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THE HARVEIAN ORATION.

By E. A. PARKES, M.D., F.R.C.P., F.R.S.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, ON MONDAY, JUNE 26, 1876,

By SIR WILLIAM JENNER, K.C.B., M.D., F.R.S.,
Physician in Ordinary to H.M. the Queen, and to H.R.H. the Prince of Wales, etc.

As you, Sir, are aware, the Oration I am about to read was written and was to have been delivered by a Fellow of this College dear to all acquainted with him, and very, very dear to all who knew him. Our last President, when Dr. Parkes died, expressed a wish that I should read the Oration that he had prepared. The manuscript was, I found, unfinished; but incomplete and unfinished as the Oration is, it seems to me to contain so able and just an estimate of the character of Harvey's mind and of the value of his labours, as to be worthy of being read, even in its incomplete state, before the College; and I believe that you, Sir, will agree with me that a tribute from such a man as Parkes to the memory of Harvey should not be withheld from the Fellows. No doubt, had Dr. Parkes lived to deliver the Oration, some few sentences would have been polished, some parts of the manuscript would have been expanded, and some parts curtailed, and a conclusion worthy of the occasion and of the orator would have been added; while grace would have been given to the Oration in delivery by his voice, so pure and clear, and by his manner, so simple and yet so impressive. I was anxious that the duty I have undertaken should have been entrusted to one more competent than I am to do justice to the Oration and to Parkes's work and character. But as my only wish is that the greatest possible honour should be done to Parkes's memory, I yield to Sir George Burrows' judgment that it is better that I, from my age, standing in the College, and long and intimate acquaintance with Dr. Parkes, should discharge the duty; and this must be my excuse to you, Sir, and to the Fellows, for my standing here to-day, and for all my shortcomings.

Sir, on the statue of William Harvey, which was erected by his contemporaries of the College of Physicians, and which was burnt in the great fire of London, was an inscription, "Viro monumentis suis immortali." In these days, when discovery succeeds discovery so fast that it taxes the memory to remember the discoveries, much more the names of the discoverers, it may be asked, Can we call any memory or any works immortal? Some few names in literature, some few in philosophy, and some among those who have founded or destroyed empires, have echoed down the stream of time for a thousand, or, may be, two or three thousand years, and have thus secured what we call immortality. But will William Harvey be admitted into this scanty band? A thousand years hence will there be, in this city, a Harveian Orator standing before the great physicians of those days, and proclaiming still the immortal name of the discoverer of the circulation of the blood? It may seem rather too curious thus to endeavour to anticipate the verdict of posterity, but it is only when we put the question in this way that we get the measure with which this discovery must be meted. Is it pure gold? does it stand the fire of the assay? will time bring no dimness upon it, nor eat into its substance and transform it into dust? The answer, I believe, must be that the explanation of the actions of the heart and of the circulation of the blood is not only one of those cardinal discoveries which lie at the very foundation of physiology and medicine, but is from its very nature one of those great landmarks which must remain in the sight of all. The full interpretation of this great discovery is even now not given, for we are still painfully learning what the blood does in that marvellous circuit which never ends, yet ever recommences. The discovery can no more be overlooked or passed by in physiology than the movements of the world round our sun, and of our sun round some great centre, could be overlooked in the investigations of astronomy. We may then, I think, confidently assert that this discovery is what we call an immortal one—that is, that it is too great and too momentous to permit men to let the name of the discoverer fade from their minds.

The Oration which I have the honour to deliver to-day was not originally intended either to celebrate the discovery of the circulation or the name of the discoverer. It was, in fact, instituted by Harvey himself, and was intended to recall to the memory of the Fellows of the College of Physicians the names of the benefactors who, in their day, had done the College good and true service, and to exhort the members of the College to study and search out the secrets of nature by way of experiment. And it may be hoped that in years to come there may be many names and many memories which will be recalled in this hall and on this anniversary, and that other discoveries, if not so splendid as that of Harvey's, may still be enumerated with pride by successive Harveian Orators. But on the present occasion I propose not to pass beyond a theme which has had for me a powerful attraction. When anyone examines into this discovery of Harvey's, and gradually recognises its extraordinary importance (for the full sense of what it is grows upon him as he studies it), he cannot but be seized with an urgent wish to know how the mind which solved so great a problem was constituted; how it worked, and how it reached, not merely the probability, but the certainty, of a grand natural law. The proof of the circulation of the blood was a discovery in the truest sense of the word. There was no accident about it, no help from what we call chance; it was worked out and thought out, point after point, until all was clear as sunshine in midsummer. Nor had it been anticipated. Harvey himself states quite candidly and truthfully how opinions stood before he published in this College his evidence on the motion of the blood. Men for years had perplexed themselves about this problem. Now one guess, now another, may have hovered for a moment near the truth; but, as Dr. Rolleston has so well shown in a former Harveian Oration, there cannot be for a moment a doubt of the entire originality of Harvey. As he claimed for himself, so we can most justly claim for him, that he "was the partisan of truth alone," and truth would have been shamed if he had robbed the least of his predecessors of a single grain of the discovery.

What, now, was the intellectual calibre and tendency of Harvey's mind, as far as we can judge of it from his works? He appears to me to have had in a marked degree what is sometimes called the "scientific mind." But this term is not, I think, a good one. Some men who have nothing to do with science have a mind like Harvey's; there were examples of it in pre-scientific days, and, though it may be more common in our times, it has existed always. Nor is the term otherwise a correct one. Men of great mathematical insight must be called pre-eminently scientific; but the scientific mind to which I refer is not mathematical in the highest sense of the word. Harvey was one of those men who are urged on to submit everything to experiment and observation. As he himself says (I quote, of course, from Dr. Robert Willis's admirable translation), "he professed to learn and teach anatomy, not from books, but from dissections—not from the positions of philosophers, but from the fabric of nature." And in his introduction to his work on Generation, where he has a chapter on the "Manner and Order of acquiring Knowledge," he says, among other sentences to the same purport, that "all true science rests upon those principles which have their origin in the operation of the senses; and that no one can truly be entitled discreet or well-informed who does not of his own experience—from repeated memory, frequent perception by sense, and diligent observation—know that a thing is so in fact." And in another place he says, "Nature is herself to be addressed; the paths she shows us are to be boldly trodden, for thus, and while we consult our proper senses, from inferior advancing to superior levels, shall we penetrate at length into the heart of her mystery."

It may be said that a mind of this kind, the main character of which is a habit of diligent observation of nature, presents nothing unusual, that all men have it more or less, and that we cannot make this habit or power a means of classification, or partition out an order of minds by what is a common possession of all minds. My contention is, however, that some minds possess this power and intentness of observation in quite an extraordinary degree, so that it really does separate them from other men. A parallel case may be found in music. All men have some musical power, but every now and then a man is born with such an extraordinary genius that he is quite

lifted out of the crowd of common musicians. Mozart was at five years of age trying to compose a concerto for the harpsichord, and at eight years composing six sonatas which were good enough to be published; Mendelssohn at twelve conducting his own operas; Beethoven deaf, yet knowing how to harmonise and combine the notes of diverse instruments, not one of which he could hear. All these and many others are examples that an universal faculty may rise into a region which seems above common humanity. In the same way poets are truly said to be born, not made, for, admitting all the power of education, when we see that scarce ten centuries can claim an epic, we cannot but doubt whether education alone will ever elevate the poetical faculty more or less possessed by all men into those splendid examples which the names of Homer, Æschylus, Dante, Milton, or Shakespeare recall. And so also there appears to me a mind with quite peculiar mathematical insight. When Newton first read Euclid it seemed a well-known road to him; his apprehension of the demonstrations, which ordinary men take so much time and trouble to learn, was so quick that the whole field of geometry unrolled before him almost as if he had a prior knowledge of it. But there was nothing in the nature of Newton's mathematical insight which was different from that of other men; it was merely that the extent and power of that part of his mind (as well as other parts) was so wonderful.

In the same way it seems to me that there is a mind pre-eminent in its power of observation and in its recourse to experiment. When it exists it gives us the great naturalists, and chemists, and physiologists of the time. Let anyone call up to his memory men whom he knows, and who are the acknowledged masters in botany, or zoology, or chemistry, and I think he will admit that these have quite unusual powers of close observation and appreciation of natural phenomena. Here, again, it is power possessed by all men, but in them carried to an extreme. When, as in Newton, this observing or experimental power is combined with mathematical insight, we get a philosopher of the highest class, who writes his name indelibly on the record of science.

Now, I claim for Harvey a position among the men exceptionally gifted with these powers of observation. There is in his works on Circulation and on Generation quite sufficient proof of this, and I shall give some evidence as I proceed. Men possessed of this power seem to be unable to avoid exercising it. They must observe, must try experiments, must—to use Bacon's phrase—be always asking questions of nature. In the middle ages, to "put a man to the question" was to torture him into an avowal of the truth, and to this sense Harvey may literally be said to have tortured nature. He was a thorough vivisectionist, and animals of all kinds ministered to his insatiable curiosity. He owns to having used a "variety of animals," whose living breasts and pericardia he opened; and if he had lived in these days, he would, perhaps, have met with scant mercy from a Royal Commission on vivisection. And yet, without that, would the circulation have been discovered? But the work on Generation shows even still more his power of really intense and continuous observation. What marvellous industry and indefatigable search after facts! And this disposition must have commenced extremely early, for he had made all his numerous experiments on the circulation before he was thirty-seven, and must have lasted to extreme old age, for he was still observing the movements of the stars or the growth of plants up to the time of death, when he was nearly eighty years of age. A usual peculiarity of this class of mind is the great ingenuity and imagination men show in arranging their experiments and in devising new ones. Everyone must have admired the ingenious mechanism by which physical hypotheses are tested or proved. We may see a great chemist not only devising very complete apparatus, but getting at the composition of bodies in the most roundabout ways by substitution or residues, so that one is doubtful which most to admire—the marvellous result, or the skill which has attained it. There is not much trace of this in Harvey's works, for the subjects perhaps hardly admitted it; he was an anatomist and naturalist, and had only to procure his animals and to make his observations; but there are some parts in his writings which prove he could have shown ingenuity had it been wanted. Yet on the whole I should say he was not an imaginative man; and when Dr. Willis calls him so because he uses some poetical expressions, the fact is overlooked that such expressions are merely the result of culture. Imagination is shown in other ways, and there is little trace of it in Harvey's writings; he bent his mind on the thing before him, and he kept it to objects of sense, and did not attempt—perhaps would not attempt—any flight which led him from the earth, except, perhaps, when, by long dwelling on the impenetrable mysteries of generation, he allowed his mind to wander a little from the phenomena to their hidden causes. He possessed, however, in a very marked extent, one character of the class of minds to which he belonged. He had faith in facts. Now, this may seem a common matter, but it is not altogether so. Many observers have a great mistrust of the facts they have themselves discovered. They are biased by previous theories, they do not see how their new facts fit in, they think there is some mistake, or they do not really fully see what they have seen. At any rate, they explain away what seems to them strange and unlikely, and really modify or alter what they have found. They are, in fact, honestly untruthful. Harvey was quite otherwise; when he had seen and touched, so to speak, a fact, and knew it was so, he accepted it, no matter how it struck on previous knowledge. To this clear truthfulness he owed his great discovery. I will only refer to one example of what I mean. After he had made out the actions of the heart he fell at once upon the problem of the total amount of blood, and tried to determine this in animals, such as sheep and dogs. He then made out the capacity of the ventricles. In man he found the left ventricle would hold two ounces of blood: now his difficulty was to know how much it propelled into the aorta at each contraction, and I imagine that he did not succeed in doing this to his satisfaction, as he gives no experiments on the point. But he says, "Let us suppose, as approaching the truth, that a fourth, fifth, or sixth, or even but the eighth part of its charge is thrown into the artery." Then, counting the pulse, he shows that in half an hour far more blood must pass through the heart than all the blood in the body. In the case of the sheep, he says that if only one scruple passes at each contraction, in one half-hour three pounds and a half would pass, but the sheep's total blood is only four pounds. But it is obvious he had a still clearer idea of the great velocity, as he takes the very lowest discharge he can conceive—namely, one scruple—so as to be within indisputable limits. But when he had taken his higher limit, he calculates that if the amount be half an ounce, not less than forty-one pounds and a half would pass through in half an hour; and if it be one ounce, he says the quantity would be eighty-three pounds and a quarter. He leaves, however, the actual amount to be hereafter settled by the experiments he has made, he says, with reference to this point. Now, even with the conviction of the truth of the circulation, he may well have been staggered at this enormous velocity. But he does not hesitate to accept the result. We now know the circulation is much quicker even than this last. Think how many men, when they got a glimpse of this rapidity, would have said, "That is impossible; there is some blunder." Harvey kept to his facts, and had faith in them,—just as Edward Jenner, hearing the story that hundreds had heard before him, and had made no use of, had faith in the fact which has given to mankind the power of controlling small-pox.

In consequence of this faith in facts he overlooks none; he passes by none. Now, a common error is to think some facts more important than others; but all are important, and if one is left out, a whole heap may fall asunder. Now, Harvey omits nothing; he commences with the most obvious, and proceeds step by step; nothing is blurred; nothing is left ill-defined. His work was composed before the "Novum Organon" was published, but it has been well said by Willis that it might have been planned on the model of that system.

The marvellous clearness of Harvey's treatise on the Action of the Heart and Circulation is quite unsurpassed. It is said that not one of his hearers at this College ever doubted his doctrine; and we can well imagine this when we see the way in which the facts are laid in order—first this, then that, then a third; and so the mind is led from step to step, until the whole is seen clear as daylight. The opposition he met with came from outside, and from abroad, from those who had probably never read his lucid and convincing work. Happily, this College is free from the least suspicion of opposition; it honoured his doctrines when he proclaimed them living, and his memory when his written word alone remained.

Such was the mind, then, so gifted with the highest observing power, so true to what that power saw, so clear in stating what was seen, which made this immortal discovery. And

now, I think, if my conception of the mind is a true one, we can see clearly how the discovery was made.

Harvey was twenty-four years of age when he returned from Padua. He had, no doubt, had his attention strongly directed to the subject of the motion of the heart by his teacher, Fabricius. He found everything obscure, and determined, I presume, at that time, to work at this problem. He desired, to use his own words, "to contemplate the motion of the heart and arteries not only in man, but in all animals that have hearts; and, further, by frequent appeals to vivisection and constant ocular inspection, to investigate and to endeavour to find out the truth." He nowhere gives a complete list of the animals he employs. He mentions, as it were incidentally, dogs, hogs, sheep, birds, fish, eels, snakes, lizards, toads, frogs, crabs, snails, shell-fish, shrimps, bees, wasps, hornets, flies. He laid all the kingdom of nature under contribution, and sacrificed hecatombs of victims. He went still further. Directed to it by a remark of Aristotle, he commenced the study of the development of the fowl in the egg, and also examined the fœtus in man and animals.

At first he tells us that all was obscure, and he found the task so difficult that he was tempted to think, with Fracastoro, "that the motion of the heart was only to be comprehended by God." But at length, by constant looking and watching, the thing became clear. He disentangled one movement from another, arranged them in time and order, and at last arrived at so perfect a knowledge of the intricate movements of the heart that he left really nothing for his successors to do. That formed, then, the first part of his great work, and gave the first words to its title, "De Motu Cordis."

No doubt years had passed before he had made all this out. Engaged in practice, married, and a few years later becoming Physician to St. Bartholomew's Hospital, he can have had but little time for these researches.

At length all was clear about the heart, and he had, in addition, carefully determined the total quantity of blood in the body of animals. He had also found out the action of the cardiac valves, and was acquainted with the valves in the veins; and now there came the next step. He nowhere precisely tells us, but he seems to have kept the whole facts before him, just as Newton tells us he did with his great discoveries, until light began to dawn. To us who are so familiar with the circulation of the blood it may seem strange that Harvey, having solved the mystery of the heart's action and of its valves, being certain that the blood poured out by the aorta and pulmonary artery, and flowed in by the vena cava and pulmonary veins, should not have come at once to the idea of the circulation. But there were, perhaps, two causes which held him back. We must remember that there were no microscopes to demonstrate the channel of communication between arteries and veins; and of course he had no true conception of the immense capillary system. Then, even with a mind of such a class, it is impossible to put aside the influence of previous teaching. The power of the general opinion must impress every man, and lead him to see difficulties which are perhaps unreal. Harvey had very soon dismissed the absurd notion that there were invisible pores in the septum of the heart; but he appears to have been seriously hampered by the Galenic doctrine of the blood being supplied at once by the food. But at length he says, "Not finding it possible that this (that is, the quantity of blood) could be supplied by the juices of the ingested aliment, without the veins, on the one hand, becoming drained, and the arteries, on the other, getting ruptured through the excessive charge of blood, unless the blood should somehow find its way from the arteries into the veins, I began to think whether there might not be A MOTION, AS IT WERE, IN A CIRCLE.

Here then, at last, was his great discovery made. I entirely agree with the Harveian Orator of last year, Dr. Guy, that Boyle's story of Harvey being led to his discovery by considering the action of the venous valves, is incorrect; that would have been merely a lucky guess from one fact, not an induction from a great many. His next proceeding is most characteristic of Harvey's character of mind. To most of us, I think, if the movement of the blood in a circle from arteries to veins had occurred, the conclusion would at once be that it so completely accorded with all facts that it must be so. We should be tempted to call out "Eureka!" like the sage of old. But Harvey's first thought was simply how to completely test and thoroughly prove this idea. He did not at once accept his own conception of motion in a circle, but tested it by experiment; for, says he, "I *afterwards* found it to be true, and finally saw" that the blood was distributed in such a way. In fact, he put his own hypothesis into the assay, and proved its truth so clearly and by such able arguments that even at the present day anyone wanting to prove the circulation of the blood (microscopic observations and fine injections not being used) must adopt Harvey's method. In fine, he brought his doctrine to demonstration and proved it once for all; and throughout everything was done by observation and induction. There are no theorising, no useless attempts at explanation, no employment of imagination, no guesses at truth; all is fact arranged in order, and leading slowly but certainly up to certain truth. Then the title of his book was complete—"De Motu Cordis et Sanguinis,"—and it was published in 1628, though since 1616 he had yearly demonstrated its truth before this College. Everybody, in reading Harvey's works, notices the extreme modesty with which he announces his discovery. The simplicity and the entire absence of self-applause are most remarkable. The clearness of the style, the careful avoidance of ambiguity of expression and its brevity, make it indeed a model for all time of a philosophical treatise.

The other work of Harvey's which in part remains to us is the treatise on Generation. Harvey was evidently led, probably by the teaching of Aristotle and of Fabricius, to watch the development of the embryo in the fowl's egg. Probably he may have thought that by watching the punctum saliens he would gain some insight into the problem which so long occupied him. But very soon he must have pursued the subject of generation for its own sake, for it formed the study of all the latter part of his life. He had completed a work on the Generation of Insects, the loss of which during the civil wars caused him great regret; and this and his remarks on the interest Charles I. took in his researches on the generation of deer, show he must have been busy with the subject. Very early during his connexion with the Court he had obtained leave from Charles I. to dissect the does killed in the hunts of which the king was so fond, and he interested Charles himself in the subject.

During the occupation of Oxford, where he remained for some time, he continued his observations on the chick; and in 1650, when he was seventy-two years old, Sir George Ent tells us he was still engaged with the subject. In that year Sir George Ent obtained from him the MS. of the treatise on Generation we now have. He can hardly have studied the subject for less than thirty years. It appears, indeed, to have had for him the same fascination it has had for all physiologists who have attempted this difficult problem. Harvey was less successful with it than he had been with the circulation of the blood. He brought to bear on it the same patient observation and unwearied industry, the same keen insight and unrivalled power; but he was in face of an inscrutable mystery. What he did and how clearly he saw, as far as the light of those days permitted, has been admirably brought before this College by a former Harveian Orator, Dr. Farre, who speaks with an authority on this subject second to none in this country. I shall not, then, venture to repeat what has before been so well said. I will only remark that Harvey seems to me to have clearly caught sight of the mystery of generation, which we, with all our better powers of inquiry, are just as much unable to solve. How it is that two minute cells, each so fragile that if removed for a few minutes from the conditions which surround them they die, how it is that these minute and apparently inert cells should meet and then should give rise to the most wonderful power we can conceive, is as dark a problem to us as to Harvey. We see it everywhere, in the vegetable and in the animal kingdom. Suddenly, from the contact of two cells of opposite sexes, a formative power, as Harvey calls it, arises. The mother-cell acquires, in a second, entirely new powers—it grows, differentiates, produces layer after layer, organ after organ, and all with a most wonderful regularity as to time and order, which holds good age after age in the different species of vegetables and animals. At length arises not only the wonderful machinery of the animal body, but the mind, which tries to investigate its own extraordinary origin.

All attempts to explain this are mere concealments and subtleties of language. Harvey himself abandons in some degree his hold of facts, and looks upon the influence of the male cell on the female as a sort of "contagious effect," which he refers to in his treatise on Conception as accomplished by "atoms, odorous particles, fermentation, or anything else—even something immaterial." But the giving this name to

the fact brought him no nearer to an explanation, but even confused it more. He was, in fact, at an end of the means of observation which were possible to him. He had no microscope to carry him farther, as it has done us; though the only effect has been to throw the inscrutable a little back.

It must be said, however, that injustice is done to Harvey if we do not remember that his treatise on Generation is an incomplete work. He had lost the part on insects; and he also evidently regarded the work we now possess as the commencement only of a complete treatise. Without dwelling further on this great work, I think it may be said that, baffled as he was in his search, it yet shows Harvey's wonderful power of observation as conspicuously as the treatise on the Circulation.

The mention of the loss of the treatise on the Generation of Insects may remind us that other works of Harvey's are lost which would be to us of inestimable value. In his second disquisition to Riolanus he refers to a work on "Medical Observations and Pathology," which he says will throw light on many diseases, and will show, he says, "how speedily some of these diseases that are even reported incurable are remedied and dispelled as if by enchantment." This work is lost, or if it exists....

With this broken sentence the Oration ends, and with it the last literary effort of Edmund Alexander Parkes.

ORIGINAL COMMUNICATIONS.

ON A NEW AND EFFECTUAL METHOD OF

TREATING (SO-CALLED) INCURABLE CASES OF SYMBLEPHARON.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

When the eyeball and internal surface of the eyelids adhere together, the patient is said to suffer from symblepharon. The most frequent causes of this condition are injuries from red-hot metal, quicklime, strong acids, or burns from explosions: these occasion sloughing, excoriation, and ulceration of the palpebral and ocular conjunctiva; and when the wound heals, the two opposed surfaces unite together. All sorts of expedients, ever since surgery was a science, have been devised to prevent this undesirable consummation; but if the injury is extensive, and involves the retrotarsal fold, the case is usually considered incurable. My object in the present paper is to point out how this condition may be remedied.

Having carefully separated the adhesions with knife and scissors, I dissect off a thin strip of skin from the upper or lower eyelid, according to the situation of the adhesion, draw back the flap thus formed, and then perforate the lid and cartilage with a vertical slit at the base of the incision. Through the aperture thus formed the flap is passed inwards, and its raw surface fixed in apposition with the under surface of the lid by sutures. The thin, silk-like skin of the upper lid readily adapts itself to its new situation, and compensates for the loss of conjunctiva. It is nourished through the base until the circulation is established—and there is, consequently, no fear of sloughing. The woodcuts refer to the upper lid; but when the lower lid is affected it may be treated in the same way, or a flap may be brought from the upper to the lower lid—a plan I adopted recently—by dividing the external canthus, and transplanting the skin through the gap thus made. The skin may be made to adhere to the globe if desirable; and in a case of recent injury, before symblepharon is established, it might fulfil a temporary purpose in preventing adhesion between the opposed surfaces of injured conjunctiva. It will be seen that by the interposition of the transplanted skin the raw surface of the globe has no corresponding raw surface on the eyelid to which to adhere. When union is thus prevented, the ocular conjunctiva, or an efficient substitute, is reproduced; and even when the cornea is destroyed, and all chance of sight abolished, mobility is restored, and the very painful sensation of dragging (which accompanies every motion of the eyeball) relieved. I have hitherto adopted this method only in extreme examples of symblepharon, in cases where heterogeneous transplantation was impossible, and where there was not sufficient conjunctiva to enable me to carry out Mr. Pridgin Teale's admirable suggestions; but there is no doubt that the same principle may be applied to slighter cases, and even to other diseased conditions. The necessary manipulations are readily effected. There can be no doubt as to which is the cuticular surface of the skin—a question often difficult to solve with regard to the mucous surface of partially or wholly separated conjunctiva; and the transplantation is much more readily effected than when we have to deal with a thin, shrivelled-up film, such as the conjunctiva becomes when separated from its connexions. The small flap can be well spared from the wrinkled skin of the lids. The wound when healed looks like a natural fold. The power of closing the lids is not interfered with; and, in fact, the operation (if adroitly performed) leaves no trace. I introduced a patient, who had been successfully treated in this way, to the members of the Clinical Society of London, in February last.

Fig. 1.

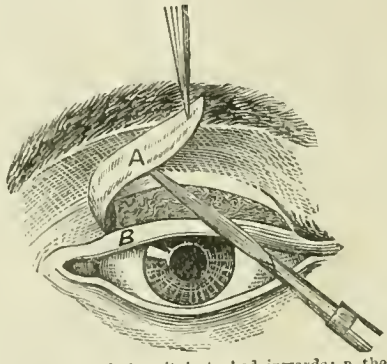

Fig. 1 shows the flap, A, before it is tucked inwards; B, the vertical slit through which it is pushed.

Fig. 2.

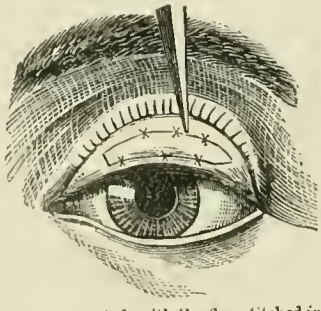

Fig. 2 represents the lid everted, with the flap stitched *in situ*, though it is usually stretched so as to cover a larger surface.

Fig. 3.

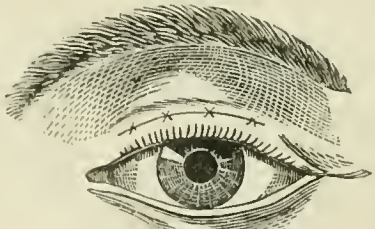

Fig. 3 shows the gap from which the flap has been removed, united by sutures.

THE BILIOUS FEVER OF THE TROPICS.

By JOHN SULLIVAN, M.D., M.R.C.P.L.

The variety of names under which this fever is described by various authors, founded upon the prevalence in certain localities of some particular type, or predominance of some particular symptom, is rather perplexing, tending to confuse and lead astray from the study of cause to that of effect. That of "bilious remittent" is, perhaps, the least open to objection, as the type of the fever is most frequently remittent, and as the term expresses its malarious origin.

Great difference of opinion exists among medical men respecting the diagnosis and true nature of this disease, especially in tropical countries, as in Cuba, where malignant fevers rage with great severity.

Consultations held by physicians in cases of this fever are, I regret to say, too frequently accompanied with heat in argument and passion. And yet great allowance must be made for this difference of opinion, as this grave bilious fever of hot climates resembles in many important features other grave epidemics which often prevail about the same time, more particularly yellow fever. Many eminent physicians in Havana will insist that yellow fever is but a variety of the grave bilious fever of the tropics; that heat and marsh miasma are the exciting causes of both, generating in the natives and the acclimatised "grave bilious fever"; and in Europeans and the non-acclimatised the variety called "yellow fever."

The European lately arrived, they teach, is incapable of resisting or repelling the united causes, and the exposed tissues become rapidly disorganised. The natives, on the other hand, are capable of resisting these impressions. But when the causes become more intense they will operate in an equal degree upon the native as well as the European, and both will suffer from black vomit, which was formerly considered to attack foreigners or the non-acclimatised exclusively. Such opinions respecting the identity of bilious and yellow fevers, however ably advocated, I cannot endorse.

I will, therefore, from my own experience, and supported by the opinions of many eminent authors, foreign as well as English, describe with all the minuteness of which I am capable the distinctive marks of the grave bilious fever of the tropics.

Grave bilious fever is met with on the coast of Africa, in the East and West Indies. It is not, like yellow fever, peculiar to any particular region, but is found in various regions in the Torrid Zone, especially where endemics of marsh fever prevail in their greatest intensity. Although the origin of grave bilious fever is the same in all cases, nevertheless it presents certain modifications according to the difference of climate in which it is developed. Along the coast of Africa the type is usually intermittent or remittent; in the large Antilles the type is frequently continued, with hæmorrhagic symptoms.

This fever is frequently observed when grave epidemics prevail in low marshy districts. In order to diagnose this grave bilious fever of warm climates from all other morbid conditions which go under the name of bilious fevers, we may describe it as "a state of pyrexia, which under any and every type always exhibits an essential, and often the only, symptom of the bilious condition—jaundice, vomiting, the characteristic stools and urine of a bilious attack; and when the symptoms become aggravated there are cerebral and hæmorrhagic symptoms, which may be attributed to an alteration of the blood through the bile."

Now, we must not confound with this bilious fever cases of intermittent, with a few slight bilious symptoms; cases of liver affection, accompanied with fever and jaundice; of jaundice, accompanied with slight accesses of fever; or even of severe jaundice, complicated with fever.

True bilious fever is the result of the united efforts of two morbid elements, the "bilious" and the "malarious"—the former proceeding from the slow influence of climate upon the hepatic functions, and impressing an especial seal upon the disease; the latter may be detected by the condition of the spleen and by intermittence.

The new comer is seldom attacked. The acclimatised and the creoles are more subject to its influence; or patients slightly cachectic, who have already suffered from frequent attacks of intermittent, in whom the bilious element begins to show itself.

Jaundice makes its appearance from the onset, but it is not constant; it will diminish or increase with the exacerbations or relapses of fever. Vomiting, which is also one of the earliest symptoms of bilious fever, from a yellow or bright green assumes a deeper hue. The urine is characteristic, differing from all other kinds of jaundiced urine so frequent in other diseases of hot climates; it is of the colour of ink, or of strong coffee. This is not owing to the existence of bile alone, but also to the large proportion of the constituents of the blood in the urine. The addition of nitric acid is immediately followed by a precipitate of albumen, and in proportion to the degree of the intensity of the colour, and consequently of the amount of blood it contains, so is the amount of albumen. By the aid of the microscope we can detect the red globules of an irregular shape.

The secretion of blood in the urine may be intermittent, like the fever; increase as the fever increases, and diminish or cease with the fever. As the fever returns, so does the blood in the urine.

In dangerous cases of bilious fever the quantity of bloody urine voided in the twenty-four hours is below that in the normal state. In no case have I ever seen hæmaturia, either by its duration or by its quantity, dangerous to life. In such cases the secretion of urine may be diminished or entirely suppressed. According as the stage of ataxia becomes developed, so do the symptoms of the grave bilious fever vary. Respiration becomes deep, slow, oppressed, accompanied by sighing; the pulse is hard, concentrated, and soon becomes small and frequent, varying from 100 to 120. Racking pains are felt, especially over the loins; intense headache, increasing with each exacerbation of fever. Thirst extreme; the tongue from moist becomes rough, dry, dark, and discoloured from bile. There is a great feeling of anxiety about the pit of the stomach, increased by every attempt to vomit; skin cold and clammy. Agitation increases, and delirium, more frequently of a slight, fugitive character, may increase to a state of violence. The features do not express suffering, but become altered and sharpened. The close of life is usually calm,—no violent delirium; it may be preceded by a deceitful calm, as of convalescence, as sometimes occurs in yellow fever—a calm the messenger of death. The patient dies suddenly, or falls into a state of coma, which ends with his life.

Now, the fever of which we treat may be mistaken for hepatitis, jaundice, or yellow fever. How diagnose? In hepatitis, the fever does not arise from malaria—it is symptomatic of some affection of the liver; in hepatitis, jaundice is not constant, and does not appear at the onset; while the jaundice of bilious fever is intense, and constitutes a primary symptom, accompanied with abundant bilious excretions. Jaundice may be attended with hæmorrhage, but it never presents the essential predominant character of bilious fever—there is no pyrexia, although there might be slight and irregular attacks of fever.

How diagnose from yellow fever? Bilious fever may exist during periods of epidemic yellow fever, or may exist in its absence. Yellow fever attacks the non-acclimatised, especially Europeans. It prevails along the coast, beyond the reach of malarious influences, and may be conveyed from centres of infection to localities very distant from the original focus. Whereas grave bilious fever is to be found in the East Indies and other regions where yellow fever is unknown—in localities essentially marshy and far removed from the coast.

The character of yellow fever changes in different epidemics; that of bilious fever never, although it may be modified by locality, and to this locality it remains confined, and never reproduces itself beyond this locality.

Bilious fever not only attacks the Europeans, but also the natives and creoles, and never developes itself except among those in whom hot climates have roused up the predominance of liver affections.

Pains in the limbs, anxiety about the epigastrium, bilious and black-streaked vomiting, may be observed in the two diseases; but in the one, vomiting of bilious matter prevails, while in yellow fever what is vomited is watery, greyish, or black, mixed with pure blood. In yellow fever, blood in the urine is of rare occurrence, suppression of urine frequent. Now, blood in the urine is the symptom which characterises the most dangerous form of the bilious fever of the tropics.

The external character of the two fevers is also very unlike from the commencement. The difference is as great as between red and yellow. The countenance in the first period of yellow fever is red, bloated, and excited, bordering on a mahogany colour; while jaundice in bilious fever is visible from the onset. In the second period of yellow fever, beneath the vividly injected conjunctiva and the red colour of the face, there breaks out a clear yellow straw-coloured tinge, which spreads and extends over the skin.

The urine, when tested, gives no evidence of the presence of bile, and any albumen that may be detected does not proceed from an admixture of blood. The discoloration of the skin is owing to decomposition of the blood, as may be observed in all pernicious fevers in hot climates; while in bilious fever the tinge of the skin, which passes from a saffron to a colour of yellow ochre, proceeds from bilious suffusion.

It sometimes happens, in cases of convalescence in yellow

fever, that a true jaundice may succeed to that state caused by decomposition of the blood. Here we may be apt to confound bilious with yellow fever, but if we attend to the duration, progress, and difference in the anterior symptoms we shall soon be enabled to clear up our diagnosis. I have thus dwelt with some minuteness upon the diagnosis between the two fevers, as they are frequently the subject of a great waste of words, and a fertile source of learned discord amongst medical men in countries where bilious and yellow fevers prevail.

The prognosis of bilious fever must be given with caution, as it may become complicated with some pernicious attack, ataxic, algid, or comatose. The danger would appear to depend more upon the influence of malaria than upon that of the bile. If the intermission be regular, the remissions frank, the prognosis is favourable. The continued type of the fever is the most dangerous. Persistent vomiting, violent delirium, suppression of urine, frequent hiccough, are signs of great danger. Seldom does a first attack of bilious fever prove fatal; it only tends to increase the preceding debility, develope marsh cachexia, and dispose to relapses. Unlike what occurs in yellow fever, an attack of bilious fever does not convey an immunity against successive attacks.

In this fever the liver, spleen, and kidneys undergo a marked alteration. The spleen increases in volume, consistence, and weight; is of a violet colour; appears rather swollen than hypertrophied; its parenchyma is gorged with black blood, like lees of wine; nevertheless it is a remarkable fact that we seldom meet with those spleens of enormous size (known as ague-cakes in the fens of Lincolnshire) as we do in temperate climates. The liver does not present the alterations, the anæmic appearance, the pale yellow, which it does in yellow fever; it is swollen as in intermittent fever, gorged with bile and blood of a reddish-brown colour; if an incision be made into its substance, a fluid like dark blood, oily from its admixture with bile, will ooze from it; if its consistence appears to be augmented, its cohesion appears to be diminished; it is friable, more easily broken than torn.

The difference in the condition of the liver, in bilious and in yellow fever after death, in two diseases with many symptoms in common, but which derive their origin from two entirely different causes, is a subject of great interest to a medical inquirer. The former being the product of malaria, the latter never; hence quinia, so useful in the treatment of bilious, is injurious in that of yellow fever.

The kidneys are always found in a state of hyperæmia; there are patches of ecchymosis in the bladder. It is to this state of the kidneys that we must attribute the blood in the urine. The same relation exists between the state of the kidneys and hæmaturia as between cause and effect.

This blood in the urine can always be traced to congestion of the kidneys. The congestion may amount to a degree of bloody infiltration or of capillary apoplexy. There is generally an increase in weight and size of both kidneys; colour red-brown, marbled, and ecchymosed. The kidneys undergo a characteristic local disorganisation. The ureters are empty, and open all their course. The mucous membrane, as well as that of the bladder, is but little altered. Hence we may conclude that blood in the urine proceeds from the apoplectic condition of the kidneys.

The contents of the chest and abdomen present but little change. However, there is one important character worthy of notice—that is, the deep yellow tinge which penetrates the white tissues principally by imbibition. The brain and its membranes, the serous membrane of the ventricles and pericardium, the internal lining of the large vessels, the pleura and their membranes, all assume the coloration of jaundice.

What is the nature of this grave bilious fever of hot climates? We have, on the one side, a malarious origin—active, all-powerful, continuing to exert its influence after all bilious symptoms have disappeared; and, on the other hand, the bilious element, communicating to the disease its characteristic appearance. To which of these two elements can we refer the dangerous symptoms usually observed in the course of a grave bilious fever? Are the coma, hæmorrhages, hæmatemesis, blood in the urine, connected with the jaundice; or are they determined by the septicæmia engendered by marsh malaria?

We meet with hæmorrhagic symptoms in yellow fever, in the pernicious forms of marsh fever in the tropics. Here, then, we have evidence of two distinct poisons producing similar effects—the poison of malaria, and the poison of yellow fever—which cannot be referred to bilious causes.

Again, in certain morbid conditions, which have no connexion with marsh effluvia, in grave cases of jaundice, we have coma and various kinds of hæmorrhage. Might we not, therefore, attribute the morbid effects in bilious fever to a concurrence of two causes, acting simultaneously and in the same sense? I am inclined to believe that in bilious fever the malarious element prevails over every other, exerting its influence over its etiology, symptoms, progress, treatment, etc.; and to this influence must be ascribed the most formidable symptoms of the disease. Of course, to jaundice and to blood in the urine must be set down other grave symptoms; but the two must be considered as symptomatic effects rather than as morbid aggravating causes. The malarious element must act, but in an unequal degree, upon the spleen, the kidneys, and the liver. It will act in a less degree upon the spleen, but with more intensity upon the hepatic apparatus, causing a hyperæmia, which will produce jaundice and other bilious symptoms.

The general or local congestion of the kidneys, the infiltration of blood, producing capillary apoplexy, will cause a hæmorrhage characteristic of the hæmaturia in bilious fever. Now, the specific nature of this fever will imply a specific treatment—an essential indication which quinia alone can fulfil. A secondary indication, although a very important one, results from the bilious symptoms. Hence, in practice, evacuants are most useful in combination with quinine. The order in which these agents must be applied will, of course, depend upon the more or less prominence of various symptoms.

Ipecacuan, as an emetic, is extremely useful in the bilious fevers of the tropics. The green bilious vomitings and stools become less abundant, and soon take a yellowish colour. The urine, from bilious and bloody, becomes modified, clear, and less frequent. I have found ipecacuan to calm wonderfully the sense of uneasiness and vomiting. It ought to be administered at the onset of a hot stage; it is also valuable in the continued form. Of course, tartar emetic must not be thought of; its use may expose the patient to some serious accident, by increasing the tendency to a state of ataxia, which is always to be dreaded in this fever. Neutral salts and calomel are often administered with advantage. But the treatment I have found most successful beyond all other is the combination of calomel and quinia, which fulfils simultaneously the two indications of treatment—a combination especially useful when the remissions are irregular and of short duration. In certain dangerous forms I have found this combination our last resource.

Irritability of stomach often interferes with the due administration of medicines of any kind. In extreme cases we must apply a blister covering the epigastrium and two-thirds of the anterior region of the liver. The beneficent effect of the blister may be kept up by sprinkling over the hollow of the epigastrium a little morphia night and morning.

If the fever be a frank intermittent, give the quinia after the attack; if remittent, wait for a remission. Quinia combined with opium is more easily retained on the stomach; but should it not be tolerated in any form, we must endeavour to produce its absorption by the rectum, or by any other channel or mode of absorption, especially should a tendency towards pernicious fever show itself.

I will conclude by expressing a conviction that if there be any (and I believe they are not a few) who entertain doubts respecting the connexion of this fever with malaria, who believe that it is the product of great heat with hepatic disorder only, if in the treatment of this fever they will but adopt the use of the antiseptic quinia with judgment, patience, and discretion, administering it occasionally alone, at others in combination, keeping in view any complications that may arise, they will be induced to alter their preconceived opinions, and to arrive at the conclusion that the sum of malarious, as well as of hepatic causes, goes to build up and constitute this formidable disease—"the bilious fever of tropical climates."

Havana.

The Italian Universities.—The following are the numbers of students registered for the current year:—Naples, 991; Turin, 361; Padua, 251; Pavia, 250; Bologna, 176; Rome, 157; Genoa, 128; Pisa, 104; Modena, 78; Siena, 69; Parma, 61; Palermo, 60; Catania, 36; Perugia, 18; Messina, 17; Sassari, 17; Cagliori, 10; Macerata, 7; Ferrara, 6; Camerino, 5.—*Annali Universali*, May.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

"PERMANENT CLOSURE OF THE JAWS."

THE treatment of permanent closure of the jaws from contracted cicatrices, necrosis, anchylosis, and other causes, has not received very much attention from surgeons generally. As such cases are not of very unfrequent occurrence, it will be interesting, no doubt, to some of our readers if we refer briefly to the treatment of those who are the unfortunate victims of this pitiable condition.

There have been two operations proposed and practised. Professor Rizzoli, of Bologna, conceived the idea of simply dividing the jaw; he made no external incision whatever, but completed the section of the bone from the mouth by means of powerful forceps. In this way he operated upon four patients; and at a later date M. Verneuil reported other cases which had also been operated upon in the manner suggested by Rizzoli.

Professor Esmarch's operation consisted in removing a piece of bone from in front of the contracted cicatrix, so as to establish a false joint anterior to the cause of occlusion. It necessitates an external incision, which, however, is a matter of no real importance, whilst it permits the use of the saw instead of the forceps for the purpose of dividing the bone, and thus does away with the risk of splintering. Dieffenbach had previously recommended nearly the same operation, and had tried it, but without any good result, as he endeavoured to make the false joint behind the contraction instead of in front of it. There is a third procedure, which has been adopted by Mr. Barnard Holt and Mr. Heath, in cases where cicatrices have existed on each side of the mouth. It consists in the division of the cicatrices from within the mouth, and then keeping the surfaces apart by means of shields properly adjusted to the teeth. These shields require to be constantly modified. The treatment is prolonged and tedious, whilst the operation is difficult and bloody; and the patient ought to be of an age at which he can give assistance to the surgeon and dentist. Although in both Mr. Holt's and Mr. Heath's cases what were considered satisfactory results were obtained, this treatment is not one which is likely to be often followed, owing to the trouble it entails both upon the patient and the surgeon.

The operation which on the whole has proved most successful, and which is most frequently resorted to, is Esmarch's. It was first performed in this country by Mr. Mitchell Henry, M.P., when that gentleman was a member of the surgical staff of the Middlesex Hospital; subsequently Mr. Christopher Heath operated upon two cases with success.

We have now an opportunity of publishing the notes of four recent cases, three of which have occurred in London hospitals, and one at the Hôtel-Dieu, Paris. For the particulars of the last-named case we are indebted to Dr. Charnley, late Clinical Assistant of the Middlesex Hospital.

The London cases were of similar origin: two had followed on scarlatina, and one after measles. The Paris case comes under another category altogether: its exciting cause was a decayed tooth. Mr. Mac Cormac's and Mr. Lawson's patients had each suffered from necrosis of the jaw as well as sloughing of the cheek; in the former there was a bony lamella between the upper and lower jaws. Mr. Lawson had tried a milder treatment on his patient eighteen months before she was submitted to Esmarch's operation. It will be noticed that in his case eleven months have elapsed since the operation, and that, though for some length of time afterwards the result was perfectly satisfactory, quite recent reports prove that no great permanent good has been effected. In Mr. Mason's case—and, it is to be inferred, in M. Richet's also—there was firm anchylosis of the joint on one side, but there had been no sloughing of the cheek, and no adhesion between the cheek and gums. The permanent result in their cases may possibly, therefore, prove more favourable. The three English surgeons removed a wedge of bone from the lower jaw. M. Richet seems simply to have divided the bone. The only course which seems likely to be followed by lasting success in cases of necrosis and sloughing is to remove a considerable piece, and better still, perhaps, the whole side of the lower jaw from the joint to just in front of the cicatrices.

Those who care to know more about this subject cannot do better than consult Mr. C. Heath's book on "Injuries and Diseases of the Jaws," or Esmarch's monograph.

ST. THOMAS'S HOSPITAL.

Case 1.—Fixation of Lower Jaw from Sloughing of Cheek and Necrosis of Jaw following Scarlet Fever—Formation of Artificial Joint by Removal of a piece of the Lower Jaw.

(Under the care of Mr. MAC CORMAC.)

Jane D., aged seventeen, had an attack of scarlet fever when four years old. Her health was much impaired, and necrosis of the lower jaw, abscesses, sloughing, and ulceration of the cheek followed, apparently as sequelæ of the attack. The cheek became adherent to the maxillæ, and the buccal pouch was completely obliterated, and so long as she can recollect she has been unable to open her mouth. She states that on two occasions in another London hospital the cheek was extensively separated by dissection from the jaws, and for a time some movement was the result; but after a short space the immobility was as great as previously.

On admission to St. Thomas's Hospital, under Mr. Mac Cormac's care, March 11, 1876, her condition was pitiable: the lower jaw was fast fixed against the upper, so much so that the incisor teeth actually overlapped. There was, on careful examination, a slight amount of lateral motion observed. She could readily swallow fluid food, but any solid nourishment could only be introduced into the mouth by a process of rubbing or "grating" the morsel against the teeth, when some portion would pass through the interstices. She suffered much from toothache. The left cheek was throughout adherent as far as the angle of the mouth, which was deformed by the cicatrices due to the former loss of substance.

Mr. Mac Cormac decided to perform Esmarch's operation for the formation of a false joint, believing the absence of mobility to depend on the cicatricial contraction in the cheek, and that if the jaw were divided in front of this, the mandibular joint on the uninjured side would be free to act, and the patient be placed in a condition of comparative comfort.

Accordingly, a free incision was made horizontally through the cheek from the angle of the mouth to the anterior border of the masseter, and another down to the ramus of the jaw from the middle of the first incision. In this way the region involved was freely exposed, but some embarrassment occurred by reason of no interval being found between the jaws, and it was only then discovered that a thin lamella of new bone extended from the upper to the lower jaw.

A hole was made in this with the gouge, and a chain-saw passed around the bone, which was readily divided opposite the second præmolar. Then a piece of the jaw in front of this was excised, partly by means of the saw, and partly with cutting forceps, as far forwards as the canine tooth—a piece of quite half an inch in breadth being removed. The left half of the jaw became now freely movable, and could be opened quite widely. A considerable number of decayed teeth were then extracted (amongst them the molars), which had been pressed into a position at right angles to their normal direction. Some bleeding from the divided bone was checked by the application of perchloride of iron, and the wound united carefully by sutures—a piece of the lower lip, which was much larger than the upper, being turned up to form a new angle to the mouth. This facilitated the healing, and improved the girl's appearance considerably. Three days later all the sutures had been removed, and the wound was healed by first intention except at one point. The progress to recovery of the patient after the operation was uninterrupted. She soon became able to eat solid food, and she can now masticate with ease and comfort. After eight weeks, during the greater part of which she simply remained in hospital to be under observation, she was sent to a convalescent home, having an excellent use and free movement of the left two-thirds of the lower jaw.

Case 2.—Anchylosis of Right Temporo-Maxillary Articulation—Esmarch's Operation—Good Result.

(Under the care of Mr. FRANCIS MASON.)

The patient was a young woman, aged twenty-nine, who was admitted into St. Thomas's Hospital, under Mr. Mason's care, June 8, 1875. She stated that she was quite well until thirteen years previous to admission, when she had an attack of scarlatina. Abscesses formed in various parts of the body, and amongst others in the right temporo-maxillary region. She was also confined to her bed for two years with dropsy.

her recovery then became complete, with the exception that her lower jaw remained fixed.

At the time of admission the patient was in fair health, but had an anxious expression of countenance. Close to the temporo-maxillary joint of the right side there was a cicatrix, and the joint itself seemed somewhat thickened. The teeth of the upper and lower jaw were quite close together, and it was impossible to insert even a piece of writing-paper between them; there was just a perceptible movement, but that was all. She took her food (finely minced) through an aperture occasioned by the loss of the crown of the left lower canine tooth, as the accompanying illustration (Fig. 1) shows.

Fig. 1.

On June 30 ether was administered, and Mr. Mason tried to separate the jaws with gags of various shapes; but beyond displacing several teeth, made no impression whatever on the joint itself. Mr. Mason then proceeded to make a horizontal incision, nearly two inches in length, in the soft parts under the body of the jaw of the right side, and, reaching the bone, separated the soft tissues and got into the mouth between the teeth and cheek. The incision commenced at a point under the chin, about opposite the angle of the mouth, and extended backwards nearly to the masseter muscle, without involving the facial artery. A narrow saw was now applied vertically in the space between the first and second bicuspid teeth, and the bone divided with the help of the cutting forceps. After this section the left side of the jaw was found to be freely movable, but the right side was firmly fixed. Mr. Mason then removed with the saw about half an inch from the right or anchylosed side. There was no hæmorrhage worthy of remark, and the wound was closed with silk sutures. The sequel of the case may be told in a few words. The day following the operation she was able to open the jaw herself, without assistance, for about three-quarters of an inch, and on July 10 could open it nearly an inch.

On the 12th the wound in the skin had all but healed, and the opinions of Mr. Elliott and Mr. Ranger, the surgeon-dentists to the hospital, were taken as to her wearing some small apparatus to keep the jaw in good position. Unluckily, however, the patient got an attack of erysipelas, and thus the local treatment was necessarily suspended for awhile. When she had recovered from the erysipelas, she expressed a wish to leave the hospital, and there was difficulty in inducing her to remain.

On August 4, Mr. Mason being desirous of ascertaining the exact amount of movement, had her placed under the influence of ether, and found that the left temporo-maxillary joint was fairly free, and that the jaws could be separated to the extent of three-quarters of an inch. The right joint was quite firmly anchylosed. The left side of the jaw was tilted a little over to the opposite side, yet she could masticate her food well. Any mechanical apparatus appeared to be of doubtful value, and the idea of adopting it was abandoned. She left the hospital sooner than Mr. Mason wished; but altogether, considering the drawback of the attack of erysipelas, the result was better than could have been anticipated. Fig. 2 shows pretty accurately the patient's condition about two months after the operation. It may be added that the teeth which

Fig. 2.

were unavoidably displaced by the gags, in attempting to open the jaws previously to the division of the bone, were returned to their sockets, and became as firmly fixed as ever.

MIDDLESEX HOSPITAL.

Complete Closure of the Lower Maxilla from a Dense Cicatrix within the Mouth—Removal of a Wedge of the Lower Maxilla.

(Under the care of Mr. LAWSON.)

Emily H., aged ten, was admitted into Regent ward in January, 1874, on account of a complete closure of the jaws, caused by a dense cicatrix within the mouth, which firmly tied the cheek to the upper and lower maxillæ of the left sides, and bound the lower and upper maxillæ so closely together that the mouth could not be opened to the smallest degree. The history of the patient was as follows:—When four years old she had measles, and afterwards suffered severely from boils. She then had sores within the mouth, and apparently an attack of cancrum oris, which produced sloughing of the mucous membrane of the cheek and of the corresponding portion of the lower maxilla, with some exfoliation of bone. From this the child recovered, but, in the cicatrisation which followed, the cheek became firmly adherent to the upper and lower maxillæ, causing a closure of the mouth. The child was fed with chopped and sopped food, which was pushed through the spaces of the teeth. When second dentition commenced she enjoyed a period of comparative comfort, as, from the increased size of the spaces caused by the loss of the first teeth, she was able to push the food more readily into her mouth; but when the new teeth had filled up the gaps the inconvenience became so great that her mother brought her to the hospital for relief.

In January, 1874, she was first admitted into the Middlesex Hospital, and Mr. Lawson freely divided the whole of the cicatrices within the mouth, completely detaching the cheek from the upper and lower maxillæ. The jaws could then be opened with ease. The relief, however, was very transient, for as cicatrisation proceeded the tendency to close again was very great, and it was only by the ingenuity of Mr. Bruce, Mr. Lawson's dresser, that fixity of the jaws was prevented. He made a series of compressed dried pine-wood wedges, which were introduced between the teeth, and these swelling kept the jaws apart. They were always worn except while eating. The wound healed, and the patient when she left the hospital could open her mouth sufficiently wide to eat her food. She was to continue the use of the wedges. About nine or ten weeks after leaving the hospital the use of the wood wedges became so painful, owing to the great contraction of the cicatrices, that she was obliged to give them up, and very shortly afterwards the mouth was as firmly closed as before the operation.

July 2, 1875.—The patient was again admitted into the

hospital, with both jaws firmly bound together. She could not separate the lower maxilla from the upper to the smallest degree.

14th.—Ether having been administered, Mr. Lawson made an incision along the lower border of the lower maxilla, commencing at the point where the cicatrix terminated, and removed with a small saw a wedge of bone immediately anterior to the cicatrix, about half an inch long in the upper, and three-quarters of an inch long in the lower portion. The wound was then closed with a suture. After this operation the patient gained immediate relief, and was able to open the mouth on the right side sufficiently wide to admit a sixpence placed edgewise between the teeth.

August 3.—The patient left the hospital with the wound healed, and much pleased with the result.

The benefit, however, has been only transient, for on making inquiries recently concerning the child, Mr. Lawson was informed that the jaws are again closed as completely as before.

Mr. Lawson remarked that after the experience of this case, should a similar one again come under his care, he should pursue a somewhat different course. He would remove a longer wedge of bone anterior to the cicatrix, and then call in the aid of the dentist to make a plate to fit the inside of the teeth, so as to keep the divided ends of the jaw apart during the process of cicatrisation. The plate should be afterwards provided with a central hinge, which would allow of an up-and-down movement, to admit of mastication, and should be worn by the patient until a false joint was completely established.

HÔTEL-DIEU, PARIS.

(Under the care of M. RICHET.)

Case 4.—Decayed Wisdom-Tooth—Fixation of Jaw—Formation of Artificial Joint by Division of Lower Jaw—Removal of Tooth by Gouging.

February 8, 1876.—A man, aged thirty, presented himself with the following story:—A few months before, he had tooth-ache in the lower wisdom-tooth of the left side. He went to a dentist, who tried to remove the tooth, but after pulling his jaw about a good deal, failed. He is now unable to separate his jaws, and therefore unable to eat, and is in consequence much emaciated. The jaws are so closely approximated that a fine chisel can with difficulty be introduced. There is a swelling on the left side over the lower half of the masseter, and this muscle can be felt tightly contracted. M. Richet raised a square flap over the position of insertion of the masseter, and separated this muscle from the bone. The patient could then open his mouth a little more than before, but not wide enough to be of much use. The jaw was therefore divided by a chain-saw just behind the position of the wisdom-tooth. After this was done the patient was able to open his mouth freely. After the division of the jaw, by means of a little exploratory gouging the remains of the wisdom-tooth were found.

18th.—Patient progressing favourably. He can open his mouth four-fifths of an inch. To employ active and passive movement daily.

19th.—He can eat bread and meat, and walks about the ward. His general health is good. The discharge from the wound escapes externally.

Mr. C. S. Beyer, of Manchester, has by his will left to Owens College his interest in the Gorton Locomotive Works, which is estimated to realise something not far short of £200,000; and £10,000 to the Royal Infirmary.

The Hospital Saturday Fund.—On Saturday week the board of delegates for organising the Hospital Saturday Fund collection for the present year met at the Metropolitan Convalescent Institution, Walton-on-Thames, when it was stated that a much larger number of firms had this year agreed to help the movement than in former years, and it was expected that the result of the appeals to the working-men would be correspondingly increased. It was resolved to again adopt the principle of street collections by ladies, and a resolution was passed deprecating any action on the part of any public body which may be calculated to harass any deserving person in want of medical attendance, it being the opinion of the Board that the only question that ought to be considered is whether the person is actually in need of such medical relief.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JULY 1, 1876.

THE HARVEIAN ORATION, 1876.

The noble library of the Royal College of Physicians was filled from end to end on Monday last by a crowd of men anxious to hear one of the most distinguished living Fellows of the College read a Harveian Oration, which had been partly prepared, and was to have been delivered, by a Fellow who, as the actual orator well said, was "dear to all acquainted with him, and very, very dear to all who knew him." It was well and gracefully done by Sir William Jenner to yield to the request made by Sir George Burrows, then the President of the College, that he would read the Oration prepared by Dr. Parkes; and he must have felt rewarded by the great interest, and applause, the Oration excited; while certainly all who heard, or have the pleasure of reading it will agree with Sir William in holding that it would have been a wrong to the Fellows of the College to withhold from them "a tribute from such a man as Parkes to the memory of Harvey." We publish to-day only so much of the Oration delivered by Sir William Jenner as had been prepared by Dr. Parkes. Of course, if Dr. Parkes had lived to give his Oration, "a conclusion worthy of the occasion and of the orator would have been added"; and remembering how thorough all Dr. Parkes's work was, it is possible that "some sentences would have been polished, some parts of the manuscript expanded, and some curtailed"; but as the Oration stands, it is a most interesting study of the constitution and character of Harvey's mind, and of the value of his work, worded with singular grace and elegance. Calling to mind the fact that on the statue of Harvey, which was destroyed in the Great Fire of London, there was the inscription, "*Viro monumentis suis immortali*," Parkes was led to ask—Will Harvey really be admitted into the "scanty band" of those whose names "have echoed down the stream of time for a thousand, or may be two or three thousand years, and have thus secured what we call immortality?" And holding it certain that the discovery of the circulation of the blood "can no more be overlooked or passed by in

physiology than the movements of the world round our sun, and of our sun round some great centre could be overlooked in the investigations of astronomy," he confidently concludes that the discovery is "what we call an immortal one—that is, that it is too great and too momentous to permit men to let the name of the discoverer fade from their minds." Then he says—How was the mind constituted which solved this great problem? How did it work for, and reach, not merely the probability, but the certainty, of a grand natural law? The proof of the circulation was a true discovery: "there was no accident about it—no help from what we call chance; it was worked out and thought out, point after point, until all was clear as sunshine in midsummer. Nor had it been anticipated." What, then, was the intellectual calibre and tendency of the mind of the man who made this discovery—of Harvey's mind? This was a theme that had always had "a powerful attraction" for Parkes, and he was glad of the special opportunity for considering it. Harvey had, he thinks, in a marked degree what is sometimes called the "scientific mind," though this kind of mind existed in pre-scientific days, and is found in men who have nothing to do with science. The main character of it is a habit of diligent observation of nature—a not rare or unusual habit or power indeed, but some minds possess it in such an extraordinary degree, and in such force and intensity, that it does separate them from other men. "A universal faculty may thus rise into a region which seems above common humanity"; and the truth of this is illustrated by examples of extraordinary musical power, of poetic faculty, and of mathematical insight. Harvey, then, takes rank among the men exceptionally gifted with powers of observation—the men "who *must* observe, *must* make experiments, *must* (to use Bacon's phrase) be always asking questions of Nature." He had also an intense faith in, and reverence for, facts; "when he had seen and touched, so to speak, a fact, and knew it was so, he accepted it, no matter how it struck on previous knowledge." He overlooked no facts, he passed none by; he commenced with the most obvious, and proceeded step by step, blurring nothing, and leaving nothing ill-defined.

And he would make nothing known as a discovery till he had fully proved it. Even when, after years of patient observation and labour, the idea presented itself to his mind that the movement of the blood throughout the body might be "a motion, as it were, in a circle," his "first thought was simply how to completely test and thoroughly prove this idea." He would not guess at a truth, nor theorise from one or two facts; but put his own hypothesis into the assay. "He brought his doctrine to demonstration, and proved it once for all; and throughout everything was done by observation and induction."

Our readers will see how clearly and well Parkes proves all this from the history of Harvey's life and labours—from his great and perfectly finished work, "De Motu Cordis et Sanguinis," and his incomplete treatise on Generation; and they will hardly know whether most to admire and be thankful for the part of the Oration that Parkes left to us, or to grieve over our loss by its incompleteness.

Sir William Jenner concluded with a sketch of the character and works of Parkes himself; and this part of the Oration we shall have the pleasure of publishing next week.

TORSION OF ARTERIES.

At a recent meeting of the Surgical Society of Paris, M. Tillaux read a paper (reported in the *Gazette des Hôpitaux*) on the Torsion of Arteries. The conclusions at which he has arrived are the following:—

1. Torsion is applicable to arteries of all calibres, and more especially to large arteries.

2. One pair of forceps only is necessary for the operation, whatever may be the size of the artery.

3. The artery ought to be seized with the forceps obliquely, and not in its continuity, in such a way as to thoroughly include in the fangs of the forceps the three coats in their entire width.

4. Torsion ought to be carried as far as the complete detachment of the part seized by the forceps.

5. The turning back (*refoulement*) of the tunics towards the heart, advised by Amussat, and the limited torsion recommended by Amussat and the English surgeons are useless.

6. Torsion is applicable to atheromatous or inflamed arteries. It is a valuable means for checking hæmorrhage at the bottom of wounds.

7. It favours the immediate union of wounds by the absence of all foreign bodies.

8. There is as much safety against primary hæmorrhage with torsion as with the ligature.

9. It affords greater safety against secondary hæmorrhage than does the ligature.

Since 1871 M. Tillaux has exclusively employed torsion after both great and small operations. There has never been either primary or secondary hæmorrhage in about 100 great operations in which he has resorted to this practice.

Some of these conclusions will meet with the approval of all who have any practical experience of torsion; others will not, we are sure, be accepted as correct. For instance, experience does not warrant anyone in laying it down as a law that the part of the vessel seized by the forceps ought to be twisted entirely off, and it is altogether contrary to facts to say that the limited torsion recommended "by Amussat and the English surgeons" is useless. It somewhat surprised us to read that Amussat recommended limited torsion; we had an impression that Amussat twisted the end quite off, and that Velpeau and Frieke were the advocates of the limited method. Then, as to the uselessness of limited torsion. In more than one of our metropolitan hospitals, and certainly in one of our largest provincial hospitals, torsion has almost, if not quite, displaced the ligature, and has proved a most successful substitute for it; yet it is not the custom to detach the twisted end of the artery if the vessel be of large size, though it is admitted that in the case of small arteries it is immaterial whether or not this is done. It is stated in Bryant's "Surgery" that "at Guy's Hospital up to 1874 we have had 200 consecutive cases of amputation of the thigh, leg, arm, and forearm in which all the arteries had been twisted (110 of them having been of the femoral artery), and no case of secondary hæmorrhage": and other statistics to prove the same point could be quoted from the Middlesex Hospital and elsewhere if there were need. So far from torsion short of actual detachment being useless, we would urge that it is advantageous to leave the twisted extremity undetached. The twisted end affords an additional mechanical safeguard against the occurrence of hæmorrhage, while it also acts as a support to the lacerated and recurved inner and middle coats, and to the coagulum which forms within them.

It has been proved to demonstration that the twist in the external coat is a persistent condition, while it has also been satisfactorily established that the twisted portion of the artery does not die, that no sloughing ensues, but that adhesion between the parts of the artery, and between them and the surrounding structures, subsequently occurs. In all this lies the superiority of torsion over the ligature.

We do not endorse M. Tillaux's opinion that it is necessary to seize the artery obliquely, and not in a line with its axis; on the contrary, it has been our own practice to adopt the latter plan, and with good success. With well-made and fairly broad torsion forceps, quite as much of the breadth of such an artery as the femoral as is necessary can be grasped. But a point of much importance which is not alluded to by

M. Tillaux is the isolation of the end of the artery by drawing it out, and thus separating it from the veins and nerves. In this, it seems to us, lies the secret of rapid and effectual torsion. As a rule, M. Tillaux is quite right in asserting that one pair of forceps is all that is necessary; but, in the case of the external iliac and axillary arteries, which are very loosely connected with surrounding structures, a second pair, to fix the vessel above, is desirable.

We are glad to find it stated that torsion is applicable to atheromatous and inflamed arteries. It has often been urged that dangerous consequences would ensue from its application to such vessels. *A priori*, it should have been argued that torsion offers less risk than the ligature for diseased vessels. In addition to the plugging by conical clot, which is the only protection in acupressure after the withdrawal of the needle, there are, in the case of torsion, the more or less perfectly incurved inner coats, and the twisted external coat of the artery, whilst the process of permanent occlusion by organised lymph is not interfered with by the ulceration necessary for the separation of the ligature. Practically it has been found that atheromatous arteries are as amenable to torsion as healthy ones, if only it be borne in mind that fewer rotations of the forceps are required on account of the brittleness of the coats of these vessels; and we would add, in opposition to M. Tillaux, that the surgeon should be careful not to break away the external coat. The inference to be drawn, however, from his remarks on limited torsion appears to be this: that torsion, both in healthy and in atheromatous vessels, is actually so safe a hæmostatic that it can dispense with one of its own conditions of security, viz., the mechanical resistance offered by the twisted external coat.

THE HOLBORN IMPROVEMENT SCHEME, AND THE BIRMINGHAM SCHEME.

At the last meeting of the Metropolitan Board of Works a communication was received from the Home Secretary, rejecting totally the scheme submitted to him by the Board for the improvement of the unhealthy area in the Holborn district. It will be remembered that a large scheme for dealing with the area in question was presented to the Board, but that they refused to adopt it, and brought forward in its stead a much smaller and less complete one. There was, however, a very strong feeling, locally, that the amended scheme was altogether inadequate to the requirements of the district, and in consequence the Home Secretary directed an inquiry to be held by Mr. Cubitt Nichols for the purposes of reporting on the dwellings in the unhealthy area, and on the sufficiency of the proposed scheme, and of receiving any local objection that might be made to it. We commented on some of the evidence given at this inquisition at page 497 of our last volume, and expressed a hope that the Home Secretary would "bring his influence to bear on the Board of Works, with the view of inducing that body to adopt a more perfect and complete scheme." Mr. Secretary Cross has now had under consideration the scheme of the Board and Mr. Nichols' report upon it, with the result that "he finds himself compelled to decline the scheme, or any portion of it." He reminds the Board that when they appeared before Mr. Nichols they represented themselves as unwilling to proceed with the deposited scheme as a whole, and proposed carrying it out in part only; and this partial scheme Mr. Cross, in the first place, denounces as inadequate, and "also objectionable from want of proper space, the streets not being sufficiently widened in proportion to the height of the adjacent buildings." And he then proceeds to deal with "the entire scheme as deposited." He points out that it fails to provide accommodation for as many persons of the working-classes as would be displaced, and that this "failure to comply with the statutory requirement" would of itself make it impossible for him to confirm the scheme, even were it unobjectionable in other respects. But, further, he is of opinion that "the area proposed to be dealt with is too irregular in its configuration, and too much broken up by other buildings (which are not taken into the scheme) to admit of being converted into a convenient and appropriate site for working-men's dwellings on the scale which is required to meet the necessities of the case." Consequently, he rejects absolutely the whole scheme; adding that he "much regrets" that he had not had before him "the larger scheme of improvement which was originally submitted to the Board by Sir J. Bazalgette and Mr. Vulliamy."

The reproof thus administered to the Board of Works is, unquestionably, a severe one; but the general opinion will, we doubt not, be that they thoroughly deserved it. It is well understood and acknowledged now that the evil to be dealt with under the Artisans' Dwellings Act admits of no partial remedy. When it has been clearly demonstrated that an area is an unhealthy one, a clean sweep must be made of it—though made, it may be, gradually; and the work of reconstruction must go on hand in hand with, or must follow closely on, the work of destruction. But the Board of Works seem to have altogether failed to understand the powers placed in their hands by the Artisans' Dwellings Act, or to recognise the immense gain in public health and in economy that must follow on a bold and intelligent use of those powers.

We will venture to hope that the Board will condescend to learn wisdom and boldness by a study of the Birmingham improvement scheme and its history. It may be remembered that that scheme (a notice of which will be found at page 411 of our last volume) dealt with some ninety-three acres within the city of Birmingham—an area containing about 4000 houses, with a population of 18,000,—and that the plan involved an expenditure of about £2,000,000 sterling. The scheme was a remarkably bold and thorough one, but most carefully and wisely planned in all its details; and it met with the approval, if it could be carried out under the Act, of an inspector of the Local Government Board, after a very laborious and minute inquiry. But it was objected before him that the Act only gives power to deal with such portions of a given area as have been condemned as absolutely unhealthy, and does not grant compulsory powers for such auxiliary improvements as the general reconstruction of streets within the area; and that, therefore, the Act could not be used to carry out such a thorough scheme as the Birmingham one. The inspector was inclined to think that the objection had force; but we are glad to learn that the audacity of the Birmingham Corporation has proved to be a "happy audacity."

It has been announced that "the order of the Local Government Board, affirming the improvement scheme proposed by the Corporation of Birmingham, has just been issued, and will be incorporated in a Government Bill to be introduced into the House of Lords." Only so much of the condemned areas is to be cleared at one time as will be sufficient for the provision of accommodation for at least 500 of the persons displaced in carrying out the scheme, and no further clearance is to be made until dwellings for that number have been completed. But the compulsory powers are to extend not only to the unhealthy area, but to such parts as are necessary to make that area efficient for sanitary purposes, or to widen the approaches to it, as well as to the parts required for providing accommodation for the people displaced by the demolitions.

The success of the Birmingham men will, we hope, be laid to heart by all, and encourage the formation of similarly large and comprehensive plans of improvement in the metropolis and many of our provincial towns and cities.

THE WEEK.

TOPICS OF THE DAY.

A firm of London merchants have been endeavouring, through the *Times*, to convince the public that plague has not broken out at all in Mesopotamia, but that the disease which has been mistaken for it in that locality is simply common marsh fever. The question does not really admit of serious dispute; but as assertions such as those made by the gentlemen referred to tend to mislead and agitate the public, Dr. Dickson, Physician to the British Embassy at Constantinople, has stepped forward to explain that the epidemic in question is not malarial fever, but the true bubonic pestilence. The symptoms observed in this outbreak are those of true plague—a malignant fever accompanied by glandular swellings, and following out its usual course. The rise of the temperature in the past few weeks has tended to diminish the ravages of the disease. Dr. Dickson further remarks that the registered attacks from it at Bagdad, on a population under 60,000, have been as follows:—During the month of March, attacks 298, deaths 137; during the month of April, attacks 1855, deaths 1111; during the month of May, attacks 2099, deaths 1222.

Last week the Medical Officer of Health for the Clapham District waited upon the magistrate at the Wandsworth Police-court with reference to a case of small-pox in the Clapham-park-road. He said that a man at that address was suffering from the disease, and the authorities at the Stockwell Hospital were perfectly willing to admit the case, but the man declined to go. In reply to a question the medical officer admitted that the patient might have proper lodging and attention at the house in Clapham-park-road, but he wanted a summons against the woman who waited upon him, and who also served in the shop, whereby small-pox might be spread broadcast over the district. The applicant was questioned as to the enactment under which he applied, and on being told there was no law to meet the case, he altered his request, and asked for an order to compel the man's removal to the hospital. The magistrate explained that an order could not be granted unless it could be shown that the patient was without proper lodging. Ultimately a constable was ordered to go to the woman and tell her that she was acting very wrongly in the matter. The foregoing seems to be one of those difficult cases which are just outside the law; but there should surely be some legal means for preventing the spread of infection through such recklessness as that described by the medical officer of the district.

The report of Colonel Cox to the Local Government Board on the drainage scheme proposed by the Local Board of Slough was adverse to the scheme, on the ground that it would be resisted in Parliament by the authorities of Eton College, and if passed would probably give rise to actions at law. In accordance with the recommendations of Colonel Cox, the Local Government Board have written to the Slough authorities as follows:—"Having regard to all the circumstances of the case, the Board concur in the conclusions at which Colonel Cox has arrived, and are of opinion that the Local Board should reconsider the matter, with a view to devising some scheme for the disposal of the sewage of their district, which will be less likely to meet with such general opposition as the present."

The sanitary authorities at Greenock complain that they are unable to subdue scarlet fever in the town, in consequence of the obstinate recklessness of parents, who allow their children to mix freely with others from infected houses, and will neither themselves disinfect clothes and bedding, nor allow the authorities to do it for them.

An inquiry was held last week, before the Deputy-Coroner for East Middlesex, at the Vestry Hall, St. George's-in-the-East, to ascertain the cause of death of Henry Burchell, fifty-eight, a carpenter by trade. On Saturday, the 17th ult., Dr. Hamblin, the parish medical officer, saw the deceased by order, and gave directions that he should be properly attended to, and that brandy should be given to him. On the 20th he saw him again, and, upon ascertaining that the friends were too poor to buy the brandy, gave them an order marked "urgent," recommending that half a pint of brandy and two pounds of beef should be supplied. This order was at once taken to the office of Mr. Adams, the relieving officer, for his approval, but he was out, and the applicant had to wait a considerable time to see him. On his return he endorsed the doctor's order, but, on its being presented at the workhouse, the messenger was told that he was too late, and must come again in the morning. Upon his arrival at home he found that the deceased was dead. Mr. Robert Hamblin deposed that death had resulted from bronchitis and congestion of the lungs, and that if brandy had been administered in time the deceased's life would have been prolonged, and possibly saved. He considered that the poor should be able to obtain proper nourishment at all times of the day and night. The jury returned a verdict of "death from bronchitis and congestion of the lungs," adding that the poor ought to be able to obtain all needful articles both by day and night. A somewhat similar case to the above, at the West-end of town, has resulted in an inquiry instituted by the Local Government Board; and it is to be hoped that in this instance some steps will be taken to insure attention for the future to urgent orders received from the medical officer of the parish.

Some misunderstanding appears to have arisen between the Corporation of Southport and the contractors employed by them to carry out the new sewage works for the town. In the absence of full particulars we are unable to give the reasons which have led to a sudden stoppage of the undertaking; but as the firm employed is a highly respectable one, and the works were being pushed forward in a vigorous manner, it is to be hoped that the misunderstanding is only of a temporary nature, and that, before long, so necessary a piece of work will be resumed, and pushed forward to a satisfactory termination.

Another death has resulted from the disastrous accident at St. George's Hospital. Rose Stretton, thirty-six years of age, a married woman, was, at the time of the accident, lying in Wright's Ward, which was situated immediately below the tank, and she was precipitated on the bed on which she was lying to the basement of the building. The most serious injuries she received were internal. A coroner's inquiry will be held in a day or two, but it is stated that the proceedings will be only formal.

The different sums realised by the collections on Hospital Sunday continue to be sent in to the Mansion-house. Up to the beginning of this week nearly £22,000 had been paid in, and it is stated that in almost every instance the offertory at each of the various places of worship has exceeded that sent in last year. If this really be the case, and so many additional ministers supported the movement this year, the total sum realised should greatly exceed what has been before collected. And yet, we venture to think it will be found that the gross sum after all will not exceed thirty thousand pounds—by no means a large amount when the size and wealth of the metropolis are taken into consideration. Most ministers are anxious to pay in the money with as little delay as possible, hence in the first fortnight after Hospital Sunday the bulk of the subscriptions are received, and those sums for which the account has to be kept open are, as a rule, only small, and do not mount up very fast.

In addition to the Government grant of £1000 per annum made to the Royal Society to enable that body to defray the expenses

of scientific investigations considered by a committee of the Society to be worthy of such aid, it has been proposed by her Majesty's Government to grant an increase of £4000, leaving the conditions under which the original sum is administered undisturbed. The former grant is expended in aiding investigators to provide themselves with apparatus and assistance, but never in personal payments to the investigators themselves. By means of the additional grant it is now proposed, in certain cases, to make personal allowances to gentlemen during the time they are engaged in their investigations. This experiment it is proposed to try for five years. The administration of the increased grant has been undertaken by the Royal Society on conditions laid down by Lord Sanden.

The proceedings before the Court of Queen's Bench on Monday last in the Balham poisoning case were interesting only to the lawyers; it is, however, satisfactory to be able to record that the Court has ordered a fresh inquiry before another jury. The old inquisition has been quashed, and the same coroner has been directed to open the case *de novo*. This will, of course, entail the necessity of exhuming the body of the late Mr. Bravo, but as public attention has been so directly called to the case, we may be quite sure that in the present instance there will be no failure of justice. Cases of a similar nature are happily not of frequent occurrence, and it is satisfactory to know that in a few days it will be definitely determined, so far as human knowledge can decide, whether the late Mr. Bravo came by his death at his own hands or through the wicked devices of others.

We are glad to report that Dr. Arthur Farre is progressing favourably. He is sleeping better, and the foot and ankle are doing remarkably well.

INSTITUTION FOR THE CURE OF INEBRIATES.

A PRIVATE MEETING of an important character was held at Earl Percy's, Grosvenor-square, on the afternoon of Friday, the 23rd ult., for the purpose of founding an institution for the cure of inebriates, and placing it on a solid and permanent basis. The Earl Percy, who occupied the chair, stated the object for which they were assembled; and then Mr. C. Holthouse gave the result of his experience of the treatment of his patients at Balham during the past year. Some good and appropriate speeches, expressing concurrence and sympathy with the object for which they had met, were made by the gentlemen who moved and seconded the following resolutions, which were carried unanimously, and the meeting was then brought to a close:—1. Moved by Sir Harcourt Johnstone, Bart., M.P.; seconded by Robert Baxter, Esq.—"Public opinion having already recognised the necessity for the protection and treatment of the intemperate, and this meeting having heard of the success which has attended the treatment of inebriates at Balham under comparatively unfavourable circumstances, and having learnt from Mr. Holthouse that the term for which he has taken the house at Balham expires at the end of the present month, is of opinion that an immediate effort should be made to secure another and more suitable building, with the view of founding an institution for the cure of inebriates, and placing it on a solid and permanent basis." 2. Moved by the Rev. Canon Prothero; seconded by John Boodle, Esq.—"That this meeting, having ascertained that a place well adapted for such an institution can now be procured, is of opinion that the opportunity of acquiring it should not be lost, and pledges itself to co-operate with the noblemen and gentlemen whose names are on the prospectus in raising the necessary funds for its purchase." 3. Moved by Sir Thomas Wathen Waller, Bart.; seconded by Dr. Quain, F.R.S.—"That the noblemen and gentlemen whose names are on the prospectus be the Council of the institution, with power to add to their number, and that they be requested to appoint a sub-committee to carry out the foregoing resolution." 4. Moved by McCarthy Downing, Esq., M.P; seconded by W. H. Ashurst, Esq.—"That Stephen Alford, Esq., Dr. G. F. Blandford, Dr. C. B. Radcliffe, and Henry Spencer Smith, Esq., be the Visiting Committee, with power to add to their number, to report from time to time to the Council on any matter which they may think it desirable to bring before their notice."

ANNUAL MEETING OF THE DUBLIN SANITARY ASSOCIATION.

THE fourth annual meeting of this non-political, non-sectarian, philantbropic body took place in the Leinster Hall, Molesworth-street, on the evening of Monday, June 19. The chair was taken by Mr. Jonathan Pim, the ex-member of Parliament for Dublin, and President of the Association. A large number of ladies and gentlemen attended. Letters of apology for their absence were read from Viscount Monck; Sir Arthur E. Guinness, Bart., M.P.; Mr. Ion Trant Hamilton, M.P.; Colonel Taylor, M.P.; Mr. Edward Gibson, M.P. The minutes of the last annual general meeting having been read and signed, Dr. J. W. Moore, the Acting Honorary Secretary, read the report. The Association now numbers 289 members, being an increase of seventeen on the roll for 1875. The income for the year ending May 31, 1876, had been £143 odd; the expenditure £142 odd. With regard to the inspection of nuisances, the efforts of the Executive Committee to procure the abatement of many nuisances in Dublin had been crippled by a continued silence on the part of the Public Health Committee of the Corporation as to the action taken on the complaints made in the name of the Association. The Executive Committee had forwarded 266 complaints, comprising 416 distinct nuisances, to the various sanitary authorities, with apparently, however, but scanty results, no reply ever having been received with respect to the vast majority of the complaints. The report next referred in detail to several special investigations of defects in the city; and to the delivery of a course of lectures on sanitary science in Rathmines—one of the largest suburbs of Dublin. In concluding their report, the Committee recorded with deep regret the death of one of their most energetic members, Dr. Toler Maunsell, who ever took an active part in the work of the Association, and in the promotion of sanitary reform in Ireland. The report was adopted, and the officers of the Association having been appointed, and votes of thanks passed to the press and the chairman, the meeting terminated.

LONDON WELLS.

THE Medical Officer of Health for the City of London, Dr. Sedgwick Saunders, has just reported to the City Commissioner of Sewers that, in the course of a series of investigations into the condition of the water drawn from the wells within the City, he had come across a sample so impure as to require immediate interference. The well was an old one, situated upon private premises at Fell-street, Wood-street, and was used not only by the workmen on the spot, but, with the consent of the owner, by a large number of persons in the neighbourhood. The water as it issued from the well was clear, odourless, and sparkling—conditions which had deluded the public into the belief of its wholesomeness. A chemical analysis, however, dispelled the illusion rather forcibly; the total solids (consisting of carbonates and chlorides, but chiefly sulphates) amounted to 123 grains per gallon, as against seventeen grains in the New River water. The chlorine reached the high point of 10·4 grains per gallon, as opposed to 1·2 grain per gallon of New River water. Free ammonia existed to the enormous extent of 32·80 parts per million, as against 0·03 part per million in the New River water. The albuminoid ammonia, which was the direct expression of the deadly organic matter, reached the point of 0·52 part per million, as against 0·06 part per million in New River water. It was hardly possible

to find a worse potable water, and Dr. Saunders therefore asked for a formal order to close the well. The owner thereof had given his assurance in writing that he would offer no opposition to the adoption of that course. The recommendations of the Medical Officer were immediately adopted, and the well will consequently no longer be a source of danger to the citizens.

PAROCHIAL AUTHORITIES CHARGED WITH CREATING A NUISANCE.

The Islington Vestry is in the unfortunate predicament of having to defend an action which has been brought against it by a parishioner, for allowing a nuisance to exist at the rear of Ashburton-grove, Holloway. For several months past the Vestry of Islington has been using a piece of enclosed land some three acres in extent at the back of Ashburton-grove as a dust-shoot, and some thousands of cartloads of refuse matter of all kinds have been deposited there, which now forms a huge seething mass, and emits foul smells, polluting the atmosphere for a considerable distance around. The inhabitants of the houses in the immediate neighbourhood have memorialised the Vestry to abate the nuisance, but no notice of their complaints has been taken. The case will come on for hearing at the Clerkenwell Police-court to-day, but in all probability it will have to be decided at the County Sessions.

THE CONTAGIOUS DISEASES ACTS.

At a meeting of the Statistical Society held last week, Mr. Stansfeld, M.P., read a paper "On the Validity of the Annual Government Statistics of the Operation of the Contagious Diseases Acts," the principal object of which seemed to be to endeavour to prove that the Army Medical Department had manufactured statistics to bolster up the Acts. In the course of the discussion which followed the reading of the paper, Surgeon-General Balfour, who was for many years at the head of the statistical branch of the Medical Department of the Army, defended the returns issued by the Department, forcibly observing that the figures, whilst he had had the management of the branch, were certainly not manufactured to suit his convictions, but that his convictions had been coerced by the figures. Mr. Miller, of the statistical branch of the Army Medical Department, also bore testimony to the strict impartiality maintained in preparing the annual returns; and Inspector-General Lawson followed on the same side. The general opinion amongst the large number of members who attended the meeting was that Mr. Stansfeld had certainly failed in his endeavour to impugn the "validity" of the returns on this subject prepared by the Army Medical Department. The opponents of the Acts are evidently at their wits' end for means wherewith to keep the opposition alive. The latest manœuvre has been to engage the services of a French lecturer, and Mr. Stansfeld's friends have had an opportunity of judging how their leader's platform platitudes sound in another language.

IMPORTANT PROSECUTION BY THE DEFENCE ASSOCIATION.

At the Chelmsford Petty Sessions, on the 16th ult., Mr. J. J. Young, who has been practising at Chelmsford as a physician and surgeon since the commencement of the present year, was summoned, at the instance of the Medical Defence Association, under the 40th section of the Medical Act, 1858, for that, on January 8 last, he did "unlawfully, wilfully, and falsely pretend to be or take or use the title of doctor of medicine, physician, and surgeon." The case was conducted by Mr. Pridham, solicitor to the Association, who called witnesses to prove that on the above date the defendant caused an advertisement to be published in which he described himself as a physician and surgeon. The defendant's solicitor contended that his client was what he described himself to be, although he admitted that his name was not on the Medical Register. The Bench considered the charge proved, and, as it was shown that he had been previously convicted of a similar offence at Ipswich, a fine of £15, in addition to costs amounting to £5, was inflicted. The defendant pleaded for a mitigation of the penalty, on the ground that a summons from another Court was hanging over his head under the Apothecaries Act; but the magistrates stated that they had nothing to do with any other court, and refused to reduce the fine. The money was at once paid. On the following Monday the same defendant was sued at the Chelmsford County Court, under the Apothecaries Act, for illegal practice of medicine, and the full penalty of £20, exclusive of costs, was recovered. The above is the first case in which the Medical Defence Association has prosecuted under the Medical Act of 1858.

THE PHYSIOLOGICAL PROPERTIES OF SQUILL AND DIGITALINE.

The following are the conclusions come to by Dr. Husemann (*Deutsche Med. Woch.*, 1875, Nos. 11—13), after an experimental investigation of the properties of squill (*Scilla maritima*). In the form of an extract, such as is employed in the German pharmacopœia, it has a very constant action on living animals. It affects the innervation of the heart and the muscles of the heart exactly in the same way as do digitaline, antiarine, and those other alkaloids which are specially known as cardiac poisons. The diuretic action of squill can only be explained by the increased blood-pressure which it induces by its influence on the heart, since no other organ is acted on by it, and it does not produce any manifest irritation in the kidneys during its elimination. The indications for and against the use of squill in the different forms of dropsy are almost exactly the same as in the case of digitalis. Extract of squill has no expectorant power due to its elimination by the bronchial mucous membrane, nor has it any antipyretic power; on the contrary, its exhibition produces a greater or less elevation of temperature. It should be noted that, according to Otto (*Deutsche Klin. Med.*, xvi.), digitaline is also a drug which excites fever, for 0·002 grammes injected under the skin produced a rigor and an elevation of temperature to 40° Centigrade, and higher a few hours afterwards, both in healthy people and also in epileptic patients. Otto found that it took about ten hours for the drug to produce its full effect, and that the period of defervescence was of about the same length; 0·06 grammes given by the mouth had a similar effect.

THE HEALTH OF PORTSMOUTH.

The annual report on the health of the borough of Portsmouth for the year 1875, made by Mr. G. Turner, the Medical Officer of Health to the Urban Sanitary Authority, is so complete in all its details that we feel bound to notice the exhaustive manner in which this gentleman has carried out the important duties entrusted to him. The tables which accompany the report are most carefully compiled, and contain really valuable information for all local purposes. The health of the borough of Portsmouth, Mr. Turner shows, from the annual rates of mortality, is exceptionally good, as in the three years 1871, 1872, and 1873 it was 18·9, 22·9, and 18·4, as against the London rates of 24·2, 21·4, and 22·5 per 1000 for the same years. Mr. Turner further observes that the necessity for a fever hospital in Portsmouth is almost daily felt, and although financial difficulties may be credited with having up to the present time prevented the erection of such a building, he is of opinion that the first outlay would be considerably diminished by the eventual savings in other directions. Thus he says, "I have seen instances in which such a hospital would have prevented the spread of fever in a house, cases in which the fever was imported from other premises, and where its spread has brought whole families on the rates. Thus not only is an extra expense immediately incurred, but the ill-health consequent upon the attack too often paves the way for future

illness; and the reluctance naturally felt to applying for parish relief once overcome, the recipient frequently developes into a confirmed pauper."

HARVEY TERCENTENARY MEMORIAL.

During the past week many substantial additions have been made to the subscription-list; the names of the donors we shall publish in the next number of the *Medical Times and Gazette*. A circular is about to be addressed to the members of the medical profession in Great Britain and Ireland, the response to which we trust will be hearty and liberal. The honorary secretaries to the fund are Mr. George Eastes, M.B., 5, Albion-place, Hyde-park-square, London, W., and Mr. W. G. S. Harrison, B.A., Town Clerk, Folkestone.

CONVERSAZIONE AT THE ROYAL COLLEGE OF PHYSICIANS.

On Wednesday evening the President and Fellows of the Royal College of Physicians held their annual *conversazione*. As usual on such occasions, a large number of the *élite* of the profession made their appearance in the College in the course of the evening. Many interesting objects were exhibited, including rare pictures and works of art of various kind. Of course scientific apparatus was not awanting, and we may safely say that the whole passed off most successfully.

DEATHS FROM STARVATION.

A return has recently been published which shows that no fewer than forty-six persons are known to have died of starvation within the metropolitan district during last year. This fact is not very creditable to our poor-law system, as it shows that parochial relief fails to reach, or be acceptable to, large numbers who urgently need it.

SIR WILLIAM FERGUSSON.

We are happy to be able to report that during the past week Sir William Fergusson has continued to improve. He has slept well; the dropsical symptoms have almost entirely passed away; and he has been able to walk daily into another room on the same floor.

PARLIAMENTARY.—NAVY MEAT—POLLUTION OF RIVERS—ARMY MEDICAL OFFICERS—THE PLAGUE AT BAGDAD—VIVISECTION—POOR-LAW AMENDMENT.

In the House of Commons, on Thursday, June 22,

Mr. Hunt, replying to Mr. Plimsoll's reference to a statement in an Admiralty paper, said that the statement should have been "that no meat is sold for human food which is not perfectly fit for human food." Meat unfit for human food is occasionally sold to soap-boilers and fat-boilers for their business. Meat that is unfit for human food shall be declared to be so at the time of sale, and a record shall be kept of the names of the purchasers.

Mr. Sclater-Booth moved the second reading of the Pollution of Rivers Bill, and promised that full opportunity should be given for the discussion of the measure at a later stage; but several hon. members objecting, the debate was adjourned.

On Friday, June 23,

Mr. A. Brown drew attention to the final report of the Rivers Pollution Commission as regards the supply of water for domestic purposes in rural districts; but the House was counted out.

On Monday, June 26,

Mr. Hardy, replying to Dr. Ward's inquiry respecting medical officers of the army appointed to the medical charge of regiments for five years prior to the issue of the last new Warrant of April, 1876, said that they were to be removed from those regiments, and sent on foreign service before the completion of the said period of five years, as the Department has now become unified, and the five years' regimental service has been abolished. All medical officers, whether formerly attached to regiments or depôt brigades, or not, are now placed on one general roster, according to their service at home, sending abroad first those who have served at home longest. The first of these has not served out of this country for fifteen years.

Mr. Bourke, in reply to Mr. Twells, said that the first outbreak of disease at Bagdad of late did not appear to have been plague; but a report had lately been received which stated that it had turned into that very dreadful disease. From the last report received from Bagdad it would seem that the plague was to a great extent worn out. There had been no deaths from it for the previous three days, and the health of the town was said to be generally good. The number of deaths in February and in March was 259, in April 1707, in May 1550, while in June they were only 143, making a total of 3659. According to Dr. Colville, the resident officer at Bagdad, it was the real plague; but he did not consider quarantine to be necessary in the case of passengers, although it might be with regard to the sending of wool. The Government would use every exertion to obtain for British shipping the favourable treatment to which it was entitled.

The Medical Act Qualification Bill and the Medical Practitioners Bill were read a second time.

In the debate on the Navy Estimates, a vote of £65,830 for medical establishments at home and abroad was agreed to.

In the House of Lords, on Tuesday, June 27,

On the motion of the Earl of Carnarvon, the Cruelty to Animals Bill was read a third time.

On the question "that this Bill do pass,"

The Earl of Shaftesbury heartily thanked the Government for having brought in the Bill. It was a marvel that they had obtained so much. He had accepted with much reluctance the introduction of the words permitting vivisection "for the discovery of physiological knowledge," but he had done so in the hope of conciliating scientific men.

In the House of Commons, the Poor-law Amendment Bill passed through committee, and was ordered to be read a third time on Wednesday, the 28th.

CANNES.

(*From our own Correspondent.*)

No Southern health-resort has, I think, such a vogue among English people as Cannes; and comparing its present size with that which it had only four or five years ago, and looking also at the amount of building still in progress, it seems as if it were not likely soon to lose the favour it now enjoys. A few words, therefore, about Cannes as it is, may be a fit sequel to the letters which I sent you about Mentone. Cannes, like Nice, Mentone, and San Remo, skirts the seashore, and faces nearly due south. Somewhat like Mentone, it occupies two bays—the smaller one to the east being fringed with houses nearly from end to end; and the larger to the west, only for a mile or two. The two bays are divided by a jutting hill, on which stand a ruined old tower and the old church or cathedral of Cannes—two prominent and characteristic objects from many parts of the country. The shore along the eastern bay is rather flat, and slopes very gradually back from the sea; on the other hand, the inhabited part of the west bay rises in rather a steep slope to a height of a few hundred feet, and is occupied chiefly by villas with large gardens, and by three or four hotels. A sheltered public garden—the Square Brougham—is situated here. The main town of Cannes (the commercial part) lies directly to the east of the hill dividing the two bays. Close under the lowest spur of the hill is the harbour, of much greater pretensions than that of Mentone. The town itself consists of one straight main street running from west to east—the Rue d'Antibes,—with some minor streets parallel to and at right angles to it. The south side of the main street nearest the harbour is open, and there is a wide space partly planted with plane-trees, and laid out as a public garden, with seats, fountains, etc. Here the market is held, and the picturesque dresses—more especially the head-dresses—of the country-people render it worthy of a visit from the traveller.

The whole length of the eastern bay is skirted by a broad and well-kept carriage-road, with footpaths or pavements on either side, which are separated from the narrow beach by a low hedge. The carriage-road to the west of the town is at some distance from the sea, and for the first half-mile beyond the harbour by no means picturesque. Further westward it runs between villas and gardens, and is overshadowed by trees;

and still further it descends into the broad plain which reaches to the Esterels. Looking at Cannes, however, from a medical point of view, what interests us is less its picturesque than its sanitary aspect; and a question suggests itself—"How is the town and neighbourhood sheltered from winds?" To this the answer is, "Very insufficiently." On the east there is a range of low hills, possibly 400 or 500 feet high, which about two miles north of Cannes bend round, and then run in a westerly direction till they join the hills which turn south and divide the west and east bays. Behind the east bay the near hills are lower, and further off the shore than behind the west; but far in the background, at a distance of eight or ten miles, there is a mountain which efficiently protects the town from the north wind, except at one or two points where it is broken by valleys.

The shelter which Cannes has on the north is very different from that of Mentone; at the latter the mountains are close, at the former many miles away. Still, there are parts of Cannes which lie sufficiently under cover of the near hills to be quite protected from north winds, especially those in the west bay.

The wind which Cannes is most exposed to is the north-west wind, or mistral, which finds its way through a gap between the northern mountains and the western range of the Esterels, and sweeps over the district at times with great violence. This wind, which makes itself felt still more severely further westward, and which is still more the bane of Hyères than of Cannes, is difficult to escape from, except by keeping completely indoors. Even places which the wind itself does not touch are affected by the currents caused by its in-draught. The mistral is a very dry and sometimes a cold wind. It may blow fiercely while the sky is perfectly clear and bright. It raises clouds of dust, and whirls them high in the air, and its duration is indefinite. Generally it blows for two or three days at a time, but sometimes even for six, eight, or ten days, falling at sundown, and rising again about 10 a.m. Mentone, though occasionally visited by the mistral, is so to a much less extent than Cannes, and the wind has lost much of its force before it reaches it. San Remo is still less exposed to it. All things considered, Cannes is a very windy place. In seven weeks this spring, during which I stayed there, I noted strong winds at different times from nearly every point of the compass, with a prevalence of easterly and north-westerly currents. Even the sea-breeze which blows in the middle of the day on sunny days is somewhat rough; but this is true of it all along the coast.

Comparing Cannes with Mentone as regards wind, I should say that while the former is the more windy, the latter, owing to the valleys which run down to it, is the more draughty of the two. With regard to temperature, although, according to the statistics of certain local authorities, the mean temperature of Cannes and Mentone is nearly the same, yet those who have lived at the two places are unanimous in admitting that the latter is the warmer of the two. Considering the more sheltered situation of Mentone and the greater amount of reflected heat which it receives from the hills and mountains which hem it in, it would be surprising if such were not the case. Many persons, especially healthy ones, complain of a sort of closeness in the Mentone atmosphere, and prefer Cannes as more open and bracing; and the same is true of some invalids, who feel oppressed and languid, as well as lose their appetites, at Mentone. At the end of March or in the middle of April, according to the season, a change from Mentone to Cannes is an excellent thing for those who have wintered at Mentone, as I can personally testify. One certain proof of the superior mildness of Mentone is the way the lemon-tree flourishes there, being, as it is, of so delicate a nature, and killed by only a few degrees of frost. At Mentone the valleys are lined with lemon orchards; at Cannes lemon-trees are scarcely ever seen. The olives, too, are smaller there than they are east of Nice. The general aspect of the country about Cannes is very lovely, especially in spring. There is very little ploughed or fallow land. Olive-trees alternate with vines, and between each row of the vines in certain parts wheat is grown in strips about six feet broad. The country being more level, the steep terraces, which have to be constructed at Mentone with such labour to carry the olives and the orange and lemon orchards, are scarcely met with at Cannes. The hills are verdant to the tops with pines and forest trees, and the warm and sheltered nooks are planted with the orange-tree, which is here only grown for its blossoms —used for making perfumes. Nearly every kind of shrub and flower grows luxuriantly out of doors in the gardens; and the Cannes gardens are unrivalled in their way. In the end of March I found roses in full bloom; in the second week of April, cinerareas, petunias, verbenas, to say nothing of pansies, various kinds of wall-flowers, and stocks, were in perfection in open beds, and as little protected as geraniums would be in England when the frosts are gone in the middle of June. In a medical paper one can only speak of vegetation in its relation to climate, but those who wish to see how climate makes gardening easy should go to Cannes.

The amount of accommodation for visitors and invalids is greater at Cannes than at Mentone, but it is still insufficient for the needs of those who flock there, and new villas are being constantly built as well as new hotels, and old hotels are being added to and enlarged. A resident at Cannes during the past winter estimates that there were nearer 3000 than 2000 visitors to it. Large numbers of the English "upper ten thousand" have their own villas, which they occupy winter after winter; and the western suburb of Cannes is a kind of Belgravia in its way. In the height of the season the number of private carriages that one meets in all directions is very large, and is an indication of the esteem in which Cannes is held.

The large preponderance of well-to-do English visitors and the great demand for accommodation have combined to make Cannes rather a dear place to live at. Prices in the shops are much higher than at Mentone, though, all things considered, the shops are better supplied and there are many more of them. Extravagant prices are asked and obtained for villas. Thus a villa was let the other day for next season for £1100. On the whole, too, the cost of hotel living is dearer than at Mentone, and there are rumours of still higher charges next winter. Fifteen francs pension per diem (board and lodging) was not considered excessive last winter at an hotel in every way inferior to a Mentone hotel, where both rooms and food were better and more liberal for 12 fr. 50 cent. a day. At one first-class hotel at Cannes last winter I am informed that a particular party of four or five persons paid £90 a week to the proprietor.

The kind of life which an invalid ought to lead is much the same at Cannes as at Mentone. The arrangement of meals, if he lives in an hotel, is exactly the same. It is just as necessary to have a south bedroom and sitting-room, and the various precautions as to dress, etc., to which I referred in my letter from Mentone require to be scrupulously observed. For such invalids as are fond of society and careless of restraint, Cannes has its dangers and temptations. In consequence of the permanent substratum of winter visitors many people know one another, and social entertainments, balls, dinners, and theatricals are common events. In these, with their attendant evils—late hours, exposure at night, and hot and crowded rooms,—invalids *do* join, and from them they suffer.

The hotels best suited to chest cases at Cannes stand at some little distance from the sea, many of them—in fact, most—on a rising ground looking over the sea and the Iles des Lérins. Of these, the Beau Site and the Belle Vue, in the western bay, though dear, are highly spoken of. The Hôtel Paullon, also to the west of the town, is too near the railway and the high-road for most invalids, though an excellent hotel for ordinary visitors. On the eastern side, the Beau-Séjour, Mont Fleury, Hôtel des Anglais, Hôtel de Provence, Richemont, and Hôtel du Paradis are all good. The Beau-Lieu hotel, about a mile to the north of Cannes, is placed rather higher than the rest, and is out of the noise and dust. Near the sea-shore, in the position of most of the Mentone hotels, the hotels Gray et d'Albion, Quatre Faisons, Grand Hôtel, Beau-Rivage, and Des Princes are much on a par. Invalids reaching Cannes for the first time ought to take the advice of a medical man before they finally settle where they will take up their winter quarters. There is one part of the neighbourhood of Cannes which has not as yet been at all utilised for the service of invalids—namely, the village of Le Cannet, about two miles and a half to the north of the town. It is beautifully situated on the side, but well under the shelter of the hills which form the northern protection of the eastern bay. From the Place in the centre of the village the eye ranges first over the luxuriant orange orchards immediately below, and then over the broad valley and grey-green olives, until it reaches the red roofs of the new suburb of Cannes, and then beyond them the Mediterranean. The natives tell you that Le Cannet feels no wind, and it is easy to believe that they are right. At present a small pension or two is all the accommodation to be found there, and there is no sign of any hotel being built, although the distance from Cannes is

not great, and there is an excellent carriage-road—the Boulevard du Cannet—all the way. No doubt in time Le Cannet will find more favour than it has as yet found, and it deserves to. Cannes has a decided superiority to Mentone in the way of drives. Not only can one go further to the east and west of the town without encountering steep hills, but there are many more excursions to be made inland—in fact, there is as much variety as most people would desire, and in every direction there are picturesque views, less grand perhaps than those of Mentone, but none the less pleasing. The only drawback to carriage-drives is the dust, which is very annoying, if there is any wind, especially close to the town. The roads are laid with limestone, and as they are seldom scraped after rain, and rapidly become dry, the powder formed by the grinding of the carriages lies on the surface in a thick layer, which, owing to its want of cohesion and its lightness, is raised by a very slight breeze. Where many carriages are passing one another the clouds of dust are a serious annoyance to the eyes and mouth. To foot-passengers, the mud which this perennial dust amalgamates into after rain is also a considerable nuisance. The state of the roads and causeways in and close to Cannes is certainly one which does not redound to the credit of the authorities. On the other hand, the water-supply is excellent; and the water itself, though occasionally turbid after rain, of good quality. There is plenty of water to keep the water-closets well flushed, and there seems to be proper provision made for supplying the laundries, so that the eager spirit with which every puddle is duly utilised by the Mentone washerwomen is not seen at Cannes. The drainage—that unsolved difficulty of growing towns—is said to be bad, and there are cries for a better system for disposing of the sewage; but I cannot say anything against it from personal observation, perhaps owing to my having been at Cannes during a period of abundant rain. I certainly did not meet with any smells comparable to those so well known to loungers on the Promenade des Anglais at Nice, or even to those at Mentone. It is earnestly to be hoped that no plan by which the sewage is discharged into the sea will be ever adopted at Cannes, or at any of the southern health-resorts. The natives have long known how profitably the night-soil can be used as a manure for olives and orange-trees, and there is plenty of land to the west of Cannes to which sewage irrigation could be applied.

The various necessaries of life, and all those home luxuries which English people abroad so often feel the loss of, can even more easily be procured at Cannes than at Mentone, and English tastes are well understood and consulted in the hotels. Carriage-hire is very moderate, and the drivers have more of French civility and less of Italian roughness than at Mentone. A one-horse carriage for two persons costs one franc for the course (from one point to another without stopping), and two francs for an hour's drive, and there is a very careful tariff by which the coachmen are bound, and which prevents much imposition. Owing to the safety of the harbour at Cannes, landing from boats is easy, and those who enjoy the sea can indulge in sailing to their hearts' content. Churches of nearly all denominations are to be met with. The English churches especially are very conveniently placed, but neither at Mentone nor Cannes have the clergy yet learnt that services of an hour and a half or longer are not the best things for invalids, or that dreary sermons or monotonous chanting have no miraculous power to keep their hearers from colds and coughs.

I should like, in conclusion, to make a few remarks on points which have specially impressed me during the past winter in reference to invalids, in the hope that they may be of use to those who have to advise patients coming to the South of France. And, first, I think everyone who is sent there should, if not in really good circumstances, be warned that living in the South is an expensive thing, and it should be put to him whether he can really afford it or not. One sees persons who are not well off sent, say to Mentone, and they are obliged to take rooms that are miserably small, perhaps up in the very roof, and with scarcely any sun, and in other ways so to pinch and spare that a great part of the benefit of their visit is lost; in fact, they may be worse off than if they had never come. Cannes, Nice, Mentone, and San Remo are all getting dearer year by year; and since, by a kind of trade-union arrangement, the hotel-keepers of the three former places have agreed to regulate their business in common by a so-called syndicate or committee, there seems little hope that honest competition will bring prices down, for as long as there are people enough to fill all the hotels, as there were last season, the syndicate will hold together. What we must wish for is an increase in the number of hotels beyond the demands of the public, and then the syndicate, like the league of the three emperors, being founded on self-interest, will, when interests diverge, probably collapse. Good pensions in the style of those in Switzerland, and kept by English people, are much wanted; and hotel-keepers, if they would avoid cumbering their rooms with unnecessary decorations, expensive clocks, and such-like, might be able to charge much less without losing their profits. Those persons who wish to live moderately in the South must not mind a little bargaining as to terms at the outset, for even at Cannes a little pressure will, if firmly applied, sometimes obtain an appreciable reduction; and it is better at the beginning of the season to go to another hotel than to submit tamely to charges which, once settled, will be a burden throughout the winter. To persons at a distance these remarks may seem trifling, but they will find their application if they ever come face to face with the reality.

Another point which I think deserves attention is this: that invalids should not be sent to the South alone. It is not uncommon to meet young men with incipient phthisis who are all by themselves. In such cases home-sickness, with considerable depression, sometimes developes, especially if the weather is bad, and they have to keep indoors. In other cases the patients, having no one to look after them, become careless about their health, and feeling stronger under the influence of the climate, over-exert themselves in walking and dancing, frequent hot rooms, go out at night, and (at Mentone) are tempted sooner or later to go over to Monte Carlo and try their luck at the gambling-tables. Lastly, if such invalids get laid up from their indiscretions, they have to depend on the tender mercies of the hotel people and of any friends they chance to have made for assistance and nursing, and the feeling of solitude becomes, as I have seen it, aggravated to a degree which reacts most injuriously on the sufferer. I strongly advise my medical brethren, therefore, not to let their patients leave England unless they know they will be well looked after by some friend or relation.

The third and last point about which I would speak is that of medical advice on arrival in the South. I have met with several persons who have been sent out by their doctors at home with the simple instruction to go to Cannes or Mentone for the winter, and without any orders what to do when they reached these places. I am convinced that every invalid should be seen once at least by a medical man as soon as possible after his destination is reached, and this is the more imperative if it is a first visit to the particular place. By so doing the physician can advise as to the best situation for the patient to live in; he can regulate his habits in accordance with his state and the character of the climate; while if at any time the disease makes fresh progress he has the means of making the necessary comparison with the previous condition, and possibly of allaying much unnecessary apprehension. It is quite true (as I think Dr. T. Williams has remarked) that invalids require less medical attendance in the South than they would in England; but they cannot dispense with it, as some seem to think, altogether. And I believe that one medical examination at the beginning of the season is the most likely way to avoid several later on, and is, therefore, the most economical proceeding in the long run.

In leaving the subject of Cannes and southern watering-places, I would, as a last word, warn medical men not to let their patients return to England (as they are very apt to do) too early. Those who take advantage of the first fine days in the end of March or the beginning of April to quit their winter home are pretty sure to suffer in consequence. Several people who left Cannes this year in the middle of April were laid up seriously ill in Paris on their way home. If Mentone prove to be too hot when April comes, Cannes will be, probably, found cooler and more bracing. By waiting to the end of April, or even to the middle of May (which, this season at least, was not a moment too long), there is more chance of settled weather in the North, and less risk of undoing the winter's work. It can be no hardship to stay awhile where all is so beautiful; where the air is mild and balmy both night and day; and where Nature wraps herself in her choicest mantle of leaves and flowers.

Mr. Haviland has been re-elected Medical Officer of Health to the Northamptonshire Combination of Sanitary Authorities.

ILKLEY WELLS HOUSE SANATORIUM.

Wharfedale has long been famous as a place for health and pleasure seeking. Its scenery is beautiful; its air healthy and bracing. So much is this the case, that within a few years its chief village—Ilkley—has completely changed its character, and from being merely a country village has become an important health-resort. In the village itself there are now many boarding establishments, in most or all of which hydropathy is also practised under skilled superintendence; but in all of them, as far as we know, invalids seeking only rest and change of air may find what they want without undergoing any systematic hydropathic treatment.

By far the most important of these Ilkley sanatoria is the institution known as Ilkley Wells House. This, which within a few years has passed into new hands, has undergone so many improvements that it deserves a word of comment at our hands.

Ilkley Wells House is easy of access, for it is only about five minutes' walk from Ilkley Station, which may be approached either by the North-Eastern or by the Midland Railway. It is situated high above the village on the borders of the moor, which here stretches across as far as Keighley, and is close to the road to the latter town, by which access to the moors is easy. The house is built in the Italian style, in form a hollow square. Unfortunately, the exigencies of space have necessitated the occupation of a portion of the inner square with buildings of various kinds; but the same style of building allows of handsome corridors and a spacious entrance-hall, which are nicely carpeted and fitted up. From the drawing-rooms fine views of the valley are to be had, the house standing on ground which is partially terraced towards the side of the valley.

Here both patients and visitors are received, and, as we understand, the former may still remain under the care of their ordinary medical attendants: Dr. Leeson, the proprietor and resident physician, undertaking to fulfil any instructions transmitted to him. The arrangements for carrying out hydropathic treatment and for ordinary bathing purposes are now exceedingly complete and remarkably well arranged. They have been designed with much care, and constructed with great elegance, so that every facility is given for carrying out hydropathic treatment when deemed advisable. The water-supply is derived from Ilkley Old Wells, celebrated from time immemorial. During the winter months the house is warmed by a warm air apparatus, so that it is equally eligible in winter or in summer as a residence.

FROM ABROAD.

The Spirophore in Asphyxia.

At the meeting of the Académie de Médecine of June 20, Dr. Woillez, of the Charité, gave a description of the new apparatus which he has invented for the treatment of asphyxiated persons, and especially the drowned and new-born infants. He detailed several trials he has made with it upon himself and on dead bodies, a full account of which is published in the *Bulletin*. The apparatus consists of a zinc cylinder of sufficient size to admit the body of an adult as far as the neck, and furnished with wheels to enable it to be rapidly conveyed. It is placed almost horizontally, with a slight inclination, and is hermetically closed below and open above. By this upper aperture the body is passed in, closure of the apparatus then being effected by the aid of a diaphragm fixed to the edges of the opening—the head, thus left free, being well supported. An impermeable cloth is passed closely around the neck, so as to exclude the air as much as possible. The air contained in the apparatus around the body of the patient is then withdrawn by means of a pump having a capacity of about twenty litres, and communicating by means of a large tube with the interior. In order that experiments may be watched, a window is let into the anterior part of the spirophore. When at work a portion of the air is withdrawn from the interior of the apparatus, and after a few seconds returned to it—these alternate movements being repeated as often as desired. On aspiration being put into force, the abdomen, lower ribs, and the sternum are suddenly raised, all the cavities of the body being dilated, and the air gaining access through the orifices of the respiratory and digestive passages, which remain in contact with the air. It was found on admeasurement that in this way about a litre of air could be introduced at each stroke of the piston. M. Lerebollet, who witnessed the experiments, states (*Gaz. Hebd.*, June 23) that the respiration thus induced is especially diaphragmatic, and therefore highly favourable to artificial respiration; but he finds that the inspiratory efforts are rather sudden, while a considerable quantity of air may penetrate into the stomach and intestinal canal: on the other hand, he does not believe that any ill effect will be produced on the general circulation by the amount of vacuum produced, as scarcely one-twentieth of the air surrounding the body is removed by the aspiration. Dr. Woillez himself, M. Collin the instrument-maker, and several of his workmen, have tried the apparatus without experiencing any inconvenience. The spirophore is, however, a cumbrous instrument, difficult to move about, of a considerable price, and requiring special knowledge to work it; while its employment prevents the use of the various means for exciting the various reflex actions which are found so useful in these cases.

In the discussion which followed, Prof. Depaul observed that he could not quite partake of the enthusiasm which Dr. Woillez felt for his apparatus, and he thought that he made too light of the means which are actually employed in asphyxia—certainly so as regards the asphyxia of new-born infants. The causes of asphyxia in new-born infants are not the same as in a person who is drowned. Sometimes it depends upon lesion of the lung, and then, do what one will, the child dies. In other cases there may be an affection of the nervous centres, and, after uselessly employing various means, we find at the autopsy large effusion at the convexity or base of the brain. We cannot know beforehand what cases we may have to do with; but it may be affirmed that, when there is no organic lesion, we can in the immense majority of cases restore the child to life by the ordinary means. Dr. Woillez's fears that insufflation may cause rupture of the pulmonary vesicles are groundless; for these vesicles possess great power of resistance, so that M. Depaul, in the numerous experiments he has made, has never succeeded in rupturing them. Vitiation of the air, which he also thinks may be produced by mouth-to-mouth insufflation, is yet less to be feared in the case of the infant than in that of the adult, especially if we take the precaution of well emptying the chest, and insufflate immediately after taking a deep inspiration, before the air has had time to undergo alteration in the respiratory passages. This means, which is daily employed with success, sometimes is attended with most extraordinary results. M. Depaul refers to a case which occurred to himself, when called to see a lady about whom unnecessary alarm arose. He inquired about the infant, which had been born about an hour, and on its being brought to him, he succeeded, after two hours of patient insufflation, in restoring it to life. Such cases are, in fact, by no means rare.

Prolapsus Ani among Recruits in Galicia.

In the *Militärarzt* (a supplement to the *Wien. Med. Woch.*) of March and April, Dr. von Fillenbaum, a regimental surgeon, contributes a curious account of a somewhat rare affection very frequently purposely produced in Galicia for the purpose of escaping military service.

In none of the provinces of the Austrian Empire does so strong a desire to escape military service exist as in Galicia, which contains a large Jewish population. Recruits undergo a variety of self-inflicted injuries, under the instruction of individuals who almost make an occupation of teaching them. Some of these injuries are rarely met with in other parts of the empire. Chief among them is prolapsus ani, for which, according to the Military Statistical Annual, 283 recruits were rejected in Galicia in 1872, the entire number rejected for the whole empire being 420. Thus 67 per cent., or more than two-thirds of the cases, occurred in Galicia; the only other military command in which numerous rejections also took place from this cause being Buda-Pest, where they were 110, or 26 per cent. In several of the other commands (twelve in number in all) there were no cases at all, while in others they varied from one to five, except in Prague, where they reached fourteen. The numbers in Galicia are also on the increase, having been 243 rejections in 1871, and 283 in 1872; and

these do not represent all the cases, as other recruits, after having been received and found affected with the disease, were sent to the hospitals for treatment, eighty-five cases having been treated in the various hospitals during 1872, and forty-six of these being in Galicia. Most of the cases also treated in the other hospitals were natives of Galicia.

As prolapsus ani is only met with ordinarily as a temporary disease of childhood, or as a secondary consequence of other disease in old age, it may be well asked how it comes that it occurs in strong young men from twenty to twenty-three years of age; so that among several thousand recruits several hundred have to be exempted on account of this disease. There can, in fact, be no doubt that, in the vast majority of cases, it is purposely produced. This is supposed to be effected by the introduction of sponges, and their forcible removal when distended with fluids, the procedure being frequently repeated; but in none of the cases has this actually been proved to have occurred. As regards treatment of the disease, it has been found that when the affection has existed a year or more, and has become complicated with venous hæmorrhage, all curative measures having the object of compelling the recruit to serve have been of no avail. But in more recent cases, when no important changes in the parts have occurred, the cases can frequently be efficaciously treated. Bandages and similar appliances are, however, useless; and the object must be to render the voluntary reproduction of the prolapsus after it has been returned as painful as possible. The best mode of effecting this end is to pencil (under chloroform) the mouth of the anus with fuming nitric acid. The eschar falls off in from four to twelve days, leaving a simple granulating sore. Five out of six cases so treated by Dr. von Fillenbaum were cured, no ill consequence ensuing.

Retention of Foreign Bodies within the Brain.

Dr. Carpenter, Physician to the Kansas State Prison, relates (*American Journal of Medical Science*, April) the following extraordinary case:—Thomas W., aged twenty-eight, who had been an inmate of the Kansas Prison for six years, and who had exhibited signs of insanity, sent for Dr. Carpenter to remove some wires which he said he had been putting into his head. On examination, a small punctured wound which he had made with an awl was found about an inch above the top of the right ear, within which a metallic substance could be felt. After an incision had been made across the wound, a piece of "No. 20 broom wire" was removed with great difficulty by a bull-dog forceps. It was quite straight, and four inches and three-quarters in length. It had been retained twenty-four hours, causing a severe headache, which disappeared half an hour after its removal. No untoward consequences ensued, and about four weeks afterwards he drove an awl downwards through the top of his head up to the handle, which he allowed quietly to be withdrawn. No ill-effects resulted. Although watched, he managed to get hold of another piece of broom wire, and "during the night thrust it into his head at the lateral opening. This wire must have transfixed both hemispheres, as the skull could be easily felt at the opposite side, resisting the passage of the wire, he having, in the presence of all, tried repeatedly to thrust it further into the head. This time he became paralysed, but after awhile recovered the use of his limbs, while the disposition to suicide seemed to have passed away. He declared that before passing the wire he had put a needle into his head; but little attention was paid to this at the time. He served out his term of imprisonment, and after he had left the prison he poisoned himself with morphia, apparently while taking it to procure sleep. At the autopsy,

"Lying side by side, embedded in the medullary substance of the middle lobe of the right hemisphere, were a piece of No. 20 broom wire, two inches in length, and a large button-needle, with a piece of linen thread attached. The end of the wire slightly protruded, but the needle and thread were entirely within the membranes, and firmly adherent to them. Dividing the lobe along the track of the wire and needle, with expectation of seeing at least traces of the *first* wire, which he had a score of times thrust in and out at this opening in the middle lobe before many witnesses, to my astonishment there was no trace of injury beyond the length of the needle and *last* wire. . . . On removing the top of the cranium, I had observed the end of a piece of wire, similar to the others, protruding above the dura mater: and on examination I found it had entered to the right of the sagittal suture, and posterior to the coronal suture, descending vertically, so that its lower end was felt resting upon the dura mater in front of the fissure of Sylvius. It was in close proximity to, but did not wound the longitudinal sinus and the corpus striatum. It traversed the superior cortical portion, the internal boundary of the corpus callosum, and the medullary section. Upon following up the track of the wire, which was two inches and three-eighths in length, we came upon an imperfect fourpenny fishing nail, flat, pointed, and headless, about one-fifth of an inch in width at its broadest part, suspended vertically side by side with the wire. The extent of softening along the course of the bodies last described was not so extensive as around those of the middle lobe, but all were more or less insulated by a gelatinous substance closely adhering to them."

The three wires that had been inserted in the brain measured together fifteen or sixteen inches, and the two pieces removed after death between four and five inches, the nail measuring two inches and a quarter, and the needle one inch and five-eighths. The man was strong, healthy, vigorous, intelligent, well-informed, and witty, and of kind, social qualities to the last, having a fine manly figure, and a well-developed brain, which weighed fifty-six ounces "after drainage of the first extreme congestion."

Unfortunately, so little precision is observed in the dates during the narration, that we are unable to say how long the patient lived after the introduction of the foreign bodies; but in the title to his paper Dr. Carpenter states that these were retained in the brain for several months.

REVIEWS.

Our Medicine Men: a Few Hints. By E. Strickland Constable, Wassand, Hull. Kingston-upon-Hull: Leng and Co. Pp. 699.

Most of us must have amongst our acquaintance some fond and uxorious father of a family who is blessed with a clever baby. All the little phenomenon's "georgy-porgy," "talky-palky," all his infantile tattle, is treasured up and recited, to the vexation of everybody who comes to the house. As the child grows up he is not properly snubbed and told to hold his tongue, but is allowed to prattle on, giving his free and independent opinion on all topics brought forward, neglecting his Latin grammar, making collections of Joe Miller's jokes, getting a smattering acquaintance—of course, a second-hand acquaintance—with authors and their opinions on every subject, divine and human. Should this big baby (for the ways of Providence are inscrutable) be preserved to manhood, then he will be sure to write a book—and such a book as lies before us. The motive for writing does not signify. "A few years ago," says the author in his preface, "I thought a child of mine would have died from vaccination." This led him to read about vaccination, and, whilst reading, to jot down his thoughts on that subject, "together with others leading from it." The writer calls the book "Hints," for he says that any subject whatever is but part of an infinite whole, and branches out into innumerable other subjects to infinity. Nature draws no lines; absolute definitions are impossible; and it is impossible to say all on any subject, and absurd to attempt it. Hence we are prepared for a diffuse and indefinite book; and we are further warned by the author that "proof is often expected when only hints can be given. There is much confusion of the mind," he continues, "about proof and certainty. We do not live by certainty, but by faith." Nothing is "certain" in the sense that no intelligent person can be found to doubt it. Still he admits a "practical certainty," such as most men are content to act upon. Moreover, he affirms a "subjective certainty," such as that which impels all mankind, except a few philosophers and criminals, to believe in God.

Thus, then, we have a book of disconnected wandering assertions on all subjects, great and small; but no proof, save the quotations of all sorts of "authorities" or opinions of authors, with no reference to the book or source, with the authors' names often grievously misspelt, and seasoned with plenty of jokes from Artemus Ward, Sydney Smith, and even from the ancient Aryan collector yclept Joseph Miller.

The earliest chapters in the book are really an attack on vaccination, in which all the alleged ill consequences (which have been treated with something like scientific precision by Siljestrom) are brought forward in the shape common in the "penny dreadful" publications of the Anti-Vaccination

League. "Dr. Garth Wilkinson," it says, "(whose writings Emerson seems to admire for insight into truth more than those of any other Englishman) reckons the deaths from vaccination to have been more than 90,000 in the last forty years; but it is very difficult to understand how the British public can have allowed such a massacre of the innocents."—P. 52. Here we ask, Is the author ironical? Very "difficult" indeed! But the fact is that the British public act upon that kind of practical certainty which our author describes, which induces them to adhere to vaccination.

The author gives, as successive headings to his chapters, "The Superstition that a Person will never have the same Disease Twice"; "Medicine not a Science, a Hint or two about Titles, a Hint or two about Hereditary Legislation"; "Infection, Vice, Spiritualism"; "Germ Theory of Disease," etc., etc. His French quotations are misspelt; he quotes Maudsley, Bastian, and others, but never gives their names aright, nor refers to chapter and page of any book. He raves about the germ theory, and the respective shares of filth and of specific infection in the etiology of disease, which he seems utterly incapable of comprehending. He does not hesitate to speak of the "highly educated medical scoundrel," and "the wholesale medical murderer, who brings death to thousands by preaching the innocuousness of everything that produces pestilence and disease." (These "murderers" are persons like Budd, Simon, and others, who teach that though filth is the soil, yet that many diseases require a special germ; of course they are the warmest advocates of cleanliness, on the ground that it gives the disease-germs no soil to strike root in.)

In the latter part of his book the writer goes on to eulogise Christianity and the spirituality of St. John's Gospel. We are willing that the big baby should attack us and call us murderers, but we would rather do without his advocacy of Christianity. Does he remember Hogarth's story of the soldier who was discussing the effects of a threatened French invasion with a poor devil confined in gaol for debt. "What I fear for," said the prisoner, "is our precious liberty." "Ay, but," said the soldier, "what will become of our most holy religion, damme?"

Army Medical Department Report for the Year 1874. London: Harrison and Sons. 1876.

Within three months of publishing the report on the health of her Majesty's troops for the year 1873, the Army Medical Department has issued its Report for the year 1874. This commendable activity has apparently been assisted by the decrease in the quantity of matter published, as the volume now before us is not more than half the size of its predecessors.

The statistical report shows that the average strength of the troops serving in the United Kingdom during the fifty-two weeks ending December 25, 1874, calculated from the weekly returns of sick, was 86,837; the admissions into hospital in this number were 73,001; the deaths in hospital, and those which occurred out of hospital, were 735; throughout the year the average number of men always in hospital was 3351. The proportions per 1000 of the strength represented by these numbers are—of admissions 840·7, and of constantly sick, 38·59. In addition, however, eighty-four deaths occurred among men detached from their regiments; the average number of men so detached is given in the Adjutant-General's returns as 6361. The average strength of the force serving in the United Kingdom was, therefore, 93,198, and the total number of deaths 819, being at the rate of 8·79 per 1000 of the strength. The rate of admissions is 81·5, and that of deaths 0·53 per 1000 men in excess of the corresponding rates of the previous year, whilst both are in excess of those of the average of the five preceding years. The reasons for this increase are sought to be explained by various circumstances. The fall in the rate of admissions for venereal diseases, which followed the promulgation of the Royal Warrant of October, 1873, continued throughout 1874: the increase in the rate of admissions for all diseases together is, therefore, in spite of the operation of a cause ostensibly tending to lower the rate. The radical change which took place in this year, in the system of hospital management and medical attendance on sick soldiers, by the substitution of station for regimental hospitals, is declared not to be responsible for the increase, though it is admitted that, for some time after the establishment of station hospitals, a temporary increase in the number of admissions took place at certain stations. It is suggested that the increase should rather be ascribed to the unfavourable causes affecting the health of the general population in the kingdom in 1874, as the returns of the Registrar-General give the proportion of deaths for 1873 as 21·2 per 1000, against 22·3 in the year under notice. Again, the rate of admissions and of deaths in 1874 was, no doubt, somewhat raised by the circumstance that many invalids from abroad, instead of being sent to Netley Hospital, joined their depôts, and the records of their admissions and deaths were not always kept distinct from those of the other soldiers; in many instances, probably, their illnesses were returned among those of the United Kingdom, the result being that more admissions and deaths were attributed to the force serving at home than were due to illness contracted there, and also that the rates of mortality due to service at foreign stations were consequently a little understated.

The benefits accruing from the working of the Contagious Diseases Acts in this country are again shown by the following statement:—For the first group of fourteen stations, which contains all those under the Contagious Diseases Acts, the average rate of admissions for primary venereal sores is 42·3 per 1000 of the strength, a reduction of 8 per 1000 on the corresponding rate of the previous year; for the second group of fourteen stations, the average rate of admissions is 88·7 per 1000 men, showing a reduction of 13·3 per 1000. The rate per 1000 of the strength constantly in hospital for primary venereal sores is 3·11 in the first, 6·89 in the second group. If the stations in the United Kingdom are divided into two groups, the first containing only the fourteen in which the Acts are in force, and the second comprising *all* other stations, the rate of admissions for primary venereal sores in the subjected group is 42·3, and in the unsubjected 66·1 per 1000 men. From the results in the present year it would appear that soldiers stationed where these Acts are in force are now more favourably placed for the avoidance of gonorrhœa than are those stationed in other districts. This was not shown by statistical evidence in the first years after the Acts in question came into operation. The returns of admissions for gonorrhœa and its sequelæ were in 1874, at fourteen stations placed under the Contagious Diseases Acts—average strength, 48,136; admissions, 3353; ratio, 69·7 per 1000. At fourteen large stations not under the Acts—strength, 18,879; admissions, 1593; ratio, 84·4 per 1000. At all stations together not under the Acts—strength, 38,701; admissions, 3057: ratio, 79 per 1000.

The Appendix in the present volume, which is small by comparison with previous years, contains a topographical account of the Persian Gulf and the valley of the Euphrates and Tigris, by Surgeon Evatt, M.D.; and papers on "Chloroform and Ether at Netley," and "A Case of Fungus Hæmatodes," by Surgeon-Major Porter; and "A Case of Aneurism," by Surgeon-Major Roberts.

The late Sir J. Cordy Burrows, F.R.C.S.—The will of this gentleman, who died at Brighton on March 25, has just been proved by his only child, Mr. William Seymour Burrows, M.R.C.S., the acting executor, the personal estate being sworn under £5000, the whole of which he has left to his wife and son, with the exception of thirty guineas to his attached friend Mr. J. A. Freeman, with which to purchase a ring in remembrance of him.

At the Guernsey Police-court, recently, Dr. de Lisle, having been summoned as a witness in a criminal case, refused to be sworn and give evidence until his fee was guaranteed to him. Dr. de Lisle quoted "Taylor's Medical Jurisprudence" to show that, although a medical man is bound, as a matter of public duty, to give evidence as to facts which may have come within his knowledge, he is under no such obligation when his opinion as a skilled witness is required. The Bailiff of the Court, however, stated that the authority quoted did not refer to the law in Guernsey; and, as Dr. de Lisle still refused to give evidence, he was committed to prison for two days, but, after having been detained for two hours, he promised to give evidence at the adjourned hearing of the case, and was set at liberty. In a letter to a local paper, Dr. de Lisle states that he takes his stand of action from no disrespect to the law of the land, but in accordance with what he believes to be the law as to medical witnesses in police-courts. The Bailiff appears to have been somewhat precipitate in his action. If the law of Guernsey differs from that of England as regards medical witnesses in police-courts, the Bailiff might have said as much, or cited an authority. In all probability Dr. de Lisle would then have given his evidence without requiring the Court to assert its authority by any extreme measures.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, MAY 16.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

REPORTS ON SPECIMENS.

THE report of the Committee on Morbid Growths upon Mr. Maunder's specimen of mammary tumour was read by Mr. Wagstaffe. So far as the condition of the specimen allowed of examination, the tumour had the characters of scirrhus. Reports from the same Committee were also read upon Dr. Morison's specimen of disease of pulmonary and tricuspid valves, and on Mr. Lennox Browne's specimen of ulceration of the larynx. In the former case the reporters concurred with the exhibitor in every respect; in the latter the result of examination showed no evidence of tubercle or syphilis in the seat of ulceration.

CIRRHOSIS OF THE LIVER.

Dr. MURCHISON exhibited a specimen from a child nine years of age. The specimen exhibited the usual characters of the above-named affection. Clinically, the disease began with dyspeptic symptoms, morning vomiting, with, at the end of about a month, ascites. Tapping was twice performed, and death took place from exhaustion. Dr. Murchison remarked upon the acute course of the disease in this case, which also afforded an illustration of the fact that in children hepatic cirrhosis may be traced to the same starting-point as in adults. This child was the son of a publican, and had been in the habit of taking wine before meals. Niemeyer mentions, on the authority of Wunderlich, instances of cirrhosis in "two sisters, aged eleven and twelve years"; both "were great schnapps-drinkers."

DISEASE OF THE AORTA.

Dr. BURNEY YEO showed a remarkable specimen, in which a congenital malformation of the aorta was combined with extensive acquired disease, resulting in extreme stenosis of the vessel. The specimen was removed from a boy, ten years of age, who was first seen as an out-patient on February 5, with a history of cough and dyspnœa of three weeks' duration. There was a loud, harsh, prolonged murmur audible all over the chest, and evidence of cardiac hypertrophy. The pulse was very rapid, and the temperature fluctuated from 98° in the morning to 103° in the evening; these oscillations occurring regularly for a long period. There was extreme pallor and emaciation. The patient was admitted into the hospital, contracted scarlet fever, and was removed in a dying condition. A post-mortem examination was obtained, and there was found to be extreme contraction of the aorta just above its valves, the narrowing being greatly increased by a thick layer of vegetations. Just above the constriction was a pouch the size of a hazel-nut, and the vegetations extended into the large vessels given off from the aortic arch. The left ventricle was hypertrophied, and the visceral pericardium was coated by lymph. The pulmonary artery was bifurcated, about three-quarters of an inch above the semilunar valves, and Dr. Yeo thought that the posterior pulmonary trunk probably aided in producing the contraction of the aorta. There was no history of rheumatism or chorea. In reply to Dr. Greenfield, Dr. Yeo stated that the specimen was too mutilated to show any ductus arteriosus. There was no evidence of ulceration.

LIVER FROM A CASE OF INFANTILE SYPHILIS.

Dr. T. BARLOW showed a recent specimen. The child was twelve weeks old, and came as an out-patient to the Hospital for Sick Children with well-marked signs of congenital syphilis. There was marked snuffles, desquamation on the face and legs, and symmetrical sores on the nates, and, in addition (about a week after admission), some thickening and enlargement of phalanges of the index-fingers and of the lower end of the ulna. The spleen was large, but the liver was not abnormal in size. The child died from asthenia, and at the post-mortem examination the liver alone of the internal viscera was found to be affected. On the surface of this organ were some depressed areas, about eight in number, corresponding to circumscribed pale patches, differing but little in appearance from the surrounding tissue. The capsule was thickened over two of these nodules. Dr. Barlow remarked that the specimen served as a connecting link between the ordinary form of gumma and the fibroid patches seen in acquired syphilis. It bore also upon one of the propositions laid down by Mr. Hutchinson, the child still exhibiting secondary symptoms, and yet the liver containing gummata which, from the fact of their undergoing retraction, were probably receding.

SARCOMA OF THE SCLEROTIC.

Mr. NETTLESHIP brought forward a case of sarcoma of the sclerotic. The patient, a male, forty-two years of age, was first seen in August, 1874, having then a firm tumour in the ciliary region of the sclerotic of the right eye, slightly overlapping the cornea. The eyeball was congested, the cornea hazy, and tension was increased. There were all the symptoms of glaucoma, except that the anterior chamber was not shallow, and the pupil was not dilated. On removal there was no evidence of intra-ocular disease to the naked eye. There was much blood extravasated between the choroid and the sclerotic. Microscopically, the growth, which was composed of rather large, closely packed spherical cells, was seen to have extended through the sclerotic to the iris, and it was interesting to note that the cellular infiltration was most abundant in the parts where the tissues were the least compact; invading thus the part between the sclerotic and the ciliary muscle, but not affecting the muscle itself, and passing forward from the suspensory ligament of the iris quite to the pupillary border of that structure. The outer margin of the cornea was also infiltrated. There was cupping and partial atrophy of the optic disc. The case showed how the symptoms of glaucoma depended upon the parts involved rather than upon the extent of the growth within the eyeball.

TUMOUR OF THE SCALP.

Mr. BUTLIN exhibited a tumour of the scalp, which occurred in a woman forty-eight years of age, under the care of Mr. Callender, at St. Bartholomew's Hospital. The tumour was of the size of the fist, and situated over the occipital and parietal bones. It was said to have existed for many years, but during the last two years it had increased in size and become ulcerated. It was partially removed, and was found to be composed of a large cyst, probably sebaceous, filled with growths of a papillomatous or epitheliomatous nature.

LYMPHADENOMA.

Dr. GREENFIELD exhibited specimens and drawings from a case of lymphadenoma, taken from a female forty-five years of age, under the care of Dr. Peacock, who was admitted with a hacking cough, and a history of progressive emaciation and much weakness. There was enlargement and induration of the cervical glands, and several rounded tumours on the skin, which diminished in size before death. In the left groin there was a mass of enlarged glands infiltrating also the skin, and the femoral vessels were completely invested in a mass of new growth; whilst a chain of enlarged and indurated glands accompanied the iliac vessels. On the right side the inguinal region was also occupied by a mass of large, firm, and slightly pigmented glands. Some large masses of glands likewise occurred in front of the spine; they were for the most part of yellowish-white colour, and tolerably soft. Others, especially the mesenteric, were deeply pigmented. Similar enlargement of glands occurred in the mediastinum, axilla, and neck. Sections of the cutaneous tumours showed little else but thickening and induration of the skin to the naked eye; but microscopically the whole cutaneous tissues were found at these spots to be infiltrated with lymphadenomatous growth, especially around the sweat-glands and hair-follicles. The lower lobe of the right lung was almost wholly consolidated, hard, and nodulated; the pulmonary tissue was infiltrated and pigmented, giving the cut surface a marbled appearance, varied by sharply outlined nodules. At the root of the lung was a mass of white infiltration, and great thickening of the vessels and bronchi. Similar growths occurred in the left lung. The spleen was greatly enlarged, weighing sixty-three ounces, the splenic pulp being much increased. So far as he knew, this was the only case of lymphadenoma in which the skin was infiltrated, and he had brought it forward on that account, and also in order to raise the question as to how far such cases are to be considered examples of true Hodgkin's disease.

Dr. TAYLOR asked if there was any leucocythæmia in this case.

Dr. GREENFIELD replied that there was no note as to examination of the blood during life. He had examined the blood after death, but had found no excess of white corpuscles. He did not think that fact conclusive.

Tuberculosis of the Spleen.

Dr. Turner showed a specimen of tuberculosis of the spleen. The patient was admitted into St. Thomas's Hospital under Dr. Peacock's care, with a history of an illness of one month's duration. He was much emaciated; the temperature ranged from 99 to 101°, and subsequently reached 103°. The spleen was notably enlarged. Four days before death he became delirious, and sank into a comatose condition. At the autopsy there was found general tuberculosis, meninges, lungs, kidneys, etc., presenting miliary granulations. The spleen weighed fifteen ounces, and was completely stuffed with caseous nodules of the size of large peas, some of which were softening. Their yellowish-white colour contrasted strikingly with the dark-red splenic pulp. The liver also contained some large tubercular nodules, and there were some ulcers in the ileum.

Dr. Barlow did not think this condition of spleen so exceptional. He had met with some examples in children in which the spleen contained several caseous masses, some of them softening.

Dr. Green also thought the condition not very peculiar.

Dr. Greenfield had not met with a similar case; the tubercles in the specimen, which had somewhat lost its character by keeping, appeared of very uniformly large size and regular arrangement.

Sclerosis of the Spinal Cord.

Dr. Gowers exhibited sections and drawings obtained from two cases of the above disease. The one was an example of locomotor ataxy, showing uniform sclerosis of the posterior columns throughout the whole length of the cord. The patient had been under observation upwards of a year, and had exhibited inco-ordination of movements of the arms and legs, without loss of power and with slight impairment of sensation. The second case was that of a young man who died after a series of epileptiform convulsions. In this case there was no history of any ataxic symptoms, certainly none of the arms. The sclerosis in the dorsal region was confined to the posterior median columns, and in this it bore out the statement of Pierret that in such cases the lesion is not productive of ataxy, but is to be regarded as an example of ascending degeneration from disease in the lower portion of the cord. In this case in the lumbar region there was sclerosis of the posterior columns. There may have been some ataxy, but if so it must have been to a very slight extent, for the existence of the sclerosis was only ascertained accidentally in examination of the cord after death.

Cerebral Aneurism.

Dr. Gowers also brought forward a specimen of cerebral aneurism, which presented many features of clinical and pathological interest. He gave the following history of the case:—A young woman, twenty-one years of age, the subject of chronic renal disease, was admitted into the hospital for paralysis and epilepsy, with left hemiplegia of one month's duration. The lower part of the face was paralysed, to voluntary movement almost absolutely, but in emotional movements there was scarcely any difference between the two sides. The onset of the hemiplegia was sudden, and apparently without loss of consciousness. She improved during three weeks, when she was attacked with epileptiform convulsions, which recurred during three days, and death took place after only twelve hours' coma. At the post-mortem examination the kidneys were found to be large and white, and the mitral valve was fringed with vegetations. There was an old caseous infarct in the spleen. The brain was the seat of two hæmorrhages, one old, and the other recent. The former, indicated by a chocolate-coloured clot, was seated in the upper part of the right transverse frontal fissure, the convolutions being separated by it. To this the hemiplegia was evidently due. It was also interesting as being in the region assigned by Ferrier to be the centre for facial movements. The other hæmorrhage occurred in the white matter, outside the optic thalamus and corpus striatum, reaching as far as the fissure of Sylvius. At this spot was an aneurism, seated on the second branch of the Sylvian artery. The blood had found its way into the lateral ventricle, a thin band of clot lying in the sulcus, between the thalamus and corpus striatum, and then passing through the foramen of Monro, to occupy precisely the same position in the left lateral ventricle; a similar thin clot, continuous with this, lay in the third ventricle, the iter, and the fourth ventricle, where the largest quantity of blood existed. This disposition of the coagula showed that the blood must have been slowly effused, and have trickled in the direction of least resistance. Besides the two aneurisms which had ruptured, both found on the Sylvian artery, were two others, much smaller; and their occurrence on the branches of the same vessel, and that the most prone to embolism, favoured the view first propounded by Dr. Church, that such aneurisms depend upon embolism, and are associated with endocarditis. In this case there was superficial endocarditis, and an embolus in the spleen, whilst the other arteries of the brain were healthy. The not uncommon rupture of aneurisms into the substance of the brain, rather than externally, might be accounted for by the thickening which occurs in such cases in the superjacent subarachnoid tissue, and by the slowness of rupture favouring disintegration of the brain-substance, the disintegration thus opening up a path for the blood.

Dr. Greenfield did not think slow hæmorrhage from rupture of a cerebral aneurism was exceptional; he could recall two cases in which there was the same slight effusion into all the ventricles as in this case. The hæmorrhage appeared to have occurred into the nucleus tæniformis, which he believed was not uncommon.

Dr. Gowers said the hæmorrhage was wholly outside the lenticular nucleus, showing conclusively that it could not have occurred from one of the internal vessels.

The President mentioned a case of aneurism of the ulnar artery in consequence of embolism, in a boy of sixteen years of age. There were vegetations in the mitral valve and an infarction in the spleen.

Congenital Heart Disease.

Dr. Barlow showed two specimens. The first was a case of a male infant, who, when three months old, was brought to the out-patient department of the Hospital for Sick Children. He was then the subject of rickets, and was marasmic. His diminutive size and the slate colour of the lips were the only signs which raised the suspicion of congenital heart affection. He was under observation for seven months, during which time his nutrition greatly improved, and with it a progressively increasing hypertrophy of the heart was observed. At no time was there any murmur. Death took place from acute bronchitis. The heart was found to be hypertrophied and dilated. The foramen ovale was patent, but the opening was valved. The tricuspid orifice was normal. The wall of the right ventricle was thicker than that of the left, and the pulmonary artery occupied a normal position, but was thickened. There was patency of the ductus arteriosus, which was continued into the descending aorta. To the right, and posterior to the pulmonary artery, was the ascending aorta, which was smaller than the former vessel, and, after giving off the coronary arteries, terminated in the great vessels. The left auricle and the mitral orifice were natural, but the left ventricle did not give off any vessel, but opened into the right ventricle by an aperture at the undefended spot. Dr. Barlow added that the origin of the descending aorta from the pulmonary artery—*i.e.*, from the fifth left arch—was recorded by Dr. Peacock; but the origin of the aorta to the right and posterior to the pulmonary artery was undescribed. The other specimen was from an infant ten weeks old, slightly cyanosed, with a heaving impulse of the heart; there was no thrill, but a murmur audible at the apex and down the sternum showed a widely patent foramen ovale and closure of the tricuspid orifice, which was marked by a cicatrix-like line. The left ventricle was hypertrophied, and the mitral valve covered by vegetations. From the left ventricle some of the blood passed through an aperture in the "undefended spot" to the right ventricle, which was much atrophied, and part into the aorta. Two of the pulmonary valves were partially blended by a frænum, whilst the aorta, after giving off an arch, was continued up into a pouch which was nearly blind. Possibly the aorta may have communicated with the pulmonary artery, whence the descending aorta may have arisen.

Thyrotomy.

Mr. Pugin Thornton exhibited the larynx from a case in which he had performed thyrotomy in June, 1872. The patient was a child two years and a half of age, and the operation was undertaken for the removal of growths. Six months later tracheotomy was performed, and the tube was worn for [three years and a half, the child dying recently of marasmus following whooping-cough.

Fibro-Sarcoma of Fibula.

Mr. Nunn exhibited a specimen of tumour of the right fibula, for which he had performed amputation at the knee-joint. The patient, a girl aged thirteen, was admitted into

the Middlesex Hospital with an ovoid tumour of the right leg at the lower one-fourth of the fibula. There were some enlarged glands in the popliteal space. The tumour did not at first increase in size, but after some weeks it enlarged rather rapidly, and became painful. After removal, besides the chief tumour (which was fibro-sarcomatous in nature), springing from the periosteum at the lower end of the fibula, there was a smaller mass, not felt during life, close to the head of the bone. The limb was amputated at the knee-joint, the patella being left in the anterior flap.

The Society then adjourned until October.

NEW INVENTIONS.

THE HUNYADI JÁNOS MINERAL WATER.

If we read the novels of the last century or the beginning of this, constant references are to be found to the use of the mineral waters of these islands; but with the cessation of the Napoleonic wars the doors of the Continent were thrown open, and people rushed to drink and enjoy themselves at foreign watering-places. But as everybody could not indulge themselves in such pastimes, it later became a common plan to import into this country the waters of the most esteemed springs for home use—*chez soi*, as the French termed it. First of all the waters which had long been famous for the treatment of certain diseases, as Vichy and Carlsbad, were so imported; but these were found to be of comparatively little use. The absolute command of the dietary which the Carlsbad physicians maintain has, we imagine, a good deal to do with the success of the course of treatment there. The introduction of natural purgative waters was, however, found to be a much more satisfactory business, and it is of one of these we would now desire to say a word.

The Hunyadi János, or John Hunyadi, mineral water was so called after a distinguished Hungarian leader by its proprietor. It comes from the neighbourhood of Buda or Ofen, where the spring was discovered in 1863. Since that time more extensive examinations have led to the discovery of other springs in the neighbourhood, and from these this water is obtained. It is richer in purgative salts than any water now imported.

Of the characters and properties of this water we are enabled to speak from a somewhat extended experience. The water is bright and clear, with no deposit even after long keeping. Its taste is bitter, but not disagreeably so, and possesses nothing of that nauseous character which sometimes renders the use of purgative waters disagreeable. Its chief characteristic is that it renders singularly sweet and pleasant the subsequent draught of ordinary water. Only a small quantity is required—not more than a wineglassful—and this should be taken the first thing in the morning, and shortly followed by a hot draught of tea or coffee, or itself may be warmed and taken hot, with or without the addition of ordinary drinking-water. It is of great use in habitual constipation, in catarrhal conditions of the bile-ducts and bowels, and for congestion of the liver and other organs. One thing worthy of note we would remark—that its use does not give rise to subsequent constipation; rather the bowels remain slightly relaxed for a time.

According to a statement, recently published, by a Liverpool magistrate, who has made a calculation of the amount of money spent upon drink in Liverpool per week and per year, there are 1410 drinking houses, of which the weekly receipts are £54,450, and this total, multiplied by the number of weeks in the year, gives an annual expenditure of £2,831,400, which he considers under rather than over the mark.

The Hunterian Museum.—Many of our readers will be glad to learn that the preparations about to be added to the Museum will be on view in the theatre of the College on and after Monday next. In consequence of the examinations taking place at an earlier date than usual this year, they will not be exhibited so long as customary, as after Thursday, the 6th inst., they will be dispersed in the general collection. No order is necessary. Members can freely enter when disposed between the hours of ten and five. Amongst recent contributors H.R.H. the Prince of Wales appears, having sent many of his Indian trophies, etc.

OBITUARY.

SURGEON-MAJOR FLEMING, M.D.

We have to announce, with deep regret, the death of this eminent military medical officer. His long service was marked by the strictest and most punctual discharge of his duties, as well as by the unremitting care and sympathy which endeared him to both officers and men. His real gentlemanly, truthful, simple-minded, and generous character, and his patience under a long illness, procured him the respect and affection of all who knew him in private life. James William Fleming was born in 1822, received his early education at the High School, Edinburgh, and then studied medicine both in the University of Edinburgh and in the Extra-academical School. In course of time he received a diploma, and the silver medal for proficiency in midwifery. In October, 1846, he entered the army, and always described himself as unusually lucky in being appointed Assistant-Surgeon to the 37th Regiment, under Dr. Brown, to whom he was much indebted for kind and fatherly advice. Such was Dr. Brown's *esprit de corps*, that he twice refused promotion and remained with the regiment nearly twenty years. Dr. Fleming went to Ceylon with the 37th in November, 1846, when the regiment assisted, with the 15th Regiment, in extinguishing the wide-spread native rebellion of 1848. It thence proceeded to Bengal in June, 1857, accomplishing the journey from Ceylon to Calcutta in the unprecedentedly short period of eight days from the time of receiving the orders to the landing, thus forestalling the Barrackpore insurgents, who would have arrived in a body about a day later. It then took part in quelling the mutiny of the Sepoys, acting in the district of Dinapore. It was engaged in the relief of Arrah, where an ambuscade nearly annihilated two companies, three officers being killed. It was at the defence of Azimghur, and shared in the pursuit of the notorious rebel chief Koer Singh, besides other actions in this exciting war. The regiment remained in India until 1861, when, after a stay of fifteen years' duration in eastern climates, it returned to England, and on reaching this country was quartered for some time at Devonport. From thence it proceeded, in 1862, to Aldershot, where it continued until August, 1864. At Aldershot the regiment was noted among the many corps for its high character, splendid discipline, excellent conduct on many field-days and in other operations, and, if we may so put it, by its tattered banners.

Dr. Fleming was made Surgeon in 1857, and Surgeon-Major in 1866. In 1861 he married, and in 1867 was transferred from the 37th to the 4th Royal Irish Regiment of Dragoon Guards. His health soon afterwards failed, so that he left the service, and lived a retired life till his death, at Brighton, on June 25, 1876.

Dr. Fleming received a medal for his services in the Indian Mutiny, but what was scarcely less honourable was the testimony of every Inspector and superior in his own department as to the perfect and complete way in which he did his duty and presented his returns.

When he retired from active service he was by no means idle, but devoted himself to the collection and classification of all the medals and decorations which have been struck in the United Kingdom as memorials of events or rewards of distinguished conduct. A few days before his death he presented his collection to the United Service Museum. A new edition of a privately circulated catalogue, with copious figures, illustrations, and anecdotes, was not quite complete at the time of his death.

Royal College of Surgeons.—A list of stewards of the annual festival of the Fellows of the College, which will take place on Thursday, the 6th inst., under the presidency of Mr. T. B. Curling, F.R.S., shows that only twenty-two provincial Fellows against fifty-seven metropolitan have taken the office. There has been no addition to the number of candidates for election into the Council; the following, therefore, will go to the poll, viz.:—Messrs. John Simon, F.R.S., George M. Humphry, F.R.S., and Luther Holden, for re-election; Edward L. Hussey, William Adams, and C. G. Wheelhouse. Of these six candidates it will be seen that three are provincial representatives.

MEDICAL NEWS.

THE QUEEN'S UNIVERSITY IN IRELAND.—A stated meeting of the Senate of the University was held at Dublin Castle on Tuesday, June 20; and on the same day a meeting of the University took place in the Council Chamber of Dublin Castle for the purpose of conferring degrees and diplomas. Sir Dominic J. Corrigan, Bart., M.D., Vice-Chancellor (in the absence of his Grace the Duke of Leinster), conferred the following degrees and diplomas in Medicine, Surgery, and Midwifery:—

Doctor of Medicine.—Charles Henry Bennett, of Queen's College, Cork; David Bradley, Belfast; William Coates, Galway and Cork; Frederick H. Collins, Belfast; Jephson J. Connell, Cork; Patrick J. Dempsey, Belfast; J. Dunbar Dickson, Galway and Belfast; John S. Dillon, Cork; Justin F. Donovan, Cork; Michael Dundon, Cork; F. Meagher Geoghegan, Galway; Charles Good, Cork; Thomas Greer, M.A., Belfast; Henry Hunter, Belfast; George Laffan, Cork; William M'Afee, Galway; Michael J. M'Carthy, Cork; Mark A. MacDonnell, Galway; R. Dickie M'Master, Cork; Edward G. K. Marks, Galway; Francis H. S. Murphy, Cork; James Pedlow, Belfast; John F. Wales, B.A., Belfast; Archibald Wallace, Belfast; William Cotter Williamson, Cork.

Master in Surgery.—Turner J. Fisher, M.D., Belfast (*in absentid*); Samuel Fergus, M.D., Belfast; James Ross, M.D., Belfast (*in absentid*); Charles Henry Bennett, Cork; William Coates, Galway and Cork; Frederick H. Collins, Belfast; Jephson J. Connell, Cork; Patrick J. Dempsey, Belfast; J. Dunbar Dickson, Galway and Belfast; John T. Dillon, Cork; Justin F. Donovan, Cork; Michael Dundon, Cork; F. Meagher Geoghegan, Galway; Charles Good, Cork; Thomas Greer, Belfast; George Laffan, Cork; William M'Afee, Galway; Michael J. M'Carthy, Cork; Mark A. MacDonnell, Galway; Edward G. K. Marks, Galway; Francis H. S. Morphy, Cork; James Pedlow, Belfast; John F. Wales, B.A., Belfast; William Cotter Williamson, Cork.

The Diploma in Midwifery.—Turner J. Fisher, M.D., Belfast (*in absentid*); Samuel Fergus, M.D., Belfast; James Ross, M.D., Belfast (*in absentid*); William Coates, Galway and Cork; Frederick H. Collins, Belfast; Jephson J. Connell, Cork; Patrick J. Dempsey, Belfast; J. Dunbar Dickson, Galway and Belfast; John T. Dillon, Cork; Justin F. Donovan, Cork; F. Meagher Geoghegan, Galway; Charles Good, Cork; Henry Hunter, Belfast; William M'Afee, Galway; Mark A. MacDonnell, Galway; Francis H. S. Murphy, Cork; James Pedlow, Belfast.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC IN IRELAND, TRINITY TERM, 1876.—At the examination for the degree of Bachelor of Medicine, held on Monday and Tuesday, June 12 and 13, the candidates passed in the following order of merit:—

Davison, Henry A. } equal.
Wright, William, M.A. }
Blunden, William.
Hamilton, Thomas K.
Benson, Arthur H.
Fullerton, Richard.
Fitzgerald, Dudley L.
Gorman, Charles.
Poole, Jonas S.
Maginnis, Robert M.
Conry, Walter.
Taylor, Sidney H.
Kenny, William W.
Peyton, Jones L.
Cooper, Charles A.
Marshall, Joseph.
Orr, David W.
Power, Edward.
Biddulph, Richard E.
Dwyer, John H.
Sproulle, Oliver G.
Hamilton, James A. G.
Whitaker, George.
Lambert, William F.
Newell, Shapland H.
Comyn, George.

At the examination for the degree of Bachelor in Surgery, held on Monday and Tuesday, June 19 and 20, the successful candidates were arranged as follows:—

Maginnis, Robert.
Peyton, Jones L.
Poole, Jonas S.
Fullerton, Richard.
Fox, Charles.
Gorman, Charles.
Barrington, Harry E. W.
Sproulle, Oliver G.
Fetherston, H. Charles.
O'Carroll, Martin.

The Medical Travelling Prize, value £50 sterling, was awarded to Henry A. Davison. Mr. Davison's answering was of the highest order of merit, he having scored 79 per cent. No Surgical Travelling Prize was awarded.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 22:—

De Caux, Frederick, Bracondale, Norwich.
Grimwood, John Joseph Wright, Bury St. Edmunds.
Harper, Charles Norton, 187, Victoria-park-road.
Holloway, George, Wednesbury.
Kay, William, 89, Goswell-road.

The following gentlemen also on the same day passed their primary professional examination:—

Bigg, G. S. K., Middlesex Hospital.
Hetherington, G. H., St. Thomas's Hospital.
Lightfoot, W. S., St. Thomas's Hospital.

APPOINTMENTS.

MACCALL, WILLIAM N., M.D.—Honorary Surgeon to the Clinical Hospital and Dispensary for Children, Manchester.

WILL, J. C. GOILVIE, M.D.—Surgeon to, and Lecturer on Clinical Surgery at, the Aberdeen Royal Infirmary. *vice* — Kerr, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Samuel Osborn, F.R.C.S., to be Surgeon to the London Corps of the Royal Naval Artillery Volunteers. In accordance with the provisions of her Majesty's Orders in Council of July 6, 1866, and February 22, 1870, Fleet-Surgeon Clark Armstone Ducket has been placed on the Retired List of his rank.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major John Adsetts retires upon temporary half-pay.

BIRTHS.

ANNANDALE.—On June 15, at 34, Charlotte-square, Edinburgh, the wife of Thomas Annandale, F.R.C.S., of a son.

CANTON.—On June 27, at Camden Villa, Southsea, the wife of G. Anderson Canton, M.R.C.S., of a daughter.

HACKNEY.—On June 21, at The Laurels, Warbleton, Sussex, the wife of A. H. Hackney, M.R.C.S., of a daughter.

HEATH.—On June 25, at 36, Cavendish-square, the wife of Christopher Heath, of a son.

PARSONS.—On June 23, at Sunnyside, Wimbledon, the wife of T. E. Parsons, M.R.C.S., of a daughter.

ROBERTS.—On June 20, at Avenue House, Peckham Rye, the wife of J. C. Roberts, M.D., of a son.

SKENE.—On June 19, at Buckhurst-hill, Essex, the wife of William Skene, M.D., of a son.

THURSFIELD.—On June 25, at Leamington, the wife of T. W. Thursfield, M.D., of a son.

WALL.—On June 20, at 46, Norfolk-terrace, Bayswater, W., the wife of A. Wall, M.D., of a son.

MARRIAGES.

BROAD—PARRY.—On June 21, at St. Mary's Church, Monmouth, William Bowes Broad, eldest son of Stephen Broad, of Kilburn, to Charlotte Elizabeth, eldest daughter of the late Henry Parry, surgeon, and granddaughter of the late Captain Isaacson, late Adjutant of the Monmouth and Brecon Militia.

HANBURY—CARTER.—On June 15, at St. Matthias Church, J. A. Hanbury, Surgeon-Major Royal Artillery, son of the late Samuel Hanbury, Esq., of Somerstown, Neath, to Hannah Emily, widow of Colonel Carter, 63rd Regiment, and daughter of the late J. Anderson, Esq., of Coxlodge Hall, Northumberland.

MILLS—BANNER.—On June 21, at the British Embassy, Paris, James Mills, of Liverpool, to Harriott Campbell, second surviving daughter of the late John Maurice Banner, F.R.C.S.E., of Liverpool.

PARROTT—NORMAN.—On June 24, at Denham Church, near Uxbridge, Edward J. Parrott, M.R.C.S., of The Thorn, Hayes, Middlesex, to Emma, second daughter of James Stephen Norman, of Southlands, Denham, near Uxbridge.

RENTON—RODGERS.—On June 21, at St. Stephen's, Lambeth, George Renton, M.D., of Consett, Durham, to Mary, daughter of the late Robert Rodgers, Esq., of Wavetree, Liverpool.

STONE—FRENCH.—On June 23, at Appledore Church, Kent, Valentine Stone, F.R.C.S., and J.P., of Laurencekirk, Kincardineshire, N.B., to Ellen Maria, eldest surviving daughter of the Rev. M. D. French, Vicar of Appledore.

THOMPSON—HARRISON.—On June 20, at Reigate Church, Surrey, W. G. W. Thompson, M.D., of Dervock, County Antrim, to Mary Magdalene Newman, eldest daughter of John Newman Harrison, M.A., Priest-Vicar of Reigate, and Margarette Anne, his wife.

TRIMBLE—ATKINSON.—On June 17, at All'Saints, Margaret-street, Hull, James Trimble, Staff Surgeon Royal Navy, to Ellen Elizabeth, eldest daughter of the late Anthony Gwst-Atkinson, Esq., LL.D.

WEARNE—HERON.—On June 21, at St. Michael's Church, Paddington, Vivian Wearne, of the Army Medical Department, to Adela M. F., eldest daughter of Alexander W. Heron, Esq., of Manchester, Jamaica.

WILSON—PAGE.—On June 1, at St. Paul's Church, Newcastle-on-Tyne, Adam Wilson, L.R.C.P. Edin., etc., son of Adam Wilson, Esq., of Broom House, Ayrshire, N.B., to Annzella Henrietta, daughter of David Page, LL.D., Professor of Geology, University of Durham College of Physical Science.

DEATHS.

ALCOCK, EMILY, wife of John Alcock, surgeon, Burslem, Staffordshire, and sixth daughter of the late S. King, solicitor, London, on June 24.

ARMSTRONG, WILLIAM HENRY FANE, only surviving son of the late A. Armstrong, formerly Staff-Surgeon of Portsmouth Garrison, on June 19, at the County Hospital, Winchester, of rapid consumption, aged 34.

EDKINS, ELEANOR, wife of Clement Edkins, M.R.C.S., on June 24, at Somerton.

FLEMING, J. W., F.R.C.S. Edin., for nearly twenty years Assistant-Surgeon and Surgeon-Major of the 37th and 4th Regiments Irish Dragoon Guards, on June 25, at Brighton.

GANGE, WALTER, son of Fred. A. Gange, M.D., on June 19, at Faversham, aged 3 months.

JARVIS, GEORGE TAYLOR, of Margaretta-terrace, Chelsea, architect, youngest son of the late John Jarvis, surgeon, of Hart-street, Bloomsbury, on June 19.

LLOYD, THOMAS, M.D., formerly of Finsbury-circus, London, on June 20, at St. Leonard's-on-Sea, in the 68th year of his age.

MERAY, ROBERT, M.D., F.R.C.S.E., on June 20, at Marlowes House, Hemel Hempstead, aged 66.

VACANCIES.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Two Surgeons. Candidates must be graduates in surgery of one of the Universities of the United Kingdom, or Fellows or Members of the Royal College of Surgeons of England, registered under the Medical Act to practise both medicine and surgery. Applications to Wm. Brown, Secretary, on or before July 11.

Derby Amalgamated Friendly Societies' Medical Association.—Assistant-Surgeon. Candidates must be duly qualified and registered. Applications, with diplomas and original testimonials, to Mr. J. Bullivant, 58, Abbey-street, Derby.

Dewsbury Hospital.—House-Surgeon. Candidates must be qualified in medicine and surgery.

Hants County Lunatic Asylum, Knowle, Fareham.—Two Assistant Medical Officers, both of whom must be duly registered under the Medical Act. Applications, with testimonials, to Dr. Manley, the Superintendent, on or before July 10.

Hoxton House Asylum.—Assistant Medical Officer. Must be doubly qualified and registered. Applications, etc., to the Superintendent at the Asylum.

Mitford and Launditch Union.—Medical Officer. Applications, with testimonials, to Charles Wright, East Dereham, on or before July 14.

Seamen's Hospital, Greenwich, S.E.—House-Physician and House-Surgeon. The former must be a member or Licentiate of the Royal College of Physicians of London, or a Licentiate of the Company of Apothecaries; the latter must be a Fellow or Member of the Royal College of Surgeons of England. Candidates must be unmarried, and under the age of thirty years. Applications, with particulars of professional qualifications and references as to moral character, to Henry C. Burdett, on or before July 12.

St. Thomas's Hospital.—Resident Assistant-Physician and Resident Assistant-Surgeon. Candidates for the former appointment must be Members of the Royal College of Physicians or medical graduates of a University of the United Kingdom, and for the latter appointment Fellows of the Royal College of Surgeons of England. Applications, with testimonials, to the Treasurer, at the Counting-house, Westminster-bridge.

Warwick County Lunatic and Idiot Asylum.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

West Sussex, East Hants, and Chichester General Infirmary and Dispensary.—House-Surgeon. Applications, with testimonials, to H. Cotton, House-Surgeon and Secretary.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Banbury Union.—Mr. Frederick Le Fevre Milburn has resigned the Swalcliffe District; area 13,911; population 3488; salary £81 8s. per annum.

Bath Union.—Mr. R. T. Gore has resigned the Workhouse; salary £150 per annum.

Thingoe Union.—Mr. F. H. Watson has resigned the Fourth and Fifth Districts; area 14,740; population 3249; salary £92 6s. per annum.

APPOINTMENTS.

Boston Union.—Peter Maxwell, M.D., L.R.C.S. Edin., to the Boston District and Workhouse.

Chelmsford Union.—Arthur H. Orpen, L.R.C.S. Edin., L.K.& Q.C.P.I., to the Third District.

Spilsby Union.—Samuel J. J. Weakley, L.R.C.P. Lond., M.R.C.S. Eng., to the Stickney District.

Stockbridge Union.—James Clapperton, L.R.C.P. Edin., L.R.C.S. Edin., to the Broughton District.

Walsingham Union.—Frederic W. Bayes, M.R.C.S. Eng., L.S.A., to the Walsingham District and the Workhouse.

Westbourne Union.—George H. Elliott, M.R.C.S. Eng., L.S.A., to the Second District.

Wokingham Union.—George W. Noad, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Wokingham District and the Workhouse.

The President of the Royal College of Surgeons and Lady Paget entertained a large and distinguished party of ladies and gentlemen at a *conversazione* held at the College on Tuesday evening.

The Paris Faculty of Medicine and the Concours.—Some years since, the Faculty almost unanimously expressed the desire that the *concours* should be restored as the means of nomination of the professors of the Faculty. Last week, probably at the instigation of the Minister of Public Instruction, the question was again brought forward, and of the twenty-one professors present ten voted for the re-establishment of the *concours*, and eleven against it—so that as the Republic was established by a majority of one, so the *concours* (at least, as far as the voice of the professors is concerned, which, however, is only recommendatory) has been lost by the same. How evenly balanced the opinion of this body is, may be seen from the fact that had not two of the professors, who are strong partisans of the *concours*, been absent, the majority of one would have been the other way. Two only of the present professors, MM. Bouchardat and Gavarret, owe their election to the *concours*.—*Union Méd.*, June 24.

Casein from Mare's Milk.—An article by Dr. Alex. Langgarrd, in *Virchow's Archives*, Bd. lxv., on the comparison of woman's, cow's, and mare's milk, contains some observations on the chemistry of the latter which may eventually prove valuable. When mare's milk turns sour, the casein separates in fine flakes, and the same thing happens if diluted acids are added to the fresh milk. The flakes of mare's milk-casein when artificially precipitated are immediately dissolved by the slightest excess of acid; whereas cow's milk-casein forms coarse flakes, which are only soluble with difficulty in excess. If the casein of mare's milk is precipitated with alcohol, and deprived of fat by means of ether, a fine, slightly yellow powder is obtained, which is somewhat less soluble in water than human casein similarly prepared, but much more so than cow's milk-casein. The solution is slightly opalescent, froths if shaken, and has a neutral reaction. The dry casein is almost as easily digestible as human casein. Hence it seems likely that mare's milk-casein or a solution of it might be profitably used as a part substitute for cow's milk in feeding infants, or as a form of nutriment for adults, to whom mare's milk alone, or the koumiss prepared from it, is objectionable.

The Cremation Congress.—At the instigation of the Urn Society, of which Dr. Kuchenmeister is the president, a congress of the friends of cremation was held on June 6 and 7, at Dresden, at which all the principal societies that have been formed in different parts of Europe were represented. With the exception of that of Saxe-Gotha, every German government has refused to allow incineration to be performed, as contrary to existing laws. The delegates of the various societies reported the position of the question in their respective countries; and Dr. Godfrey Kinkel, well known in London, where he long lived in exile, and now Professor of Belles-Lettres at the Zürich Polytechnic School, delivered an oration to an auditory of about 500 persons. In the evening the members assembled around one of Siemssen's ovens to witness the cremation of a large dog, which was executed in sixty-five minutes, a little heap of remarkably white ashes being all that then remained of it. The Congress appointed an international committee for the publication of a journal in which may be recorded special scientific investigations and the best procedures made known. The members of the committee are Prof. Kinkel, of Zürich; Drs. Kuchenmeister and Stockhausen, in Germany; Dr. Hoogemerff, in Holland; Prof. Emile Müller, of the Paris Ecole Centrale des Arts; and Sir Henry Thompson, of London. A subscription was entered into for the erection at Gotha of an edifice for the purpose of cremation, furnished with Siemssen's apparatus.—*Union Méd.*, June 20.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

F.R.C.S., Manchester.—There is no stated time for closing the poll on the day of election; it will commence at two o'clock precisely, and ten minutes after the last recorded vote the President will declare the polling closed.

American Dollar.—Guillaume Dupuytren, the renowned surgeon of his age, died in Paris on February 8, 1835, in his fifty-eighth year. He left his daughter a fortune of seven millions of francs, the fruits of his professional labours, in addition to two millions he had given her when she married.

Funeral Feasts.—The circumstance occurred after the funeral of Lord Brougham's grandfather in 1782. The then Duke of Norfolk, who acted as chief mourner, took the chair at the funeral feast. Dinner over, the Duke rose and said: "Friends and neighbours, before I give you the toast of the day—the memory of the deceased,—I ask you to drink to the health of the founder of the feast—the family physician."

The Army Medical Service.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—With reference to a remark in your issue of the 17th inst., an old subscriber would be glad to know why, in the medical staff of the army, there should be no alternative between selection for "promotion by merit" and the "appointment of incompetent men under the system of promotion by seniority." In the combatant branches of the service promotion goes by seniority in all ranks, but employment on the staff is determined by selection for fitness alone - at least, in the higher ranks.

Why should not the system with regard to the higher ranks of the medical staff be identical with that which is followed in the case of general officers—viz., promotion by seniority, employment for fitness and merit?

I am, &c., Q.

Physiology in France.

An active interest in the Vivisection Bill now before Parliament is taken by the inhabitants, especially the shopkeepers, of Boulogne. They would, it is said, have petitioned the House of Commons for the enactment of that measure, but for the late decision, according to which their petition could not be received. It is proposed, should the Government Vivisection Bill, in its present shape, become law, to establish at Boulogne a School of Physiology, which, being within convenient distance, will be easily accessible to British medical students desirous of obtaining instruction such as can be only acquired under conditions of unfettered investigation; and whereat, also, British professors will enjoy legal facilities for practising the experiments needful to enable them to prosecute physiological researches on terms of equality with Continental men of science, and without being liable to be interfered with by a policeman.—*Punch.*

Eusebius S.— "For men are brought to worse distresses
By taking physic, than diseases;
And, therefore, commonly recover
As soon as doctors give them over."—*Butler.*

IS LUNACY PROPORTIONATELY INCREASING?

The increase of lunacy amongst paupers was again the subject of considerable discussion at the meeting of the Toxteth (Liverpool) Board of Guardians last week. It was eventually resolved to address the Local Government Board on the subject, stating the fact that the increase was so marked as to cause public anxiety; and, at the same time, to request a searching Government inquiry as to the cause, and also as to whether it was limited to the class from which paupers were received.

COMMUNICATIONS have been received from—

Mr. S. H. FISHER, London Hospital; Dr. R. H. COLLYER, London; Mr. W. D. HEMMING, London; Mr. GEORGE BARRACLOUGH, London; Mr. J. C. SARGEANT, London; Dr. ALEXANDER M. BUCHANAN, Glasgow; Dr. WILTSHIRE, London; Mr. B. MORRIS, London; Dr. J. W. MOORE, Dublin; THE SECRETARY OF THE ROYAL INSTITUTION, London; Dr. GEORGE JOHNSON, London; Dr. MARION SIMS, New York; Mr. JACKSON HAWITH, St. Mary's Hospital; Professor SPENCE, Edinburgh; THE REGISTRAR OF THE APOTHECARIES' HALL, London; Sir J. R. CORMACK, Paris; Mr. C. HIGGENS, London; Mr. BECHER, London; Mr. BALMANNO SQUIRE; Dr. BRUCE, London; Mr. W. D. NAPIER, London; THE SECRETARY OF THE STATISTICAL SOCIETY; Dr. CHURCHILL, London; Mr. HAYNES WALTON, London; Dr. CHARLES BELL TAYLOR, Nottingham; Dr. W. R. GOWERS, London; Mr. GEORGE BROWN, London; Dr. EDIS, London; Dr. DAUITT, London; Mr. J. CHATTO, London; Mr. J. WARRINGTON HAWARD, London.

BOOKS AND PAMPHLETS RECEIVED—

Royal London Ophthalmic Hospital Reports, vol. viii.—Isambard Owen, M.A., M.B., etc., Tables of Materia Medica—J. Marion Sims, M.D., Anniversary Address before the American Medical Association, delivered in Philadelphia, June 6, 1876—Alfred Ashby, M.B., Register of Visits and Index of Notes for the use of Medical Officers of Health—Edgar A. Browne, How to Use the Ophthalmoscope—R. W. Wooleombe, Some Reasons for the Supposition that the Red Corpuscles of the Blood have Cycloidal Rotation—Charles J. Cullingworth, The Nurse's Companion.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—The Shield—Nature—El Siglo Medico—Guy's Hospital Gazette, June—Southport Visitor—Gazeta Medica da Bahia, May—American Practitioner, June—Morningside Mirror—Chelmsford Chronicle—Leisure Hour, July—Sunday at Home, July—Ohio Medical and Surgical Journal, June—Philadelphia Medical Times, June 10—Cassell's History of India, part 7—Hardwicke's Science Gossip, July.

APPOINTMENTS FOR THE WEEK.

July 1. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

3. *Monday.*

Operations at the Metropolitan Free, 2 p.m; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

4. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

5. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

OBSTETRICAL SOCIETY, 8 p.m. Dr. Braxton Hicks and Dr. Goodhart, "On the Displacement of the Uterus by Distension of the Bladder, as shown by Experiments on the Dead Body." Mr. Lawson Tait, "Case of Vesico-Vaginal Fistula left fourteen years after Lithotomy, cured by a series of Plastic Operations." Dr. Redmond, "A Case of Secondary Puerperal Hæmorrhage." And other communications.

6. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

7. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 24, 1876.

BIRTHS.

Births of Boys, 1132; Girls, 1164; Total, 2296.
Average of 10 corresponding years 1866-75, 2096·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	686	618	1304
Average of the ten years 1866-75	661·1	597·3	1258·4
Average corrected to increased population ...	...	...	1346
Deaths of people aged 80 and upwards ...	...	...	44

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	14	9	1	8	...	2	1	7
North	751729	...	5	8	2	9	1	...	...	7
Central ...	334369	...	2	2	...	4	...	...	...	1
East	639111	...	3	12	1	7	1	2	1	8
South	967692	2	7	11	3	8	...	4	2	7
Total	3254260	2	31	46	7	36	2	8	4	30

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·822 in.
Mean temperature	62·4°
Highest point of thermometer	83·9°
Lowest point of thermometer	45·3°
Mean dew-point temperature	53 3°
General direction of wind	Variable.
Whole amount of rain in the week...	0·33 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 24, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending June 24.	Deaths Registered during the week ending June 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.. Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2296	1304	83·9	45·3	62·4	16·89	0·33	0·84
Brighton	100632	42·7	64	38	77·8	50·4	62·0	16·67	1·99	5·05
Portsmouth ...	124867	27·8	81	52	...	...	...	...	...	...
Norwich	83430	11·2	43	28	77·2	49·5	60·5	15·81	0·58	1·47
Plymouth	72230	51·8	38	19	77·0	44·5	57·6	14·23	0·02	0·05
Bristol	199539	44·8	126	85	83·0	45·9	62·6	17·01	0·03	0·08
Wolverhampton ...	72549	21·4	52	26	86·3	47·7	60·4	15·78	1·46	3·71
Birmingham ...	371839	44·3	259	125	85·0	48·5	63·7	15·95	0·87	2·21
Leicester	113581	35·5	76	45	87·5	43·0	61·6	16·45	0·42	1·07
Nottingham ...	93627	46·9	61	35	85·8	45·1	61·5	16·39	0·70	1·78
Liverpool	521544	100·1	392	237	81·9	48·1	59·6	15·34	0·83	2·11
Manchester ...	357917	83·4	3 0	180	86·0	46·0	61·7	16·50	1·85	4·70
Salford	138425	26·8	136	62	84·6	44·8	63·0	15·56	1·51	3 84
Oldham	88609	19·0	91	49	...	...	...	...	...	...
Bradford	173723	24·1	111	66	78·4	50·2	59·5	15·28	1·25	3·17
Leeds	291580	13·5	213	148	81·0	46·0	60·1	15·62	1·47	3·73
Sheffield	274914	14·0	200	127	82·0	45·0	60·5	15·84	1·83	4·65
Hull	136933	37·7	108	60	76·0	48 0	58·4	14·66	0·28	0·71
Sunderland ...	108343	32·8	89	33	74·0	48·0	57·4	14·11	1·44	3·66
Newcastle-on-Tyne	139929	26·1	92	55	...	43·0	...	...	1·11	2·82
Edinburgh	215146	51·3	149	94	81·5	49·5	60·8	16·01	...	...
Glasgow	545144	90·4	428	233	81·9	48·8	60·0	15·56	1 02	2·59
Dublin	314666	31·3	169	130	74·4	38·6	59·5	15·28	...	...
Total of 23 Towns in United Kingdom	8028595	37·7	5565	3328	89·0	38·6	60·4	15·78	1·60	2·54

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·82 in. The lowest was 29·67 in. at the beginning of the week, and the highest 30·03 in. on Monday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

OBSERVATIONS ON THE

WORK AND CHARACTER OF THE LATE DR. E. A. PARKES, M.D., F.R.S.

BEING THE SUPPLEMENT TO DR. PARKES'S HARVEIAN ORATION,

Delivered before the Royal College of Physicians, Monday, June 26, 1876.

By Sir WILLIAM JENNER, Bart., K.C.B., M.D., F.R.S.,
Physician in Ordinary to H.M. the Queen and to H.R.H. the Prince of Wales, etc.

When Dr. Parkes penned the sentence, "It may be hoped that, in years to come, there may be many names and many memories which will be recalled in this hall, and on this anniversary," ill though he was, no one thought that his memory would be the first to be recalled in this hall and on this anniversary; for I am sure that you, Mr. President, will not think the day when the College has done him the unprecedented honour of having his unfinished Oration read before the Fellows inappropriate for me, one of the oldest of his friends, very briefly to recall the leading facts in his professional career, and to express, in a very few words, the estimate I have formed of the characteristics of his mind and the worth of the work he performed.

After a very distinguished career as a student, Dr. Parkes was appointed, in 1842, Assistant-Surgeon to the 84th Regiment, and went to India when just twenty-two years of age. He remained in the army less than three years, the greater part of which time he spent in India. Shortly after his return to England he published his work on Dysentery, and the following year that on Cholera. These works prove, more than all the many honours he obtained at his college and university, the amount of work he must have performed as a student—the real knowledge he possessed, knowledge only to be acquired by hard, continuous, unremitting work, and the varied character of that knowledge, chemical, microscopical, anatomical, and clinical. These works, had they been written by one who had filled the post of physician to a hospital for years, would be held to give evidence of high merit in their author; but when it is remembered that they are the productions of a man who had only then closed, and that at an early age, his college days, their merit must excite our surprise. And when, further, we call to mind that the clinical records and post-mortem facts were collected by a man who had just entered the army, everything around him novel, and enticing, at such an age, to legitimate idleness and pleasure; that they were collected by a man to whom the complete discharge of his numerous official routine duties was a matter of conscience; that the records of clinical facts and of post-mortem appearances were made in India at the most trying season of the year, when the duty of merely attending to the sick during a great epidemic must have been most laborious, our surprise at the merits of the works and our admiration for the man must, I think, be unbounded. Apart from the evidence these two works afford of Parkes's energy, power of work, and the wide extent of his knowledge, they prove that he possessed even then originality of mind, rare powers of accurate observation, and the ability to combine the facts observed, and to draw sound conclusions from those facts. Having regard to the age of their author, the circumstances under which the materials for them were collected, and their intrinsic merit, these two works are among the most remarkable in medical literature.

The promise given by Dr. Parkes's works on Dysentery and Cholera was amply fulfilled. He never ceased working till he passed away, and his work was always productive of results valuable to science or immediately conducive to the benefit of mankind. In 1849 he was appointed special Professor of Clinical Medicine at University College. His published lectures tell something of the worth of his clinical work, but those who followed his teaching can alone tell how great was the influence he exercised over his class in inciting them to work, to accurate observation, and, above all, to the discharge of their daily duties as students of a profession on the proper exercise of which so much of the weal or woe of mankind must for ever depend. The variety and extent of his knowledge, his capacity of influencing others and spurring them on by his example to unwonted exertion, the amiability of his nature, conjoined as it was with great firmness in condemning or resisting what seemed to him to be wrong, pointed him out as the best man in our profession to organise and superintend the civil hospital established at Renkioi during the war with Russia. There his important duties were discharged in such manner as to afford complete satisfaction to his professional colleagues and to the Government, and to secure for him the perfect confidence of Mr. Sydney Herbert and of Sir James Clark, to whose appreciation of his abilities he owed his appointment.

When, in consequence of the report of the Royal Commission appointed to inquire into all matters affecting the sanitary condition of the army, it was determined to establish the Army Medical School, Dr. Parkes was consulted by Mr. Sydney Herbert, then Secretary of State for War, on many points in reference to the constitution of the School. Subsequently, when this School was established, Mr. Sydney Herbert offered Dr. Parkes the most important post in the new School—viz., that of Professor of Hygiene. He accepted the appointment, for it afforded him the opportunity of devoting himself to a subject in which he had always taken the deepest interest—viz., the subject of hygiene in its relation especially to the health of troops. For this most important post he was unquestionably better qualified than any man in Europe. He had gained much practical knowledge in India, and his articles on the subject in the *British and Foreign Review* prove that he had critically examined, and *mastered*, I may fairly say, *all* that had been written on the subject. This appointment enabled him to carry out his wish to reside in the country. The delicacy of Mrs. Parkes's health, and his own and her tastes, had for some time led him seriously to contemplate leaving London; and these motives were strengthened by the fact that he had two serious illnesses during the ten years he was special Professor of Clinical Medicine at University College, and that he knew that he inherited a strongly marked tubercular constitution.

Although a sound and able practitioner, and possessed of considerable powers of diagnosis, Dr. Parkes never did much private practice in London. His health, his absence from England, the fact that he had no speciality, and his age—for we all know that success in practice is, to some extent, a question of survivorship—all these forbade his attaining a large practice before the time he left London. But his practical knowledge of medicine, his tact, his honourable, straightforward conduct, and his kindly feeling to his younger brethren, would certainly have secured to him, had he remained in London a few years longer, and had his health permitted, a very large consulting practice. He was a man the profession would have appreciated and trusted.

After his appointment to the Medical School at Chatham, his energies were devoted almost altogether to the advancement and spread of hygienic knowledge, and his writings on hygiene followed each other in quick succession. In 1861 he commenced a series of Annual Reports on the Progress of Hygiene. The last of these reports appeared last year. They are, as Dr. Aitken has described them, models of *précis* writing, and invaluable as records of the progress of hygiene. His "Manual of Practical Hygiene," published in 1864, is a monument of industry, a model for clearness of arrangement and style, and withal a work of great practical importance. His "Knapsack Report," his Reports on the Issue of a Spirit-Ration during the Ashantee Campaign of 1874, on the Effects of Alcohol on the Human Body, his lectures before this College, and his papers on Nitrogenous Elimination, are all of the highest scientific and practical importance as contributions to the study of Hygiene; and, like all he wrote, their worth is perfected by the knowledge that everything he states to be a fact from his own observation may be implicitly received as a fact, and used as fact by those who undertake similar or allied investigations.

It is characteristic of the man that while a student at college his labours were spread over all his studies; he neglected no one, but left, as we have seen, well informed in all subjects. When in India he devoted his energies to the study of the diseases there only to be studied—there only to be seen on a large scale. When Professor of Clinical Medicine it was to practical medicine that he gave his whole mind. He worked at that and taught that, and his pupils alone knew how well he taught it. His clinical lectures, embracing a great variety of subjects, give perfect evidence of diagnostic skill and practical acumen. It was while working at and teaching practical medicine that he collected the store of materials for his standard work "On the Composition of the Urine in Health and Disease and under the Action of

Remedies." After his appointment to the chair of hygiene, it was to the study and teaching of hygiene in all its branches that he devoted all his powers. It was this concentration of energy that enabled him to do so much, and to do it all well.

It would not be right for me to conclude this part of my sketch without calling attention to one of his latest efforts to advance practical hygiene—I mean his writings in defence of the Contagious Diseases Acts. His perfect command of the facts and his dialectic skill enabled him to convince all open to conviction of the value of these Acts; and he would be a reckless—I was going to say a wicked—man who, having read Parkes's papers, should propose their repeal. He was the purest-minded man I ever knew, and he defended the Contagious Diseases Acts. He was the kindest-hearted, the gentlest, the most humane man I ever knew; and you have heard the words he addressed to his college on vivisection. Dr. Parkes, by his writings on hygiene, did much to spread the knowledge of the subject; but, as a teacher, he did yet more. His colleague, Surgeon-General Longmore, writes to me:—"The influence Dr. Parkes exerted on those who had the advantage of his tuition before entering the military service of the country, and thence indirectly on the public services themselves, was beneficial to an amount which can hardly be overestimated. It was not merely the knowledge which he was able to impart in the course of each sessional period of the Army Medical School, though, owing to his painstaking personal teaching and lucid expositions, the extent of this was very large, both in regard to the principles and practice of military hygiene as well as to the chemical manipultion a applied to it. But, what was even more valuable, was the interest in the work which he contrived to awaken in many of those who came under his tuition. He was such an ardent, honest, and indefatigable searcher after scientific truth himself, and for truth's sake and the general good only, that his example as much as his teaching served to excite a kindred love of the same pursuit in others. That the zeal so excited was not evanescent has been proved by what many of his pupils have since accomplished in science."

Of the wisdom of Sydney Herbert's choice of Dr. Parkes to advise him originally in the organisation of the Army Medical School, and subsequently to fill the Professorship of Hygiene in that school, no one can now doubt. The Professor of Surgery, who was his colleague from the commencement of the School, writes again to me :—" Since the formation of the School, as must happen in all important establishments, various important questions have arisen from time to time in connexion with the interior economy and working. Dr. Parkes's previous associations with the army, his wide acquaintance with educational subjects, his numerous official relations with London professional institutions, his prudence and tact, his single-minded devotion to the interest of the public service, and at the same time his thoughtfulness for others, all these circumstances caused the active part which Parkes constantly took in the discussions on these questions to be of inestimable value in attaining a right and satisfactory solution of them."

How highly Dr. Parkes's labours in the field of military hygiene are appreciated by those best capable of judging their value, may be well illustrated by the eloquent paragraph with which Baron Mundy, the Professor of Military Hygiene at the University of Vienna, concludes his biographical notice of Dr. Parkes: " All the armies of the Continent should, at parade, lower their standards draped, if only for a moment, because the founder and best teacher of military hygiene of our day, the friend and benefactor of every soldier, Edmund Parkes, is no more." And Professor Longmore, commenting on Baron Mundy's eulogy, writes to me, " Dr. Parkes was indeed a benefactor to the soldiers of all armies, if the diffusion of a knowledge of the best means of warding off sickness from bodies of troops, of augmenting the standard of health, and of increasing the individual welfare and happiness of soldiers, constitutes a benefit; and even now that he has gone to his rest, he will continue to be a benefactor to them, for he has trained a small army of followers to reflect and diffuse still further the light which he imparted during his lifetime."

Of the extent of Parkes's labours, and of the value of the scientific and practical outcome of his labours, all here can judge; but those only who personally knew him, and whose personal knowledge of him extended over a series of years, can fully appreciate the mental and moral worth of the man, and the loss mankind has sustained by his death at an age when his intellectual power was in its full strength—when his love and capacity for work were undiminished, and when his influence was daily widening.

My acquaintance with Dr. Parkes began when he and I were attending the same classes at University College, and continued till his death. As a student he was distinguished by brightness and cheerfulness, amiability, unselfish willingness to help others at any cost of trouble to himself, energy in work, diligence in the using of each hour for the studies of that hour, the high moral tone that pervaded his converse, and above all, and crowning all, by the real living purity of his being. Goodness and purity shone through all his daily life; they were visible in his lesser as well as his greater acts; his purity was not mere lip-purity, but pervaded his work and his very being at all times and in all places.

The excellence of his life was so evident, his work was such earnest work performed so unostentatiously and manifestly from such high motive, and the charm of his manner was so great, that few of his fellow-students could escape being better men from associating with him. He illustrated well the contagious power of goodness; he diffused among his fellows purity of motive, as some men have diffused among their contemporaries impurity of morals.

From what I can now call to mind of his appearance, and from what he was physically in his latter days, I know that Parkes possessed in his youth much refined beauty of face and form; but his moral nature so clothed his physical that few who knew him intimately would have been struck by his physical appearance. Still, body, mind, and moral nature were, as they so often are, in perfect harmony.

Few men have preserved through life the mental and moral characteristics of their youth so unchanged. What he was in the spring-time, that he was in the summer of his life, and that he was when cut down by death in the early autumn of his days.

With increase in years his mind ripened, his sphere of action widened, his influence over others operated in new and perhaps more important ways; but in all moral and intellectual essentials Dr. Parkes was as a man what he was as a youth—he was animated by the same principles and stimulated by the same faith. As years went on, his mind proved itself to be singularly well balanced: he possessed an extraordinary power of acquiring information; his memory was very retentive; he was the best-informed man in the medical literature of the century I ever met; he was unprejudiced as he was learned; he could use with ease the information he acquired, and could express his ideas clearly and simply; his language was always elegant, and on occasions eloquent; few physicians have equalled him as a writer. His powers of observation, of perception, of reasoning, and of judgment were all good, and equally good. But as in his youth so in his manhood—the beauty of his moral nature, his unselfish loving kindness, his power of inoculating others with his own love of truth, with his own sense of the necessity of searching for the truth, of questioning Nature till she yielded up the truth, of earnest work, were his most striking characteristics.

From the constitution of his mind Dr. Parkes was greatly indisposed to take an unfavourable view of men's motives or conduct, and especially so of the motives or conduct of his professional brethren. He judged others by himself, and, therefore, never doubted the purity of their motives. He thought all men good till they proved themselves to be otherwise. He was, however, the reverse of a weakly good-natured man, for if once satisfied that a man was animated by unworthy motives, was guilty of dishonourable conduct towards his brethren, he was most severe in his condemnation. Still he would even then rarely say aught against the man, but would, as he once wrote to me, " learn to shun him."

The last days of Edmund Parkes proved the truthfulness of his life. In the very sight of death he displayed the same forgetfulness of self, the same thoughtfulness for others, the same desire to urge forward true work, that had characterised him from boyhood onward. When he believed himself to be dying, and heard that I was coming to see him, he was most anxious that I should arrive before his end. The motive that prompted this anxiety was that he might with his last breath promote good and useful work—it was that he might express to me his earnest wish that I should exert the influence which he hoped my position might give me to stay the hands of those who, through ignorance of the value of the Army Medical School, might possibly hereafter curtail its usefulness or even destroy

it. He most earnestly impressed upon me his sense of the worth of all his colleagues, of the value of the work they were doing, and the fitness of each for his special duties. A body of men so able and so well fitted for their duties, if once dispersed, could, he said, never be again collected. In the very act of dying, then, this noble man thought most of others, and how he might best promote the progress of good and useful work when his own hand must be powerless and his own tongue silent.

While Parkes was near to us we saw how perfect was each portion of his life; but it is only when death has placed him at a distance that we can realise how completely he stands out from his fellows. It is only now, when death has placed him at a distance, that we can see his character as a whole, that we can fully appreciate the harmonious beauty of the several parts of his being, and the full height of his intellectual and moral stature.

And now, Sir, that I have finished the task the judgment of others and my own sense of duty imposed on me, I must say that, although I have striven my best to draw Edmund Parkes truthfully, I feel, to use his own eloquent words, written for a like occasion, "how pale and tame a portrait I have drawn of this noble and large-hearted man. Would that to some pen which could draw the outline more boldly, and could fill in the lights and shadows more delicately, this task had been assigned."

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture VII.

MEDICO-LEGAL ASPECTS OF DEATH.

In dealing with the medico-legal relations of death at last lecture it fell to me to commence the consideration of the last of the series of changes in the dead body following the departure of life. After having disposed of the external or extraneous influences of various kinds which arrest, modify, or hasten the changes in the corpse characterised as the process of its decomposition, it only remains here to complete the subject of death generally, so far as it bears more or less directly on forensic medicine, by adverting to the remaining points which are of interest to us in our special pursuit.

The leading appearances presented by the human body in its passage through the various stages of its decay, at and subsequently to the commencement in it of putrefaction, have been very closely studied and detailed by Orfila and Leseueur and Devergie in France, and by Muntz and Caspar in Germany,—by the last author, however, more from their practical than exhaustive side. In following, to a large extent, our guides in this important subject, the remarks which follow will be found to refer chiefly to the body as it is found to decay *in the atmosphere*, though the differences which such bodies present as contrasted with those decaying *in the water*, or *in the earth*, are not of so prominent a kind as to demand a separate consideration, while the whole admit of being treated in connexion.

On the exterior of the body the first sign of commenced putrefaction is the greenish discoloration of the abdominal walls, simultaneously with which the putrid odour is usually first perceptible.

This greenness, in the form of a small patch, commonly commences at the centre of the belly, thence extending gradually to the groins, breast, face, neck, and superior and inferior extremities, in succession. This order of succession of the green discoloration, which is all but constant in bodies *in the atmosphere and the earth*, is not, however, that which takes place, as a rule, in bodies which have lain *in water*. Here the coloration makes its first appearance over *the sternum*, thence extending to the neck, belly, and shoulders, and then coalescing with patches which have previously commenced in the groins. This difference in the order of succession of these spots is usually so constant that it has been fixed on by Devergie and Caspar as a sufficient test for discriminating bodies which have begun to decay in water, from those which commenced their decay in the two other media. Too much stress, however, should not be laid on this test, as I have twice met with the green discoloration of the belly *in drowned bodies* before it had appeared on the chest.

After a few days, the green discoloration has become deeper and spread over the whole of the abdomen and the genitals. In a few days longer, the separate patches have coalesced over the trunk, and the front of the face and neck presents a shade of red.

Subsequently the discoloured patches on the surface of the body will have assumed more or less of a brownish hue, in union with the green (Caspar, "For. Med.," vol. i. pages 38-9); ultimately the green patches, where most strongly developed, take a deep brownish-black colour, best seen in the face and upper part of the chest in the bodies of the drowned, after some stay in water.

Simultaneously with these changes of colours on its surface, *gases* begin to be generated and accumulate under the skin, in the submucous and intermuscular tissues, and in the interior of the hollow organs of the body.

The more or less abundant generation of gases in the corpse explains *three distinct series of appearances* which mark the progress of its decomposition:—

(I.) We have, from this cause, distension of the scrotum, belly, chest, and face, and ultimately of the limbs; the increase of the bulk of the entire corpse; and the lessening of its specific gravity. Hence we have the obliteration of the, features and have the difficulty thus presented to the identification of bodies at this stage of their decay; the invariable circumstance of such bodies left in water coming after a time to the surface unless kept down by heavy weights; and the alleged occurrence of such corpses turning in their coffins (adverted to in a previous lecture). Again, the gases generated in the stomach will occasionally propel the food found there at death into the mouth and pharynx, while such food may find its way from thence into the larynx, and might give rise to the suspicion of death by suffocation. Further, the expansion of the lungs from putrid gases in their cells, causing these viscera to force their way out of the chest on the removal of the sternum, has, I believe, led too readily to the reception of this phenomenon by some writers as an available sign of death by drowning when encountered by them in the bodies of persons found in water. On this point I would only add that I have never met with this circumstance in the drowned prior to the development of gases in their interior. However different in appearance the fetid gases evolved as an effect of putrefaction from the emphysema of the living, whether in the areolar tissue, the cavities of the body, or the interior of the hollow organs, the line of demarcation between the two may not always very easily be drawn on inspection. This, however, is of the less consequence as in the latter case no inferences would be drawn from the appearance of emphysema alone, unattended by its usual co-existing organic changes.

(II.) A further series of effects arising in the putrid body from gaseous development is traceable to the consequent displacement of the now fluid blood from the places where it is most largely found accumulated—such as the cavities of the heart, and the large bloodvessels connected with them. Hence the empty state of these, the blood which they originally contained having been propelled onwards to the capillaries. Hence, too, the diffused reddening of the skin and the areolar tissue in bodies examined some weeks after death, and the more or less marked redness of the mucous and serous surfaces, and of such of the viscera as are naturally the most largely supplied with blood—changes which, I need scarcely remind you, might readily be mistaken by a careless observer for the consequences of inflammation or of irritant poisons during life.

The diffuse redness of the skin to which we have just referred may be almost, if not entirely, absent, unless under the circumstances we have noticed. Apart from the ordinary cadaveric lividities, and later in appearing, it may also escape notice till the displacement of the cuticle reveals the depth of colorisation of the cutis vera—an appearance best marked in the bodies of the drowned after a prolonged stay in water, in corpses a considerable time buried, and in those of infants perishing and being retained long in utero.

Coincident with this more developed reddening of the surface of putrid bodies the cuticle is loose and readily to be detached, the subcutaneous areolar tissue is bathed in reddish serum in

such situations as the front of the neck, the groins, and the back part of the scalp, presenting gelatinous-looking effusions of the aspect of red-currant jelly. Independent of the co-existence of fetid gases and the extent of the diffusion of these appearances of the skin and subcutaneous areolar tissue, with perhaps the addition of blisters filled with reddish serum, this effect of putrefaction could scarcely be mistaken for the consequences of morbid agencies during life.

We cannot speak, however, so confidently as to the distinctive characters of the reddenings of the mucous and serous surfaces in the interior of the body from the gaseous development. In these circumstances these internal surfaces assume different shades of colour, from a deep rose-red (most frequently encountered), to a brownish or blackish-red—appearances which might be mistaken for *the effects of inflammation during life*. The chances of mistake here, however, may be generally obviated by attention to the circumstance that in this form of post-mortem redness the bloodvessels of the part are either empty, or filled with putrid gases; and, what is still more important, that the reddening is not confined to the surfaces of single organs, but involves almost all the naturally colourless membranes and tubes—the parenchymatous viscera, the alimentary and respiratory canals, the bloodvessels, etc. Less stress is to be laid on the circumstance occasionally relied on as an auxiliary test, viz., that *inflammatory redness* consists rather in injection of the vessels, striæ, dots, or streaks, than in a mere dyeing of the parts, as in *cadaveric redness* (Devergie); actual exceptions to this having been encountered by Yellowly in the dead body, while such so-called inflammatory appearances have been produced artificially by Roget and Trousseau.

Orfila and Devergie have both remarked, as peculiar to the reddening of mucous membranes from the effects of putrefaction, that *ecchymoses* are never thus produced—a remark of considerable importance, if verified by others.

Devergie has also called our attention to the circumstance that, *in general*, parts that have been *inflamed* at the time of death run more rapidly into putrefaction than healthy parts; and that, consequently, the conclusion is authorised that the discovery of one part running into putrefaction, while the rest of the body is free from it, implies the previous existence of inflammation in that part. Too much stress, however, should not be laid on a distinction of this sort, for reasons which must be obvious.

Two further distinctive tests proposed by this author are, perhaps, more trustworthy, viz.—(1) That in *post-mortem redness* the colour is *limited to the course of the vessels*, while in *inflammatory redness* the *parts around the vessels partake* more or less *of the coloration*; and (2) that in *inflammatory redness* the *colour* is usually *limited to the inflamed membrane*, while in *redness from putrefaction* the colour pervades the whole of the tissues of the part. (The first of these characteristics of putrefaction is very well seen in a drawing of a stomach in Caspar's Atlas.)

We need scarcely add that in deciding betwixt post-mortem and inflammatory appearances collateral circumstances must be taken into account. In this way the presence or absence of inflammatory changes and products—such as thickening of membranes, false membranes, copious mucous or purulent exudations, consolidation of tissues, etc.—would give the character of certainty to signs, themselves insufficient to yield to more than strong presumption. In some instances, indeed, the failure of such collateral circumstances would be fatal to the assumption of previous inflammatory disease of the part, as in the case of suspected inflammation of the brain and its membranes, or that of the upper part of the air-passages. As regards the brain, for instance, it is admitted by pathologists that, with the exception of such obvious changes as apoplectic clots, abscesses, or tumours presenting themselves, the examination of the organ yields, in general, no means of distinguishing morbid from post-mortem discolorations—a difficulty which is increased when the discrimination has to be applied to the surface and, above all, to the membranes of the brain. Again, Caspar has been at pains to show that post-mortem changes commence at an unusually early period in the air-passages, and especially about the top of the trachea, which, while with difficulty distinguishable from, might be readily mistaken for, the effects of laryngitis or death by drowning.

To illustrate this he has given two figures in his Atlas, contrasting this pseudo-morbid redness of the larynx and trachea, after death *from natural causes*, with the same parts in a person who had died by hanging. The colour in the latter is higher than that in the former; but this, of course, would depend on the time after death not having allowed of its darkening. Before leaving this subject, it may be well to direct your attention to some forms of redness of the intestinal tube other than either inflammation or putrefaction are known to occasion.

Thus, Orfila first pointed out the circumstance that in persons in health, perishing suddenly while digestion was going on in the stomach, the interior of this organ will usually be found uniformly and distinctly reddened.

Again, in the case of habitual drunkards, after sudden death, as by drowning or hanging, the interior of the stomach, and, though to a less extent, of the smaller intestines, though pale at the moment of exposure, speedily assumes a distinct deep-red colour from the action of the air. (The drawing now shown exhibits the reddening effect of a few minutes of such exposure.)

Once more, it might happen that substances taken into the stomach might give rise to redness of the interior of this organ. Of this we have an instructive instance adduced by Sir Robert Christison, where the inspector referred the colour to inflammatory action, though it was found to have been caused by a strong infusion of the cerv-poppy (*Papaver rhœas*). —("Toxicology," page 540.)

Nor are these all the changes of *colour* which may be met with in *the alimentary tube*, from the action of causes operating on the tube itself at or immediately before death, as well as those depending on the state of the neighbouring viscera at or after death, having no connexion with either inflammation or putrefaction. Thus, it is known that the presence of gases is capable of variously affecting the colour of the blood in the intestines, in much the same way as is done by certain of the acids. The transudation of the contents of the gall-bladder through the coats of the duodenum, or even of the stomach, may also simulate the effects of nitric acid swallowed during life. The gastric juice, even where not in sufficient quantity to corrode the coats of the stomach, is capable of effecting changes of colour in the interior of the organ. But this is a digression from our subject.

To return. Some other forms of redness encountered in the dead body may present serious obstacles to any ready diagnosis; but as these have more bearing on general pathology than on forensic medicine, that consideration need not detain us long. We have an example of such a form of redness in the injected state of the dura mater, particularly towards the dependent parts of the head, from venous fulness, both in fresh and putrid bodies; and, *à fortiori*, of the coverings of the spinal cord, from the same cause, which makes it sometimes difficult, if not impossible, to decide betwixt the natural appearance of the part and the consequence of disease or decomposition. The same remark applies to the pia mater, and even the substance of the brain at times, where blood is accumulated within its vessels, whether from the mode of natural death, or from the effects of intoxication, narcotics, deaths by hanging, drowning, etc.

(To be continued.)

Iodine Injection in Hydronephrosis.—Dr. Woelfer, the assistant of Prof. Billroth, narrates in the *Wien. Med. Woch.* (April 15 and May 20 and 27) a case of congenital hydronephrosis, in which puncture and iodine injection led to recovery. After a review of cases of this affection hitherto published, he comes to the following conclusions:—1. Whenever the constitutional conditions of the patient allow of it, the operation should be resorted to as early as possible. 2. Mere puncture can be followed by no radical result, whether the fluid discharged be urinous, serous, or purulent. It is hurtful in proportion to the frequency of its repetition, and is, in fact, only useful for exploration. 3. When after such exploratory puncture the diagnosis is clearly established, and the contents are urinous or serous, a few weeks after the first puncture another is to be repeated in its vicinity (with the hope that the first puncture may have been followed by adhesion to the walls of the abdomen), accompanied by the injection of diluted tincture of iodine. This is to be repeated when the result obtained is only incomplete. 4. When upon exploration the contents of the sac are found to be purulent, or become so afterwards from any cause, Prof. Simon's practice should be followed by incising the sac after preliminary injection of iodine, cleansing it out well daily. If suitable drainage be established, and the wound carefully treated by Lister's method, a brief duration of the healing process, unaccompanied by fever, may be expected.

ORIGINAL COMMUNICATIONS.

CLINICAL STUDY ON NAPLES FEVER.

By Dr. DIODATO BORRELLI,
Professor Pareggiato of Medicine in the University of Naples.

At the end of the prolonged epidemic of typhus fever which prevailed in Naples eight years ago, I had an opportunity of studying a number of mild cases, which, after a few days of continued fever, terminated in two or three accessions of intermittent fever of quotidian type with evening elevation. In 1870 I met with a case which, during two weeks, presented the symptoms of a mild typhoid; but the fever, after it had completely subsided on the morning of the twelfth day, returned again and assumed an intermittent form of quotidian type, which it maintained for more than twenty days. Later on I saw several other cases of a similar description, and, since at that time such fevers were generally considered and treated as if of simple malarious origin, it appeared to me a good opportunity for discussing the question of their real nature, which I did in an essay published in the *Rivista Clinica di Bologna* ("Delle Febbri, a Tipo Intermittente"). Since that time this form of fever has become very prevalent, and, especially in the last two years, it has almost assumed the dimensions of an epidemic. It has also been noticed that no inconsiderable number of the other essential fevers, such as measles, scarlet fever, and small-pox, as well as of those fevers which are simply symptomatic of catarrhal inflammation, have ended in an intermittent stage of greater or less duration. In the narrow limits which are allotted to me, I shall first consider the question of the origin of the Naples fever, and shall then pass on to its clinical aspects.

I. In the very first paper which I published on this subject I expressed the opinion that *typhoid infection* was at the root of the form of fever which we are now considering; and that opinion has not been in the least degree modified by further observation. I was led to form it by observing the co-existence, at the above-named period, of typhoid fever in every degree of development, from the complete and relatively severe, to those milder and more abbreviated forms to which we give the name of *febricula*; and both in the former as well as in the latter varieties *intermittence* was a symptom repeatedly observed, although far more frequently in the latter. Nevertheless, there are physicians like my distinguished friends Professor De Martini and Professor Schrönn, who differ from me in their opinion, and believe in a mixed infection of malario-typhoid nature, and in a double infective process which developes in the organism. According to them the evolution of the malarious element sometimes precedes that of the typhoid, and then the stage is first occupied by the intermittent fever, and the symptoms peculiar to the typhoid process appear later; and, lastly, when these have disappeared, the intermittence can again show itself, owing to the incomplete exhaustion of the malarious elements. In other cases they believe that the typhoid infection may first manifest its presence, and then the intermittence will only appear as its concluding phase. Dr. Schrönn specially observed a number of cases in which he accurately followed the progress of the two phases of the fever, and it is on these that he rests his pathological explanation.

I completely admit the possibility of mixed infections; for I have many times observed scarlet fever and measles, scarlet fever and varicella, and measles and small-pox, running their course in the same individual, and Thomas and Gerhardt have reported other combinations of the same kind. Uhle and Wagner, too, admit the possibility of such combinations, including that of typhoid fever and intermittent fever. On this point Trousseau writes as follows:—"It is especially in the countries where paludal fevers are endemic, and among those persons who have only left their country a short time previously, that we see typhoid fever assume an intermittent type at its commencement." For my own part, I can remember a very important case which was under my care last year, in which the first rise of temperature was accompanied with marked signs of true ague (*perniciosa algida*); but when the first danger was removed by hypodermic injections of quinine, the fever assumed the character belonging to typhoid infection. Now, this patient came from another country in which he had previously suffered from ague, so that there was nothing more easy than for the old poison, which was lurking in his blood, to link itself on his arrival in Naples to another kind which was there prevalent. While, therefore, I recognise the possibility of mixed infections, I still hold to the opinion that the febricula of Naples is only one of the various forms which typhoid fever can assume; and I therefore designate it by the name of "*intermittent typhoid*." The proof of this view would require more space for its complete development than can be given to it in the present paper. I must therefore confine myself to giving a *résumé* of the principal facts which support my opinion.

1. The *intermittent form* of fever is not peculiar to paludal infection, but is met with in a number of different diseases. I have observed it pretty often in tuberculosis and in caseous inflammations of the lungs, in chronic inflammations of the serous membranes, in pyæmia, in gall-stone colic, and such-like affections: why, then, should we exclude it from typhoid and typhus fevers? This argument, on which those persons who hold a contrary opinion to mine especially rely, has nevertheless no valid ground of support.

2. If the febrile intermittence depended on a malarious element, the salts of quinine ought to cure it rapidly,—yet they invariably fail; and I have already proved, by various clinical examples, that quinine does not exhibit any power over intermittent typhoid, while, if it is administered in large doses when the fever is continuous, it almost always produces a diminution of temperature: my results in this respect agreeing with those which Liebermeister has published.

3. In paludal infection, when the fever assumes a quotidian type, each fresh access almost invariably begins during the forenoon; whereas, in intermittent typhoid, the type, although quotidian, has an evening rhythm—that is to say, the exacerbation occurs in the afternoon or evening, so that in that respect it resembles all those spurious intermittent fevers which accompany the other diseases that I have mentioned.

4. In paludal infection the enlargement of the spleen during the febrile period either maintains its previous volume or even increases still more, and it not unfrequently happens that this increase persists even after the fever has subsided. In intermittent typhoid, on the other hand, at the end of a fortnight, or even earlier, the size of the spleen in most cases begins to diminish gradually until it has regained its normal limits.

5. Lastly, I must mention that cases of true malarial infection of well pronounced type are relatively infrequent in the interior of Naples. The majority of persons with this disease that we meet with every day in the hospitals or in private practice come from Pozzuoli, Ponte della Maddalena, or from parts of the city in the neighbourhood of marshes: I therefore think that we can divide the district in which fevers occur at Naples into two sub-districts—the central, in which they depend on zoogerms (typhoid poison); and the peripheral, in which they are due to phytogerms (paludal infection).

The typhoid virus, being widely diffused, is that which gives rise to the great variety of forms of fever which we encounter in Naples, from the *febricula*, which only lasts five days, to the severe forms of typhoid fever, with the complex collection of symptoms which usually characterises them. But, in reality, the perfect and severe form, as it is met with in Paris, Munich, and other European cities, has latterly almost disappeared from Naples, or, at any rate, occurs there with the utmost rarity. In its stead febricula prevails, and we ought, I think, to be well contented with the exchange; since the latter is a mild disease which is only exceptionally accompanied by symptoms of any severity, and always terminates in recovery. I am not able to assert that the mild character of the typhoid infection which now exists depends on a modified intensity of the poison, or on any alteration in the degree of individual receptivity, but I believe that the pathology of the present day will soon give a definite answer to these questions.

In other diseases, especially in diphtheria, I have observed the conversion of severe forms into mild ones when the disease has existed for a long time in a given locality. It would seem that as the poisons diffuse themselves more widely their virulence diminishes, and it is possible to believe that the human organism by long exposure to their influence becomes habituated to it and therefore suffers less harm from it.

The view which is held by my distinguished friend Professor Beale, and which I have fully considered in another essay, might perhaps offer a satisfactory explanation of this point.

The principal cause of the wider spread of typhoid infection at Naples I believe to be the increasing number of sewers (*corsi luridi*). Before the year 1860, only the Toledo, Chiaia, and a few other principal streets were provided with such sewers, which were intended to carry off, not only the rain-water, but also the contents of the private closets (*latrine*) with which they communicated. At that time, when there were heavy rains, the water was conveyed from the roofs of the houses by means of gutters, and poured into the public streets, which became, for the nonce, veritable torrents. This, no doubt, caused considerable annoyance to foot-passengers, but still the water cleansed the paving, and carried with it to the sea all the filth which was perpetually being thrown out into the streets by an uncleanly populace. Since 1860, the different administrations which have succeeded one another in the municipal government have laid open and remade many of the streets, with the laudable intention of beautifying Naples, and many new sewers have been excavated every year, so that their number is now very considerable. It was thought that the ends of civilisation would be met by this undertaking, whereas in reality the result has only been injurious; for the sewers have to receive not only the excreta of the whole city, but also the rain-water, laden, as it is, with the rubbish and filth of the thoroughfares, and they often become clogged up. The consequence is that the stream behind the points of obstruction stagnates, and the sewage undergoes decomposition; and, finally, its foul products are not only discharged into the air, but infiltrated into the surrounding soil and the drinking-water pipes which traverse it.

The greatest harm must result in the low-lying parts of the city, where, in consequence of the slight inclination of the ground, the flow of the sewage is sluggish. Perhaps the new road from Santa Lucia to Mergellina, by taking the mouth of the sewers further off and placing it in deep water, may not inconsiderably improve the hygienic conditions of the large inhabited district through which it passes. But it is to be hoped that the municipality may be induced not only to seriously discuss matters of such vital importance, but also to listen to what science has to say, so that they may thus secure to Naples that exceptional salubrity which Nature evidently intended her to have when she crowned her with green hills, and refreshed her with the everlasting breezes of the sea.

II. In describing the clinical features of Naples fever, I shall not refer to such cases of complete typhoid fever as are met with in other countries, but I shall take as my typical example that form which I have entitled "intermittent typhoid," and which is commonly called "febricula."

1. The most important symptom is the *thermic disturbance*, which, in the majority of cases, represents almost the whole of the disease. There are three varieties of it—(*a*) a fever continuous at the commencement and intermittent in its final stages; (*b*) an intermittent stage at the beginning, followed by continuous fever; (*c*) an intermittent stage at the beginning and end, and a continuous fever in the middle period: (*a*) and (*c*) are the most frequent, and (*b*) is the rarest of these varieties. In a case of exanthematic typhus which I had to treat last year, and in which the patient was a strong young man, the fever began with a chill and headache, yet on the ninth morning he was perfectly apyretic. In the afternoon, however, the temperature again rose, and defervesced again on the following morning; but after the third accession the fever became continuous, and ran the remainder of its course in that form. This is the only case of typhus in which I have observed intermittence at the onset of the disease. In febricula it is most usual for the fever to assume a continuous form at the beginning. The rise of temperature is generally rather rapid, so that on the first or second evenings the maximum—which rarely exceeds 39·5° to 40° C.—is reached. There are only slight daily oscillations, which consist in a fall of from four to six-tenths of a degree in the early hours of the morning. The new elevation always occurs in the afternoon. Often, after a few days, the oscillations assume a remittent type, the temperature falling in the morning to 38·5°, and rising again in the evening to 39·5° or 40° C. In these cases I have generally found that the depression commences before midnight, and the minimum corresponds to five or six o'clock in the morning. About 10 a.m., or even earlier, the new elevation begins, and reaches its maximum about 2 or 3 p.m. In most of the cases the intermittent phase is preceded by a period of remittence. When intermittence supervenes, the temperature reaches its normal limits in the first half of the day (from midnight to mid-day), and rises again in the afternoon. In the first few days of this stage the morning temperature continues to range between 37·6° and 37·8°, and then progressively sinks, so that it is not uncommon for it to reach 36°. The afternoon rise reaches 39° to 39·5°, and sometimes, but rarely, 40°, and it may remain at this height for several days. When, however, it begins to fall gradually—from one evening to another—it is a most certain indication that the disease is nearly at its end. The morning temperature has a favourable significance when it reaches the physiological minimum. We can thus distinguish the following phases in the thermic cycle of the most perfect types of febricula:—(1), a rapid rise, and fastigium, with stationary oscillations; (2), a remittent phase; (3), an intermittent phase. We have, however, previously observed that in many cases the intermittence is met with at the commencement of the disease.

2. The disturbances on the part of the heart and vascular system are but very slightly marked, and it is very rare to meet with any of those severe troubles which are so common in complete typhoid. The pulse generally ranges between 90 and 110 beats per minute. Dicrotism is not a constant symptom; it is more common for the pulse to be frequent.

3. The gastro-intestinal derangements are far from reaching that degree of intensity which they assume in complete typhoid; in most cases they are confined to slight redness of the tongue, on which there is a thin white fur; to loss of appetite, moderate swelling of the abdomen, and a little gurgling in the ileo-cæcal fossa. But what is most important to remember is that there is generally no diarrhœa, but instead constipation, which sometimes is so obstinate as to necessitate the use of injections. All the symptomatology of this group of phenomena perfectly resembles that to which our old physicians assigned the name of *simple gastric fever*.

4. Among the secondary local symptoms, I need only mention the bronchial catarrh and the enlargement of the spleen. The former reveals its presence quite early in the illness by a more or less troublesome cough, and by râles chiefly of sonorous quality. This makes us think that the hyperæmia and swelling of the mucous membrane are more marked than its secretory activity. The other secondary alterations with which the respiratory apparatus is frequently attacked in infective diseases are scarcely ever met with in febricula. The splenic enlargement is one of the earliest symptoms, and the upper limit of splenic dulness will generally be found raised and thrown backwards from the beginning of the illness to a degree proportionate to the amount of tympanites. This dulness persists for ten or twelve days, and then steadily decreases, even should the fever persist. Roseolar *tâches* are only exceptionally met with, and in very limited numbers.

5. The nervous troubles which often make the aspect of exanthematic typhus and of typhoid fever more formidable are generally absent in febricula, yet it is a notable fact that the patient's strength is often more exhausted than we should at first be led to expect from the duration and the mildness of the disease. The duration varies widely in different cases; the shortest which I have seen only lasted five days, the longest thirty-five, and in the latter the intermittent phase always took up the larger portion of the whole period. The habitual termination of febricula is in recovery. The cases of death, which are of extremely rare occurrence in Naples nowadays, are all the result of forms of complete typhoid. The period of convalescence is relatively long, and is longest when the fever has been most severe; it is characterised by hydræmia, languid digestion, and, above all, by muscular weakness. I remember a young lady who two months after she had recovered still walked with difficulty; but this fact has not much significance, since it occurs sufficiently often in typhoid fever, even without complete paralysis of the lower limbs. The diagnosis of febricula is generally easy; the elevation of temperature and enlarged spleen, and the absence of inflammatory signs, will enable us to determine quite early that we have to do with an infectious disease. We can distinguish it from paludal fevers by the signs already enumerated above; from complete typhoid by the mildness of its form and the absence of the local symptoms which are common in that disease. It is necessary to be on our guard against a grave mistake which it is possible to commit—namely, that of confounding the early stages of tuberculosis, before the appearance of other symptoms, with febricula,—for the former may also be accompanied by an intermittent fever, and signs of bronchial catarrh, which make its aspect very similar to that of the latter. To avoid this error, we have to discover at an early stage what

the primary disease is on which the fever is dependent; and this can generally be done by making a careful examination. The initial fever of tuberculosis has a more irregular course than that of febricula. It sometimes lasts but a few days, and then ceases, only to return shortly after without any assignable cause. The hour at which each exacerbation occurs is less constant than in febricula, and the maximum and minimum temperatures range within wider limits. Splenic enlargement is the rule in febricula; in tuberculosis it is the exception. In the latter the fever is not unfrequently preceded by bronchial catarrh; and, lastly, a careful physical examination will scarcely fail to detect at least some of the symptoms with which the early stage of tuberculosis is attended. The mild character of febricula, and its almost invariable termination in recovery, make it unnecessary for me to discuss its prognosis. I have, however, observed that in persons previously debilitated by chronic diseases, and who are suffering from advanced hydræmia and cardiac weakness, it is possible for some danger to arise from the *asystolism* which such a condition may give rise to.

Most physicians treat febricula with quinine, and they give it for two reasons—first, in the belief that they are contending with a miasmatic fever; and secondly, owing to the faith which so many of them have in the anti-febrile properties of the drug. For a certain period I myself adopted this plan, but a rather extended series of observations has now convinced me that in the intermittent stage of febricula quinine has no effect whatever. I formerly published some very striking cases in proof of this statement, and I have notes of others, among which I may mention the case of Miss S., the daughter of a well-known professor in this country. This lady was laid up with an intermittent febricula for quite thirty-five days, without the least control being exerted over her temperature by the salts of quinine, and even on some evenings on which quinine was given it rose higher than on the night before. While I make this assertion, I have no intention of excluding salts of quinine in a general and absolute manner from the treatment of fever. I have already discussed the question in another work ("La Febbre"), but, on the strength of clinical studies which I have undertaken since then, I believe myself justified in expressing myself as follows:—"When the fever assumes a continuous or remittent type, if we give a large dose of quinine an hour or two before the time when the new rise of temperature is expected, the subsequent elevation will be less than on the previous day, and the temperature will remain for a shorter time at its maximum height. On the other hand, in typhoid of an intermittent type the quinine has no tendency to lower the temperature."

The dose of quinine for an adult which I give is a gramme and a half (twenty-two grains and a half) of the bisulphate, divided into three portions, which are given at intervals of a quarter of an hour. I must observe, however, that the depression of temperature which quinine produces in typhoid fever does not in the least remind us of its action in intermittent fever. It only exercises that limited antipyretic effect which is now generally conceded to it, not only in fevers depending on infection, but also in acute rheumatism and pneumonia. My excellent friend Professor Semmola goes still further than I do, and absolutely denies that quinine has any such property unless administered in poisonous doses. I cannot, however, agree with him on this point.

To sum up my views, I consider that quinine ought not to be prescribed off-hand in febricula, and I limit its use to that period in which the fever has a continuous type, and the elevation of temperature is so great as to threaten the heart's action and that of the nervous centres. I cannot think it a wise proceeding to prescribe a certain quantity of quinine every day merely as a routine practice. It seems to me far better to order one large dose, and then to let the patient have two or three days' rest before resuming the remedy, if it be found necessary for him to do so. But in all cases it is necessary not to overlook the state of the stomach and intestines, for I am firmly convinced that quinine has an irritating action on the mucous membrane of the digestive tract, and that it may sometimes induce a catarrhal condition if it be given incautiously. I should transgress the narrow limits of the present essay if I were to enter on a discussion as to the value of other anti-febrile remedies in the treatment of febricula, and I may say, in conclusion, that in the greater number of cases no drugs are really required. It is one of the great triumphs of modern therapeutics to have demonstrated that simple attention to hygienic rules suffices to cure, I will not say febricula alone, but the greater number of acute diseases; and I believe that to this is due the success of the homœopathists over bad allopathists, and the credit which the former are beginning to acquire among the upper classes in Naples. Adhering firmly to these principles, I generally abstain from ordering any medicine in febricula, but I advise my patients to take plenty of cold water at the time when the fever is highest, drinking a little at a time every twenty or thirty minutes. Or they may have instead a weak lemonade made with tartaric or citric acid. Since the bowels are generally much confined, I order an injection of cold water every two or three days, and I find that it not only prevents the catarrh which an accumulation of fæcal matter in the intestine often produces, but I have also seen its use followed by a fall of temperature. I believe, with reference to this subject, that obstinate constipation in febrile diseases sometimes produces a rise of temperature. Cold baths are not required in all the cases, but only when the fever exceeds its ordinary limits and remains for some time at 40° C. The most important part of the treatment of febricula is the management of the diet. Milk is certainly about the best food, and may be ordered from the very outset of the illness in quantities regulated according to the age of the patient, and divided into three or four equal quantities. When there is a considerable amount of gastric irritation, milk is usually tolerated better than soup; but when the disease lasts a long time, or if, owing to the previous condition of the patient, there is a danger of collapse, it is best to order some good soup, as well as eggs and a few ounces of wine. In a case where the fever assumes an intermittent type, and so continues for a long time, we must give the patient a more supporting diet, and I usually order in the apyretic part of the day not only eggs, but also a thick meat soup and some good wine. Ventilation of the room from time to time, scrupulous attention to the cleanliness of the linen, and complete rest, are indispensable adjuncts to the treatment. But if, in spite of all that can be done, the fever still persists after several weeks, nothing does so much good as to send the patient into the country; and I most frequently recommend Sorrento in the summer, and Torre del Greco in the winter.

TWISTING OF THE INTESTINE—CONGENITAL ABSENCE OF THE MESOCOLON AND MESOCÆCUM.

By T. T. WHIPHAM, M.B.,
Assistant-Physician to St. George's Hospital.

For the notes of the following case I am mainly indebted to Mr. Childs, House-Physician at St. George's Hospital, and to Mr. Fletcher, then one of the clinical clerks. During the temporary absence of Dr. Dickinson, Maria D., aged nineteen, a nursemaid, was admitted under my care on March 22 last, suffering from constipation of ten days' duration.

The history given me by the patient and her friends was that she had experienced a precisely similar attack eighteen months previously, which had been relieved by purgatives on the tenth day, but that she had never been quite well since—*i.e.*, she had been subject to cramping pains in the abdomen, which were occasionally excruciating in character. Her bowels, however, had acted during this time with tolerable regularity. She had been under my care as an out-patient, but the notes of her ailment, unfortunately, cannot be found, and I am unable to recall to mind the circumstances attending her visit. Subsequently, she was treated by other medical men for loss of appetite and general debility. When a child she had measles, and was reported to have suffered from typhoid fever at four years of age; otherwise she had enjoyed good health. Inquiries as to her family history elicited the facts that one of her maternal aunts died from cancer, and another from consumption; one of her brothers died at five years of age from "chronic liver complaint"; and one sister died of some wasting disease.

On March 12 of the present year she took to her bed, complaining of sickness. Violent and uncontrollable vomiting soon set in, and she brought up, without much effort, large quantities of a liquid of a grass-green colour. The bowels from this time ceased to act.

At the date of her admission into hospital she looked greatly depressed; her eyes were prominent, large and bright; her

cheeks were flushed; the skin was cool and fairly moist. Pulse 90, soft; body well nourished. The tongue was red at the edges, raw in appearance, and coated in the middle; its papillæ were red and remarkably prominent. She had no abdominal pain or tenderness. There was no distension of the bowels. Percussion elicited no abnormal dulness, nor was any tumour detected by palpation. She vomited soon after admission about half a pint of fluid of a grass-green colour. The treatment adopted was tinct. opii ℥x., ol. ricini ʒvj., to be taken at once; with extract. belladonnæ gr. ¼., opii pulv. gr. ss., every four hours. Her diet was beef-tea and milk.

March 23.—The report was to the effect that she had been slightly delirious during the night, but that she had not vomited. In the morning, however, sickness (similar in character) recurred. At the time of the visit no marked change was perceptible in the condition of the patient. Her pulse was quiet; her skin cool; her tongue, if anything, rather less coated. No action of the bowels having occurred, she was ordered a turpentine injection, which resulted in the evacuation of a small quantity of liquid fæces. Abdomen somewhat distended. Towards evening the delirium recurred, and rapidly increased, and on this account Mr. Childs omitted the opium and belladonna, and ordered a repetition of the enema in the morning.

24th.—The delirium had increased, but her answers to questions were ready and coherent. The pulse had risen to about 120, and was very weak; respiration hurried; tongue dry, very red, and raw in appearance, papillæ very prominent; the abdomen was tympanitic, but no great distension existed. She complained of slight pain and tenderness over the epigastric and hypochondriac regions, where the distension was most marked; below this there was little or no pain or tenderness. Her countenance, however, was rather dusky, and she had a somewhat anxious look. She was evidently much weaker, though up to this time there was no great impairment of strength; she could raise herself easily in bed. At 2 p.m. she took five grains of calomel and a drop of croton oil. A few minutes after taking these the patient again vomited, became suddenly collapsed, and died.

The temperature was taken several times during her illness, and varied from 97·4° to 98° Fahr.

Examination of the body, twenty-three hours after death (reported by Dr. R. J. Lee, curator).—Pleuræ: Very slight adhesions on the right side. Lungs: Covered externally with dark red blotches, apparently of an apoplectic nature. Both lungs congested throughout; more so at the bases, where they were also slightly œdematous. Heart: Weight, nine ounces; normal; slight trace of atheroma on the lining membrane of the aorta. Liver: Weight, forty ounces; natural. Kidneys: Weight, ten ounces; natural. Spleen: Weight, six ounces; firm. The stomach and duodenum were very greatly distended, and contained fæcal matter and air. The small intestines, with the cæcum and ascending colon, were attached by their mesenteric envelopes to the same point near the last dorsal vertebra, so that the usual attachment of the large intestine to the right iliac fossa was deficient. This pedicle of conjoined mesentery was twisted from left to right across and around the union of the duodenum with the jejunum, so as to compress this part firmly. There was considerable change in the colour of the jejunum; it was dark, soft, and the surface of the mucous membrane was in the early stage of gangrene, although not distinctly gangrenous. The lower bowel was in its usual position. The walls of the ileum were contracted, and the gut was nearly empty. The brain was slightly congested, but otherwise healthy.

In reviewing this case, aided by the light thrown on it by the post-mortem examination, many points of interest naturally present themselves, of which the more prominent may be here noticed. An accurate diagnosis during life, in a case in which so rare an abnormality in the arrangement of the folds of the peritoneum existed, amounts almost to an impossibility. All that could be decided with certainty was, that intestinal obstruction had occurred, and that that obstruction was high up in close proximity to the stomach; the chief evidence in favour of this being the distension which existed in the epigastric and hypochondriac regions, together with absence of any such dilatation of the bowels lying in the lower part of the abdominal cavity. Beyond this no diagnosis was made, and the true cause necessarily remained undiscovered until the post-mortem examination. By process of elimination the possible causes were reduced to three in number—1. By external examination of the groins, the umbilical and femoral regions, it was demonstrated clearly that no hernia existed in the usual situations. 2. By the symptoms and undistended condition of the lower part of the small intestine and of the colon, it was rendered improbable that any unusual form of hernia (*e.g.*, obturator) had occurred. 3. The absence of any abdominal tumour and bloody evacuations negatived the idea of intussusception of any part of the intestine. There remained, therefore, two or three causes, to either of which the intestinal obstruction might have been due—viz., *a*, twisting of a portion of the small intestine: *b*, obstruction due to impaction of a gall-stone or hardened fæces; *c*, constriction produced by a band of adhesions originating in previous peritonitis; *d*, constriction due to contraction of the cicatrix of an old ulcer. With regard to these last two, the history of the former attack rendered either event possible. Obstruction by gall-stone or hardened fæces was unlikely, as the patient had been subjected to treatment calculated to remove any such cause before her admission into hospital. On the three possible causes of obstruction—viz., twisting of the gut, constriction due to old peritoneal adhesions, and that due to contraction of the cicatrix of an ulcer, it was, owing to insufficient data, extremely difficult to decide.

In the treatment of the case, the history of the previous attack, followed by recovery under the action of purgatives, led me, in the first instance, to administer castor oil, and, in the event of this failing, to produce evacuation of the contents of the bowel, to have recourse to opium and belladonna, as being drugs which have been attended with most satisfactory results in intestinal obstruction. In the first number of the *Medical Times and Gazette* for 1872 are three cases (two of which were fatal) of twisting of the gut related by Dr. Handfield Jones; and in his remarks on the treatment suitable to such cases Dr. Jones lays great stress on the administration of opium. "For pain," he says, "opium is the best remedy. By it we save the nervous system the wear and tear of agony, we obtain sleep, and we shield the cardiac nervous centres more or less from the paralysing inhibitory impressions conveyed from the irritated districts; opium, moreover, in some conditions certainly promotes peristaltic action powerfully: so that it seems capable of acting as a conservator of force to both sensory and motor departments of the nervous system. . . . When, as Abercrombie says, a case of intestinal obstruction yields to a full dose of opium, after the most active purgatives have been tried in vain, is not the explanation that the latter were simply an unnecessary and injurious stimulus which gave no force, while the opium did?" In summing up his remarks on opium and belladonna in the treatment of these cases of obstruction, Dr. Handfield Jones observes: "To speak of these drugs as stimulants or sedatives, describes, I believe, their action imperfectly; they are rather *recreators of nerve-force*, and the primary result of their successful action will not be any evident exertion of force, but the return of a capacity for exerting force efficiently on the application of suitable stimuli." These comments of Dr. Handfield Jones, so suggestive and so amply confirmed by experience, are expressed with such force that I make no excuse for quoting them *in extenso*. Their beneficial effect in the present instance was clearly demonstrated by the temporary cessation of the vomiting; on its recurrence, however, it was decided, in consequence of the delirium, and also because the patient had in her former attack been relieved by purgatives, to have recourse to these remedies, and, in the event of their failing to produce the desired effect, to call in the aid of the surgeon, with a view of opening the abdominal cavity, and thus to ascertain, and, if possible, relieve, the cause of the obstruction. The sudden death of the patient, however, frustrated any such intention.

After a brief investigation as to reported cases of obstruction due to twisting of the bowels, I find that Dr. Crisp, in his Jacksonian Prize Essay, has recorded twelve such cases; in the *Pathological Society's Transactions* seven cases are recorded, and of these the twisting occurred five times in the large intestine, and twice in the ileum. In Dr. Handfield Jones's first case, the cæcum was the part affected; in the second, the lower part of the ileum. My own case is remarkable for two reasons—first, in that the twisting occurred at the junction of the duodenum and jejunum; secondly, that there was a congenital abnormality in the arrangement of the peritoneal folds.

From the description of the condition of the parts at the post-mortem examination, it will be evident that the intestines lay comparatively free in the abdominal cavity, or rather, to speak with greater accuracy, that the large intestine was unrestrained in its usual position by the ordinary peritoneal

attachments, and that, in consequence, the movements of the whole intestinal tube were unlimited, while the changes in the position of its various portions must have been frequent and variable. Are we, then, to ascribe the twist in the present case rather to an accident resulting from abnormality in the distribution of the peritoneum, or to other causes? In discussing this point with Dr. H. Jones, I was, at first, rather disposed to attribute the cause of the lesion to want of the usual intestinal connexions; but he at once suggested that other causes have produced twisting when the peritoneum was normal in its attachments (as in the cases reported), and that there were no sufficient data, either in the clinical history or in the post-mortem report, for assuming that the twist was the result of the peritoneal abnormality alone. In this I am quite disposed to concur; and the argument receives additional weight from the fact that, since the illness which occurred eighteen months previously to her fatal attack, she had frequently experienced cramping pains in the abdomen. This pain would tend to show that the first attack of constipation had produced functional derangement of the nervous system in the abdomen, from which it had never recovered. In explanation of the causes of twisting of the intestines, two theories have been advanced: one, that it results from distension of the bowel consequent upon deficient or altered innervation; the other, that it is due to spasm of the gut below the seat of the obstruction. In the case related, the excruciating cramp from which the patient so often suffered might seem to indicate some such spasmodic contraction occasionally affecting the intestinal walls; while, on the other hand, these cramps may have been equally the result of undue distension of portions of the intestine. Moreover, most writers on the subject, and notably Abercrombie, have adopted the explanation that the lesion in question is to be ascribed to undue dilatation of the intestine. Given either of these conditions as a predisposing cause, twisting of the bowel would have been further facilitated by the abnormality in the peritoneal attachments.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

ST. MARY'S HOSPITAL.

CLINICAL REMARKS ON THE TREATMENT OF TRANSVERSE FRACTURE OF THE PATELLA, THE RESULT OF MUSCULAR CONTRACTION, SUPPLEMENTED BY THE USE OF MALGAIGNE'S HOOKS.

(By Mr. HAYNES WALTON.)

[Reported by Mr. JACKSON GAWITH, House-Surgeon.]

GENTLEMEN,—Of course it is well known among my class that I have been endeavouring to ascertain whether better results may be obtained in fractured patellæ by employing the hooks known as Malgaigne's, than by the ordinary recognised methods which are so frequently seen in operation in this ward. I have experimented with the hooks sufficiently often to warrant me in giving an opinion, and I shall now enunciate my views. I shall not give you a systematic lecture on this form of accident—that would legitimately include many physical and pathological states I shall not touch on,—but confine my observations as closely as allowable to the question in point: the value of the hooks.

In the treatment of fractures of bones in general, the principle on which we act is to place the broken surfaces in apposition that bony union may ensue. It is applicable in vertical fractures of the patella, and when in operation the desired end is obtained. It is scarcely ever applicable in transverse fracture of the patella, and, therefore, bony union is so rare that an anatomical museum would be proud of a specimen. This exception to the rule is due to the wide separation of the broken bone by the contraction of the flexor muscles of the thigh, and the persistence of such through effusion in the knee-joint, together with swelling of the soft parts in the vicinity of the fracture. Indeed, so generally do these conditions prevail, and so impossible is it to overcome the effusion and the swelling in sufficient time, that we shall be more surely in the path of surgical duty if we reject the hope of obtaining bony union, and recognise the alternative that it is only by soft materials the bone can be mended, and endeavour to do our best towards that desideratum. The best adhesion next to bony union is that of ligamentous material, but even this cannot be got if there be much more than an inch of space between the broken fragments. A less perfect union, if union it can be called, is through the medium of the fascia which is irregularly attached to the fragments. It scarcely forms any bond of union; the closer the broken bits are proximated in the course of treatment, the more perfect in all respects will be the limb, for the stronger will be the acquired ligament. A well-united patella does not give way, nor is there any stretching of the ligament, when the patient begins to walk. The different forms of bandaging, which I need not describe, as well as the many kinds of straps and buckles that are used to approximate the fragments, the position of the limb, the necessary back splint, etc., approximate the broken fragments tolerably well up to a certain point, and they cannot be dispensed with. But a time arises when not only will the fragments not go nearer, but the several appliances about the joint tilt them or displace them vertically, and they cannot generally be pushed in a line except by pressure (often not to be borne by the patient), and then it is that Malgaigne's hooks come most advantageously into play. Without dragging you through the statistics of my eleven cases in which the hooks have been employed, the details of which my dressers have carefully recorded, I will give you the general results of my experience. I can say that, taking them as a whole, the effect has far exceeded that of any equal number of cases treated without the hooks, in the closeness with which the fragments were brought together, and the straightness of the mended bone. In four instances, the repair was so good that an enthusiast might suppose that long union had taken place. I have so often said so much about the method of inserting the hooks that more might sicken you. I need only remark, do not attempt at once to screw the fragments together if they be wide apart, for it is not to be accomplished, but effect it by two, three, or more trials, at the intervals of a few days. Now as to the objections which are raised to the hooks. First, the painfulness. The adjustment of them is very painful, and sensitive patients should be helped by an anæsthetic. This would induce some surgeons to abandon them from practice. However, after they are in position the pain soon ceases. Secondly, the irritation which the hooks produce. In two of my cases they did irritate: in one they were discontinued after a fortnight, and in another they were applied, discontinued, and reapplied; and the patient before us is the one in whom this occurred. He was admitted on October 25. The fragments were separated a little more than an inch. The knee-joint became unusually distended with fluid. On November 6 the hooks were applied; on November 10 they produced irritation, and were taken out; on November 17 the hooks were reapplied; on December 20 they were finally removed, the fragments being almost in close apposition. On December 21 a starch bandage was applied to the limb. A little festering frequently occurs in the skin immediately around the hooks, but it need cause no apprehension, and should not alone be made the signal for removing the hooks. As the hooks are at present made and sold, two or three sizes should be kept to suit the different sizes of patellæ, as well as the degree of separation to which broken fragments may be subjected; but there is nothing to prevent one instrument being made which will suit all purposes. Receive these remarks, then, merely as hints, and, if you like, as encouragement to try the value of the practice advocated. Of course, the necessary manipulation you must learn yourselves, for no talking on my part can teach you, and even my demonstrations are only aids to your acquiring it.

KING'S COLLEGE HOSPITAL.

ILIAC ABSCESS.

(Under the care of Sir WILLIAM FERGUSSON.)

WILLIAM W., aged twenty-seven, admitted on January 30.

History.—Twelve months ago he first noticed a dull, heavy, aching pain in his loins, and found a difficulty in stooping, or, if in the attitude of stooping, of raising himself from this posture. He also carried himself very stiffly, but did not experience any difficulty in turning in his bed, nor did the pain radiate at all, being always in the small of the back. No change took place in the curvature of his back. Four months ago a swelling appeared in the right groin, and has gradually increased since, but without causing him any pain, nor did it interfere with his walking. He cannot in any way account

for the onset of these symptoms. He has never sustained any injury to the back. In the family history we find that his sister died of consumption. He does not remember how his mother died. His father is a healthy man.

Condition on Admission.—A large abscess exists in the groin of the right side, pointing externally, and below Poupart's ligament. It has all the signs of an abscess in this situation. He can straighten the leg perfectly. Pain is still complained of in the back, increased by percussion. There is no angular curvature of the spine. The pain seems more in the neighbourhood of the sacro-iliac synchondrosis of right side.

Progress: February 9.—The abscess was tapped by a large needle aspirator, and a large quantity of pus escaped. The wound was closed, but it broke open again in a day or two, and discharged freely, and continued to do so in a tolerably regular quantity till March 9, when there was a considerable increase in the quantity discharged. Poultices are applied to the opening. Five days after the abscess was first opened, decided symptoms of hectic were observed, and his temperature that morning was found to be 103·2°, evening 102·6°; after this it fluctuated, rising in the evening to 103° or 104°, and being in the morning about 101° or 100°. From February 28 to March 3 it was much more fluctuating, being 104° in the evening and 97° or 98° in the morning. From this time till March 9 the fluctuations were of slighter degree. The pulse was usually about 100, and did not vary much. Accompanying this febrile disturbance is a very troublesome cough, which has also come on since the opening of the abscess. He expectorates a considerable quantity of blood-streaked muco-purulent matter. His appetite has failed very much lately.

27th.—Ordered quiniæ sulph. gr. ij., tinct. ferri perchlor. ℥xx., acid sulph. dil. ℥xv., aquæ ad ℥j., t. d. s.

March 3.—Liq. opii sedativ. ℥xx., mist. camph. ad ℥j., omni nocte sumend.

He rapidly emaciated, and signs of cavities at the apices of his lungs occurred. No improvement in the character or amount of discharge from the abscess, which was always thick and white. He went into the country.

St. Thomas's Hospital, Medical and Surgical College.—The distribution of prizes took place on Wednesday last; Dr. J. Risdon Bennett, F.R.S., President of the Royal College of Physicians, in the chair. *Prizes for Summer Session of* 1875:—Second Year's Students (introduced by Mr. Croft)—C. E. Sheppard, Kensington, College prize of £15 and certificate of honour; G. B. Longstaff, Wandsworth, College prize of £10 and certificate of honour; F. H. Weekes, Southampton, College prize of £5 and certificate of honour. First Year's Students (introduced by Dr. Bernays)—J. Shaw, Clapham-road, College prize of £15 and certificate of honour; W. E. Woodman, Camberwell, College prize of £10 and certificate of honour; H. Castle, Newport, Isle of Wight, College prize of £5 and certificate of honour; S. J. Taylor, Grantham, certificate of honour; S. A. Crick, Cosby-hill, Leicestershire, certificate of honour. *Prizes for Winter Session of* 1875-6:—Entrance Science Scholarships (students introduced by Dr. Stone)—H. A. H. Fenton, Westminster, scholarship of £60; T. D. Savill, Brixton, scholarship of £40. First Year's Students (introduced by Dr. Ord)—T. D. Savill, Brixton, Wm. Tite scholarship and certificate of honour; A. Newsholme, Bradford, College prize of £20 and certificate of honour; Takaki Kanehiro, Kasumigaseki Tokei, Japan, College prize of £10 and certificate of honour; C. A. Ballance, Lower Clapton, certificate of honour; A. Purkiss, Kennington, certificate of honour; Ho Kai, Hong-Kong, China, certificate of honour. Second Year's Students (introduced by Mr. Mac Cormac)—S. J. Taylor, Grantham, Musgrove Scholarship of forty guineas and certificate of honour; J. Shaw, Clapham-road, College prize of £20 and certificate of honour. Third Year's Students (introduced by Mr. Sydney Jones)—G. B. Longstaff, Wandsworth, College prize of £20 and certificate of honour; C. E. Sheppard, Kensington, College prize of £15 and certificate of honour; F. H. Weekes, Southampton, College prize of £10 and certificate of honour; E. H. D. Gimlette, Southsea, certificate of honour; F. W. Giles, Henley-on-Thames, certificate of honour. Physical Society's prizes (students introduced by Mr. Wagstaffe)—E. H. Jacob, Winchester, Society's third year's prize and certificate of honour; C. E. Sheppard, South Kensington, Society's second year's prize and certificate of honour; D. S. Davies, Bristol, Society's first year's prize and certificate of honour.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JULY 8, 1876.

SIR WILLIAM JENNER ON DR. PARKES.

The noble and eloquent eulogium on the work and character of Dr. Parkes, pronounced by Sir William Jenner as the most fitting supplement to Dr. Parkes's Harveian Oration, will excite as much interest as the Oration itself did. When Parkes, in preparing his Oration, wrote the words, "It may be hoped that, in years to come, there may be many names and many memories which will be recalled in this hall and on this anniversary," certainly the idea that his own name and memory would be the first to be so recalled would be the very last thought that would present itself to him. And yet, as certainly, nothing could have been more singularly fitting and appropriate. Everyone, in reading Sir William Jenner's faithful, loving, and sympathetic sketch of the labours and character of his friend, must be struck with the close similarity in "intellectual calibre and tendency of mind" of Parkes as drawn by Jenner, and Harvey as pictured by Parkes. In each we see the same eager, persistent, single-eyed search after truth; each had the same faith in, and reverence for, facts; each was "exceptionally gifted with powers of observation"; and each possessed, in a remarkable degree, the power of clearly stating what he had seen and knew. We need not now quote again from Parkes's description of Harvey's mental characteristics, but it seems like a restatement of them when we find Sir William Jenner speaking of Parkes's energy and power of work, of his rare powers of accurate observation, and his ability to combine the facts he observed and to draw sound conclusions from those facts; of his untiring industry; and of the admirable clearness of arrangement and style of his writings: and pointing out that the worth of all his works "is perfected by the knowledge that everything he states to be a fact from his own observation may be implicitly received as a fact, and used as a fact by those who undertake similar or allied investigations." But all who knew Dr. Parkes well will recognise the faithfulness and truth of Sir William's sketch of him; and those who

were only "acquainted" with him, or knew him only by his works, will be glad to learn why and how he was "very, very dear to all who knew him." It was more than even a liberal education to have known him. Sir William Jenner, who was a fellow-student with him, and an intimate friend till his death, speaking of him in his early days says—"The excellence of his life was so evident, his work was such earnest work performed so unostentatiously and manifestly from such high motives, and the charm of his manner was so great, that few of his fellow-students could escape being better men from associating with him. He illustrated well the contagious power of goodness; he diffused among his fellows purity of motive, as some men have diffused among their contemporaries impurity of morals." And "what he was in the spring-time, that he was in the summer of his life, and that he was when cut down by death in the early autumn of his days;" while, as Sir William goes on to say, "With increase in years his mind ripened, his sphere of action widened, his influence over others operated in new and perhaps more important ways; but in all moral and intellectual essentials Dr. Parkes was as a man what he was as a youth—he was animated by the same principles and stimulated by the same faith. As years went on his mind proved itself to be singularly well balanced; he possessed an extraordinary power of acquiring information; his memory was very retentive; he was the best-informed man in the medical literature of the century I ever met; he was unprejudiced as he was learned; he could use with ease the information he acquired, and could express his ideas clearly and simply; his language was always elegant, and on occasions eloquent; few physicians have equalled him as a writer. His powers of observation, of perception, of reasoning, and of judgment were all good, and equally good. But as in his youth so in his manhood—the beauty of his moral nature, his unselfish loving-kindness, his power of inoculating others with his own love of truth, with his own sense of the necessity of searching for the truth, of questioning Nature till she yields up the truth, of earnest work, were his most striking characteristics."

Sir William did well to draw attention particularly to Dr. Parkes's opinions on two subjects that specially exercise men's minds in these days. With regard to the Contagious Diseases Acts, Sir William says:—"His perfect command of the facts and his dialectic skill enabled him to convince all open to conviction of the value of these Acts; and he would be a reckless—I was going to say a wicked—man, who, having read Parkes's papers, should propose their repeal. He was the purest-minded man I ever knew, and he defended the Contagious Diseases Acts." And he adds, "He was the kindest-hearted, the gentlest, the most humane man I ever knew, and you have heard the words he addressed to his College, in the Harveian Oration, on vivisection."

We will only further point attention to the description of what Parkes was "in the very sight of death." He was most anxious to see his old and tried friend once more, and why? "The motive that prompted this anxiety was that he might with his last breath promote good and useful work—it was that he might express to me his earnest wish that I should exert the influence which he hoped my position might give me to stay the hands of those who, through ignorance of the value of the Army Medical School, might possibly hereafter curtail its usefulness, or even destroy it. He most earnestly impressed upon me his sense of the worth of all his colleagues, of the value of the work they were doing, and the fitness of each for his special duties. A body of men so able and so well fitted for their duties, if once dispersed, could, he said, never be again collected. In the very act of dying, then, this noble man thought most of others, and how he might best promote the progress of good and useful work when his own hand must be powerless and his own tongue silent."

We know that the Netley School has been saved, and we may hope and believe that this is only the first of very many proofs that the influence, as well as the works of such a man, "influence-rich" for good throughout his life, will live long after him.

THE CORONER'S COURT.

The Balham Mystery has been the means of directing attention afresh to the method of conducting coroners' inquests, and it can scarcely be said that the result has been to increase the public confidence in this ancient institution. On the contrary, the conviction has forced itself on the mind of almost every inquirer that inquests are often unmeaning, and even worse than useless formalities. To our readers the recital of the shortcomings of the coroner's court will not have the charm of novelty, as we have repeatedly written on this subject and urged the necessity of reform.

It is easy to predict that the present system cannot be maintained much longer, but it is not at all easy to suggest the exact nature or extent of the changes that it is desirable to make. A debate on the subject is expected to take place in Parliament very shortly, and the Government will be asked to state whether they intend to propose any alterations. It is scarcely to be expected, however, that they are already prepared with any scheme of reform. The subject is so surrounded with difficulties that it would be much wiser of them not to take the matter in hand until a full inquiry into the working of the present system has been made. For this purpose we would suggest that a Royal Commission be appointed without delay, and upon the report of the Commissioners the Government would be able to frame a scheme which would command the respect and confidence of the public.

Among the points to which inquiry should be directed, perhaps the first in importance is the mode of electing coroners. Here an alteration is most desirable. The present system does not insure that the person elected is fit to hold the office; indeed, evidence is not wanting to show that frequently those who are elected to the office are not in any way well qualified for the post. Coroners should be specially trained for the duties they have to discharge, and it is desirable that they should be versed in both medical and legal knowledge. They should be paid an adequate salary, and in the metropolis and in large towns they should not be permitted to hold any other office, or to engage in any other calling or profession. The payment by fixed salary should be adopted at once, even if other reforms are postponed, as it seems highly important that coroners should be released from temptations to which in some cases they are at present exposed.

It is desirable also that the coroner should be able to feel that he is perfectly free to make a thorough investigation in all cases where it is necessary to hold an inquest, without having the bill of costs so severely criticised by county magistrates as hitherto has been customary. Coroners have been urged by the magistrates to cheapen inquests; and too frequently they have endeavoured to comply with this desire, with the result that in many cases the public interests have suffered. The readiest means of reducing the cost of inquests is, no doubt, to dispense with medical evidence and post-mortem examinations; but, as a rule, where this has been done the investigation could only by a stretch of courtesy be termed an inquest. In a well-written article on this subject the *Saturday Review* says, "Coroners inquests are an important and, it may be said, a vital part of criminal justice. It is of the greatest consequence to the interests of society that these inquiries should be conducted in a thoroughly searching manner, not only in order that crime may be detected, but that the designs of possible criminals may be discouraged by the prospect of the keen inquiry which awaits their deeds."

For our part we regard the coroner's court not so much as a criminal court as a court of inquiry as to the cause of death, and it is by directing careful attention to this point that it plays so important a part in the detection of crime. But it is too much the fashion on economical grounds to jump to conclusions as to the cause of death, and verdicts are frequently returned which are not merely unmeaning and senseless, but would be found to be opposed to the facts were the evidence to be obtained by post-mortem examinations permitted to be presented to the minds of the jury. Not long ago a case came under our notice where a verdict was returned that the deceased person died from the effects of an accident in the streets; but had a post-mortem examination been made before the inquiry, it would have been found that death was undoubtedly caused by a corrosive poison. Such cases are possibly of not rare occurrence; and in this way the coroner's court assists, rather than frustrates, the designs and practices of criminals.

We should like also to see the powers of the coroner's beadle restricted, or, at least, his actions should be subjected to some kind of supervision. This functionary has to hold a kind of preliminary inquiry, and it often rests with him whether an inquest shall be held or not. As the beadle is not always a person of the highest intelligence, and, it may be, has peculiar notions as to the manner in which the public interests are best served, it is not altogether impossible that an inquiry is occasionally avoided, when, although inconvenient and unpleasant to some parties, it is desirable on public grounds that it should be held.

There are some other points in connexion with the coroner's court to which we should have wished to direct attention; but sufficient has been said to show that reform is urgently needed, and we trust that the Government will lose no time in taking such steps as are necessary to insure that inquests shall be more efficiently and satisfactorily conducted than they are at present.

THE HEALTH OF HASTINGS.

We are very glad to publish the following, as it gives us an opportunity of more fully explaining our meaning. The first note is from Dr. Croucher, a homœopathic practitioner, and an alderman of the borough of Hastings. The statement is signed by the greater number of the practitioners in Hastings and St. Leonard's.

"26, Grand-parade, St. Leonard's-on-Sea,
July 4, 1876.

"*To the Editor of the Medical Times and Gazette.*

"Sir,—I beg to forward to you a copy of a memorial signed by the medical practitioners of Hastings and St. Leonard's, protesting against the unwarrantable and false assertion contained in your issue of the 24th ult., to the effect that typhoid fever is *endemic* in the neighbourhood of Warrior-square. In the proper sense of the word, no disease has *ever* been endemic in Hastings or St. Leonard's. Therefore, as a member of the Corporation, and as such being in some degree responsible for the welfare of the town, I ask you to give to this denial the same publicity which you gave to the injurious statement protested against. I am yours faithfully,

"Alex. R. Croucher, M.D., J.P.,
"Alderman for the Borough."

"A statement having appeared in the *Medical Times and Gazette* of Saturday, the 24th ult., which is also quoted in the *East Sussex News* of Tuesday, the 27th ult., that typhoid fever is endemic in Hastings, especially in the neighbourhood of Warrior-square, we the undersigned beg most emphatically to deny that such has ever been the case. A very few—perhaps half a dozen—cases of typhoid may have occurred in the two towns in the course of the last three or four months, but at present we are unaware of the existence of a single case of fever in either Hastings or St. Leonard's.

(Signed) Chas. Ashenden, M.R.C.S., Medical Officer of Health for the Borough.
Frederic Ticehurst.
Charles A. Adey, M.D.
Robt. J. Wilson, F.R.C.P. Edin.
Charles J. Axford, M.R.C.S.E.
D. Hoadley Gabb, M.R.C.S.
John Underwood, M.D., M.R.C.S.E.
John Penhall, M.D., F.R.C.S.
Thomas Trollope, M.D. Cantab.
Benj. H. Allen, M.D. Lond.
Alex. R. Croucher, M.D.
John Cooke, M.B. Lond.
Wm. Campbell, L.R.C.S. Edin., L.S.A.
T. H. Wadd, M.R.C.S.E.
S. A. Julius, L.R.C.P., M.R.C.S., etc.
Douglas W. Duke, L.R.C.P.L., M.R.C.S.E., Medical Officer of Health for Hastings Rural Sanitary Authority.
A. R. Ticehurst, M.R.C.S. Eng., etc.
John M. Humphreys, M.D. Lond."

It will be seen that the whole question in dispute depends on the interpretation of the word "endemic." We had no desire to say anything more than is conceded by the statement given above—namely, that cases of typhoid fever had been occurring in Hastings for some time past. Our use of the word "endemic" went no farther; for, surely, if we find a disease recurring again and again without any known or ostensible cause, we must call it endemic, *pace* Dr. Croucher. We did not and do not assert that this recurrence was in any direct way connected with the water-supply, but we do desire to enforce upon the minds of people that had these cases occurred in a situation whence any part of the Hastings water-supply is derived, the result might have been most disastrous.

We repeat most emphatically that Hastings is in a position of danger from its water-supply. The catastrophe may not come now, but no one can tell when the danger may arise. We have no motive, personal or otherwise, for seeking to impress these facts on the minds of people beyond the desire to see a spot so favoured by nature in many ways placed in an unassailable position as a health-resort. To this the rulers of the borough seem opposed. *Sed magna est veritas et prevalebit.*

It turns out now—when certain disclosures have been made, and the greater part of Dr. Frankland's report is known to be before the public—that only three samples of water were sent to Dr. Frankland for analysis, and only one of these from the pond so often condemned, namely, that at Ecclesbourne. Neither the water in Clive Vale, at Old Roar, nor at Shornden, all of which were more suspicious than the specimens actually sent, were submitted for examination. What, then, is the good of saying that the only doubtful source has been cut off, and that the Hastings water-supply is now like Cæsar's wife?

THE WEEK.

TOPICS OF THE DAY.

What with rumours that the Pollution of Rivers Bill will have to be abandoned for want of time to carry it through the House during the present session, and notices of opposition which have already been lodged, it is greatly to be feared that this important and much-wanted piece of legislation will be again deferred. It is further stated that a conference of members of the House of Commons was held last week respecting the measure introduced by Government for dealing with this subject. The conference was summoned by circular signed by a number of representatives from manufacturing constituencies. After some discussion a resolution was adopted, condemning that portion of the Bill which deals with pollutions arising from manufactures and mines. The consideration of the first and second portions of the Bill, which dealt

with pollutions from solid matter and from sewage, was adjourned. It must not, however, be forgotten that the Government is to some extent pledged to go on with the Bill; and, with their original programme of sanitary legislation staring them in the face, we trust that time will be found to pass some prohibitory laws for preventing the pollution of our rivers, even if a number of less important measures are thereby sacrificed to the exigencies of the dwindling session.

The thirty-second annual meeting of the Society for Improving the Condition of the Labouring Classes, which was held last week at Willis's Rooms, with the Earl of Shaftesbury in the chair, is noticeable on account of some remarks which fell from the noble chairman. Lord Shaftesbury took that occasion of animadverting on what he deemed the mistakes of recent Acts of Parliament for improving the habitations of the poor. He complained that they fostered the perverse system of single rooms, and made no suitable provision for housing those who were being improved off the surface of the selected sites. The Limehouse, Whitechapel, and Birmingham schemes were all open to these objections; while the Glasgow experiment, on the other hand, seemed to have steered clear of them. Their own Society's practice of adapting old buildings, rather than erecting new ones, he was convinced was a sound one, and they would adhere to it until it was proved to be otherwise. Lord Shaftesbury's remarks may be correct, but we certainly thought that one of the provisions of the Birmingham scheme was that "only so much of the condemned areas is to be cleared at one time as will be sufficient for the provision of accommodation for at least 500 of the persons displaced in carrying out the scheme, and no further clearance is to be made until dwellings for that number have been completed." The accounts of the Society, which were read at the meeting, unquestionably exhibit the most satisfactory results; but we must confess to a preference for new buildings, constructed with all the requirements of modern sanitary science, over old tenements adapted to meet the wants of the Society.

The Surrey magistrates had before them at the Sessions House, Newington-causeway, on the 27th ult., an application from their Finance Committee for an increase to be made in the salaries of the coroners. It was proposed that the salary of Mr. Carter be raised from £1170 to £1442 per annum. During each of the past five years Mr. Carter had held 830 inquests, as compared with 673 at the last average. One of the magistrates wanted to know whether the district could not be divided, as it was impossible for one man to hold 830 inquests and properly to perform his duty. The Chairman said the Court had no power to divide the district. The office of coroner had been under the consideration of the Government, and Parliament would deal with the subject. The increase in the salary was then allowed.

A return made by Mr. Simon states that the following reports are in preparation with a view to their being laid before Parliament:—Two reports by Dr. Klein on the intimate morbid changes occurring in scarlet fever, and in the enteric fever in swine; a further report by Dr. Sanderson on the process of fever, particularly with reference to the constitution of the pyrogenetic ferment in septic infection; a further report by Dr. Creighton on anatomical studies with reference to cancer; and a further report by Dr. Thudichum on the chemical constitution of the brain.

Mr. Radcliffe, who has been investigating, in conference with the Medical Committee, the sanitary state of the Royal Infirmary at Manchester, finds that the state of the drains of the Infirmary requires immediate attention, and that it will be necessary to close the building for a time, in order to carry out the required alterations; the excessive foulness and radically bad construction of the drains rendering it impossible to do the necessary work while the patients and resident staff remain in the building.

The *Western Mail* reports an extraordinary statement made to the Westbury-on-Severn Board of Guardians last week. One of the relieving officers informed the Board that there was no vehicle for the removal of bodies of persons who had died from small-pox and fevers in the parish; and he added that he had been obliged to make a number of men drunk before he could prevail upon them to carry to the grave the body of a person who had died of an infectious disease. We should imagine the publicity given to this confession would insure some more decent arrangement for the removal of the sick and the burial of the dead in this district for the future.

A lively discussion arose last week, at the meeting of the St. Marylebone Vestry, regarding the proposal by the Guardians, at the instance of the Local Government Board, to erect out of the parish a new infirmary, at the cost in all of £100,000. The Vestry, which has to find the money, complained bitterly of the project, and Mr. Boulnois, the chairman of the Guardian Board, entered into a lengthened statement, showing the causes which had led to the proposal. He stated that under Gathorne Hardy's Act the Local Government Board could make an order upon the Guardians to erect an infirmary separate from the workhouse, and hitherto the correspondence received from that Board had been urging the Guardians to take that course. It was impossible for a site to be obtained in the parish, and, as the old workhouse was now being reconstructed, this time was considered a good opportunity for making the provision which had been declared necessary, as by so doing the parish would avoid difficulties at a future time by having to do the work under compulsion, or go into union with another parish. A site had been selected in the adjacent parish of Kensington, at Notting-hill. He pointed out that Islington, Lambeth, Kensington, Hackney, and other metropolitan parishes had been obliged to do the same thing, and the consequence had been that those parishes had benefit from the Common Poor Fund. He stated that for his part he considered that the erection of the infirmary would lead to diminution of pauperism by giving the Guardians more space in the workhouse to deal with the able-bodied, and to classify the inmates who were not sick; and he showed the immense advantage which had arisen by keeping the children separated in the Southall Schools—a purpose which, he said, was met by a like outcry of extravagance. The discussion which followed, though generally antagonistic to the proposal, appeared to start from the point of expense alone. Ultimately it was resolved to ask the Guardians for the official correspondence on the subject, which runs over a long time, and, if necessary, to appeal to the President of the Local Government Board.

On the 30th ult. the Archbishop of Canterbury moved in the House of Lords—"That a Select Committee be appointed for the purpose of inquiring into the prevalence of habits of intemperance, and into the manner in which those habits have been affected by recent legislation, and other causes." The Primate explained that he had been induced to ask for the inquiry at this particular time in consequence of having received a memorial on the subject, signed by 10,000 of the clergy of the Established Church of England, calling upon him in his place in Parliament to draw the attention of the House of Lords to the matter. The Marquis of Salisbury, in expressing his indebtedness to the Primate for having brought forward the subject, at once agreed to the appointment of a Committee. He remarked that one great remedy to which he attached much importance for the repression of intemperance was religious teaching, and, therefore, he heard with much satisfaction of the memorial signed by so many thousands of clergymen. He thought that everything which improved either the social or the intellectual condition of the

people would tend to diminish their craving for drink. Whilst cordially joining in the desire of the Archbishop to arrest the great spread of intemperance, we fear that the results of the inquiry, if honestly conducted, will show that increased indulgence in drink has grown amongst the labouring classes with increased means; and we are compelled to differ from Lord Salisbury's views that improved wages conduce to frugality and temperance.

At the meeting of the Metropolitan Asylums Board, held last Saturday, reports were received from the Asylums, showing that small-pox is increasing in the metropolis most rapidly. Mr. Shaw Stewart stated that during the past fortnight fifty small-pox patients had been received at Stockwell, four had died, and twenty-four had been discharged, leaving seventy in the Hospital. The last admission included patients from Chelsea, Greenwich, Kensington, Lambeth, Bloomsbury, Wandsworth, Clapham, Bethnal-green, and Holborn. Mr. Stewart stated that he had not had such a report as this since 1871. Until lately there had been little small-pox in London, but the numbers had run up from forty-six to seventy in a fortnight. The cases, he was sorry to say, were of a malignant type, and he feared the death-rate would be large. Dr. Bridges, the inspector of the Local Government Board, said he could attest the fact that the cases came in very rapidly, especially from the South of London. During the last epidemic the larger number of cases came from the East. He advised that the Hospital at Homerton should be opened. A motion to this effect was put and carried. Dr. Cortis urged that it would be advisable to obtain information as to the number of successful vaccinations in proportion to the number of children born in each of the metropolitan parishes; and Dr. Bridges promised to see if such information could be obtained.

The Solicitor-General appeared on Monday last before the Lord Chief Justice, on behalf of the Local Government Board, praying that the rule which had been granted against the Keighley Board of Guardians for neglecting to proceed against persons who refused to have their children vaccinated, might be made absolute. The Board of Guardians, who had been summoned to appear, were present, and endeavoured to justify their conduct; but the Lord Chief Justice, who said that the question was one of obedience or disobedience, remarked that this was as gross an instance of contempt as had been heard for some time. The Board had received a *mandamus* from the Queen, which they promised to obey, and they afterwards rescinded their resolution and disobeyed the order of the Court. He therefore directed the rule to be made absolute, and that the Guardians should be committed for contempt. The execution of the rule was ordered to be left to the local authorities, and the defendants were permitted to return to their homes.

Mr. Carter, the Coroner for Surrey, is stated to be rapidly recovering, and the fresh inquiry into the death of the late Mr. Bravo, of Balham, will be shortly proceeded with. The preliminary application to the Home Secretary for permission to exhume the body has already been made, but at present, we believe, the place in which the inquiry will be taken has not been definitely fixed.

Mr. Cowper-Temple moved the second reading of his Medical Act Amendment (Foreign Universities) Bill during the afternoon sitting of the House of Commons on the 5th inst. The rejection of the measure was moved by Mr. Wheelhouse and Dr. Wood. The discussion was carried on in a very temperate tone on both sides, and the Bill was withdrawn on Lord Sandon's statement that Government would not consent to a Bill dealing with foreign qualifications in the case of women only, but that they meant to support Mr. Russell Gurney's Bill, with some amendments. He thought it would not be possible, he said, to pass it this year. The first order of the day at the evening sitting of the House on Tuesday was the second reading of the "Cruelty Prevention Bill," but the House met at nine, and was counted out five minutes afterwards.

ROYAL COLLEGE OF SURGEONS.

The annual election of Fellows into the Council of the College took place as usual on the first Thursday in the present month. There were four vacancies, caused by the retirement in the prescribed order of Messrs. Simon, Humphry, and Holden, and by the death of Mr. Southam, of Manchester. The retiring members offered themselves for re-election, and, as will be seen, deservedly obtained that honour. We do not believe that any of the new candidates desired to unseat any of these men, the contest really being for the vacancy made by the death of the lamented Mr. Southam, for which one metropolitan and two provincial gentlemen offered themselves—viz., Mr. Hussey, of Oxford, and Mr. Wheelhouse, of Leeds, —with Mr. William Adams, of Henrietta-street, Cavendish-square. From the first Mr. Wheelhouse had been perhaps the popular candidate, many of the Fellows no doubt thinking that one provincial gentleman should succeed another; and owing to his large number of pledged supporters, it was felt that in all probability he would be successful. Mr. Hussey neither directly nor indirectly through his friends sought to influence any of the Fellows in his favour; he will, therefore, receive some gratification from the number who gave him their support. Mr. Adams will derive some consolation in the knowledge that from the first a large majority of Fellows, metropolitan as well as provincial, had determined to give their votes and interest in favour of Mr. Wheelhouse.

Sir James Paget, Bart., as President, occupied the chair; and, having explained the object of the meeting, and the mode of voting, called on the Secretary to read those sections of the by-laws relating to election. This having been done, the Fellows were invited to commence their voting, which was brought to a close at five o'clock. Mr. Stone, as usual, was appointed teller, several of the Fellows being invited to take the result of the voting also. Finally the President announced the result of the election as follows, taking the candidates in seniority, viz.:—

For Mr. John Simon, F.R.S. .	139, including	4	plumpers.
„ Dr. Humphry, F.R.S. .	130, „	2	„
„ Mr. Luther Holden . .	140, „	10	„
„ Mr. E. L. Hussey . .	35, „	3	„
„ Mr. William Adams . .	64, „	8	„
„ Mr. C. G. Wheelhouse .	116, „	23	„

Sir James Paget then declared that the following gentlemen were duly elected members of the Council, viz.:—Messrs. Simon, Humphry, Holden, and Wheelhouse.

In the evening the Fellows dined together at the Albion Tavern, when Mr. T. B. Curling ably filled the chair, supported by a large number of visitors and provincial and metropolitan Fellows. We must reserve until next week a report of the festival.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Royal Medical and Chirurgical Society have issued the following circular:—

"The Sub-Committee appointed by the Royal Medical and Chirurgical Society to inquire into the relations of 'Membranous Croup and Diphtheria' are anxious to obtain the result of the experience and observation of medical practitioners throughout the country on the subject. They therefore venture to hope that you will, as far as may be in your power, reply to the annexed queries, which have been drawn up with the view of determining the identity or non-identity of these diseases; and that you will further refer the Committee to any practitioners in your neighbourhood who may have had such opportunities for observation as may render their experience on this question

of special value. For the purposes of this inquiry the following definitions are adopted :—1. Diphtheria is a contagious specific disease, which is accompanied by the formation of false membrane in the pharynx, air-passages, and elsewhere. 2. Croup is a disease accompanied by the formation of false membranes (mainly in the larynx and trachea), the origin of which is in question. No case is to be spoken of as an example of croup in which false membranes were not observed either during life or after death.

(Signed) CHARLES WEST, M.D., Chairman.
W. S. GREENFIELD, M.D.,
Acting Secretary of Committee.

"1. Is your field of observation situated in an urban or a rural district, or partially in both ?

"2. What is the nature of the locality as to climate, soil, elevation, proximity to the sea, or to a river; or as to the drainage or overcrowding of any part of your district ?

"3. Have any of these conditions appeared to you to exercise an influence on the prevalence of either form of disease ?

"4. At what seasons of the year does either form chiefly prevail ? Do they prevail simultaneously, either sporadically or epidemically ; or may epidemics of the one be distinguished from epidemics of the other ?

"5. In connexion with what other diseases do they prevail ; either with influenza and bronchitis, on the one hand : or with angina tonsillaris, or other forms of sore-throat, measles, and scarlatina, or other specific disease, on the other hand ?

"6. Have you observed cases of croup setting in with catarrhal symptoms, unattended by difficulty of deglutition, or by deposit of false membrane on the fauces, to be associated with albumen in the urine or followed by paralysis ?

"7. Have you seen in the same family, at the same time, cases of croup in one member and of diphtheria in another; and have you any evidence to show that membranous croup is contagious, and capable by its contagion of producing diphtheria ?

"8. Taking the pathological fact of false membrane limited, or chiefly limited, to the larynx and trachea, what evidence can you adduce as to its origin, on the one hand, in the specific poison of diphtheria, and, on the other, in a definite exposure to cold, or any other cause of ordinary inflammation ?

"9. If you believe the two diseases to be identical in nature, on what reasons do you chiefly rely in forming your opinion ?

"10. If you have any hospital experience, or experience derived from a large school, will you be pleased to give the Society the benefit of it ?"

UNIVERSITY OF DUBLIN.

THE annual meeting of the Senate of the University took place in the Lecture Buildings of Trinity College on Saturday, June 24. The Right Hon. Sir Joseph Napier, Bart., Vice-Chancellor, presided. The business relating to the medical profession was the following :—

The Rev. William Roberts, M.A., as Senior Proctor, brought forward a recommendation to confer an honorary degree of M.D. upon the distinguished Professor of Chemistry, James Emerson Reynolds—a gentleman who, he said, had given ample proofs of his originality and industry in the field of scientific research. He might refer to his important discovery of sulphur-urea, and his paper on the Silicates ; and if it be true that *les bons élèves font la gloire du maitre*, he had another high claim to the distinction they asked the Senate to confer upon him, in the list of his pupils, who had obtained the highest honours that were conferred in the University for proficiency in chemical science.

With respect to the proposed new degrees and licences in midwifery, the Rev. William Roberts presented the following statutes :—

"*De Gradibus et Licentiis in Arte Obstetricia conferendis.*

"Ad magisterium in arte obstetricia ii tantum admittantur qui prius in medicinâ et in chirurgiâ graduati fuerint, et qui duos ad minimum annos in studio artis obstetriciæ compleverint, secundum regulas a præposito et sociis senioribus consensu Concilii præscriptas vel præscribendas.

"Priusquam gratia proponatur, candidatus a professoribus in Schola Medicinæ publice solenniter examinetur et idoneus comperiatur.

"Statutum est etiam quod in praxin artis obstetriciæ ii admittantur qui in praxin medicinæ atque chirurgiæ prius admissi fuerint et qui duos ad minimum annos in studio artis obstetriciæ compleverint atque examinationem sustinuerint, secundum regulas a præposito et sociis senioribus consensu Concilii præscriptas vel præscribendas.

"Nemo autem admittatur nisi gratia præpositi et sociorum seniorum pro gradu vel licentia prius concessa fuerit."

Dr. Hart, a senior Fellow of the University, said that the statute which was now proposed had been adopted after long and careful consideration, and the University deserved considerable credit for it. This was the first time any university had recognised the position attained by obstetric medicine and surgery all over Europe and America. He had no doubt that a long series of universities would in this matter follow the example of the University of Dublin. The recognition of this important branch of medical science was hereditary in Trinity College, for, so early as the beginning of last century, they had conferred a degree on an eminent obstetrician, although in doing so they broke off their relations with the College of Physicians. He congratulated the Board and the Council on their unanimous decision with regard to this degree, thus placing the University of Dublin in the first rank of medical corporations for intelligence. He would suggest, however, that the words to be introduced should be *consensu Concilii Academici*, or *consensu Concilii Universitatis*, so that the "Council" might not be confounded with the General Medical Council.

THE UNITED HOSPITALS' ATHLETIC SPORTS.

THE annual contest for the valuable prizes and the silver Challenge Shield which are offered for competition by the United Hospitals' Athletic Club, took place at the Lillie-bridge grounds on Saturday last, in the presence of a large and enthusiastic body of spectators. The first event on the programme was a flat race of 100 yards for a challenge cup, which was won by H. T. Griffiths, of St. George's Hospital. Throwing the hammer followed, and this event also fell to a St. George's man, J. R. W. Webb, who threw 85 feet 2 inches. The second man, Gray, of Guy's, only threw 75 feet 6 inches. The hurdle race of 120 yards was won by G. R. Turner, of St. George's. The mile race was won by F. Parish, of University College Hospital, who did the distance in 4 min. 42 sec. In putting the shot a Guy's man (W. G. Gray) stood first ; and a competitor from the same Hospital (V. V. Chapman) won the high jump. The half-mile race was won by H. W. Yate, of St. Mary's Hospital ; W. D. Jefferson, of King's College, being a good second. In the quarter-mile race, E. Jennings (St. George's) and W. D. Jefferson ran a dead heat, but on running again Jennings won by six yards. The long jump was won by J. R. Griffiths, of Guy's, who cleared 19 feet 7 inches. Both the 250 yards race and the two-mile race fell to St. George's, the former being won by H. T. Griffiths, and in the latter G. R. Turner was again successful. St. George's men, having won six out of the twelve events, retain possession of the Challenge Shield, which they wrested from King's College Hospital last year. At the conclusion of the sports the prizes were presented to the successful competitors by Lady Gull.

ALLEGED PERSONATION AT EXAMINATIONS.

THE following has been forwarded to us by the authorities of the Faculty of Physicians and Surgeons, Glasgow :—

"John Southam, *alias* Southern, belonging to Wolverhampton, and Verdon G. S. Dearden, of Sheffield, obtained the usual certificates of having passed the preliminary examination of the Faculty of Physicians and Surgeons of Glasgow, the first-named in 1870, and the latter in 1872. Both were registered as medical students, and have since been prosecuting their studies—Southam at Charing-cross Hospital and Glasgow, and Dearden at the Sheffield School. Some time ago circumstances occurred which gave rise to a suspicion that neither of these

men had appeared personally at the examinations of the Faculty, but that they were represented by a deputy. The Council of the Faculty thereupon ordered a searching investigation to be made into the facts, and, though placed somewhat at a disadvantage by the length of time which had elapsed since the cases occurred, they latterly obtained sufficient evidence to warrant them in placing the cases in the hands of the Procurator-Fiscal. A warrant was issued for the apprehension of the two students, and also of Nathaniel H. H. Arthy, a teacher in Sheffield, who is charged with fraudulently personating both the students at the examinations of the Faculty. Arthy and Dearden have been committed for trial at Glasgow. Southam, for whose apprehension a warrant has also been issued, has hitherto managed to elude the vigilance of the police."

THE PUBLIC HEALTH (IRELAND) BILL.

THIS measure, for consolidating and amending the Acts relating to public health in Ireland, is intended to do for that country what the Public Health Act, 1875, did for England. It is prepared and brought in by Sir Michael Hicks-Beach, Bart., and the Solicitor-General for Ireland; and it consists of no less than 288 clauses—many of them adopted from the English Act,—besides an elaborate explanatory memorandum by Sir Alfred Power, Bart., Vice-President of the Irish Local Government Board; and two schedules. The Bill is attracting a great deal of attention in Dublin, and is at present under consideration by the King and Queen's College of Physicians, the Irish Medical Association, and the Dublin Sanitary Association. These bodies have appointed delegates to a joint-committee to consider the Bill and to report thereon, and there is little doubt that the Royal College of Surgeons will also join in the movement. While we heartily approve the principle of the measure, we trust that Clause 10 in particular will be amended so as to place the medical officer of health—not the "sanitary officer," as the Bill most vaguely denominates the dispensary medical officer—in a proper position, and in the enjoyment of a salary adequate to his responsible and usually most unpleasant duties. It is also to be hoped that no attempts will be made to push such an important measure hastily through Parliament, but that every opportunity will be afforded to facilitate the enactment of a wise and just sanitary code.

HARVEY TERCENTENARY MEMORIAL.

WE learn from Mr. George Eastes, the indefatigable London Secretary to the Harvey Tercentenary Memorial Committee, that a circular in the following, or very similar terms, is about to be issued to the Fellows of the Royal Society, the Governors of St. Bartholomew's Hospital, the most influential dwellers in East Kent, the members of both Houses of Parliament, and the members of the medical profession:—

"It is an approved custom in civilised countries to recognise and mark distinguished services to mankind by the erection of statues or other public monuments. There is in England no such national recognition of the services of Harvey, the discoverer of the circulation of the blood. The third centenary (1878) of Harvey's birth is now approaching, and it is felt that this will be a most favourable opportunity for inaugurating at Folkestone, his birthplace, a statue to his memory. A movement to effect this object was initiated at a public meeting held at Folkestone, and the project has been warmly espoused in London and elsewhere.

"The Committee feel that they may appeal, with every confidence of support, to all classes, and ask your kind co-operation and assistance in providing the necessary funds for the erection of the proposed statue."

A list of the present donors to the fund will be appended to the circular, and we are glad to learn that nearly £800 has already been collected or promised. We need not add that the movement has our hearty sympathy and good wishes. Donations may be paid to the account of the "Harvey Tercentenary Memorial Fund," at the Western Branch of the Bank of England, Burlington-gardens, London, W.; or at the National Provincial Bank, Folkestone; or to either of the Honorary Secretaries, George Eastes, M.B., 5, Albion-pace, Hyde-park-square, London, W., and W. G. S. Harrison, B.A., Town Clerk, Folkestone; or to Sir G. Burrows, Bart, or Prescott Hewett, Esq., Hon. Treasurers *pro tem.*

THE DURHAM UNIVERSITY AND MEDICAL DEGREES.

AT the last meeting of Convocation of the University of Durham, a resolution was passed, empowering the Varden and Senate to institute a special examination, with the view of affording to practitioners of fifteen years' standing the opportunity of obtaining the degree of Doctor of Medicine. The University has always had the power to grant degrees by diploma to persons of sufficient standing and approved merit, but hitherto this power has, we believe, been rarely exercised. In this throwing open the M.D. degree to practitioners of long standing, the Durham University will give satisfaction to a cry from a large number in the profession who were unable to take a university degree at the commencement of their professional life. With the exception of the University of St. Andrews, which annually admits ten medical practitioners to examination for the M.D. degree, none of the British or Irish universities have admitted candidates for graduation without residence; consequently English practitioners who have for any reason desired to obtain a degree have been obliged to repair to one or other of the continental universities. We have no objection to offer to the admission of members of the profession of long standing to examination for the M.D. Honoris causâ degree so long as a high standard of merit is exacted. In addition to the above important alteration, it has been decided to allow the M.B. and C.M. degrees to be taken at the end of the four years' course of medical study, instead of, as heretofore, at the end of one year from that time.

THE HEALTH OF LONDON.

THE returns of the Registrar-General for the week ending 24th ult. show that in London during that period 2296 births and 1304 deaths were registered. Allowing for increase of population, the births exceeded by 53, whereas the deaths were 42 below, the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the four previous weeks had steadily declined from 21·6 to 19·1, was last week 19·5 per 1000. The 1304 deaths included 2 from small-pox, 31 from measles, 46 from scarlet fever, 7 from diphtheria, 36 from whooping-cough, 14 from different forms of fever, and 30 from diarrhœa: thus to the seven principal diseases of the zymotic class 166 deaths were referred, against 197, 177, and 160 in the three preceding weeks. These 166 deaths were, however, 87 below the corrected average number from the same diseases in the corresponding week of the last ten years, and were equal to an annual rate of 2·5 per 1000. Different forms of violence caused 53 deaths: 45 were the result of negligence or accident, including 24 from fractures and contusions, 4 from burns and scalds, 6 from drowning, 2 from poison, and 5 of infants under one year of age from suffocation. Five deaths were caused by horses or vehicles in the streets. From this class of accident 78 cases of injury and maiming came under the notice of the Metropolitan and City Police during the seven days ending the 25th ult.

"LEADERS IN MEDICINE AND SURGERY, 1876."

ENCOURAGED, we suppose, by the success of the "Portrait-Picture," published some years ago, of the Fellows of the Royal Society, the well-known photographers, Messrs. Barraud and Jerrard have just brought out a plate containing 183 "Portraits from Life of Leaders in Medicine and Surgery." Considering the great difficulty of grouping such a number of men satisfactorily, we must say that the enterprising artists deserve much credit for the degree in which they have suc-

ceeded in producing a very interesting picture. Many of the portraits are so good and characteristic that the individuals represented are instantly recognised, even in the skeleton key: of these we may specially mention the portraits of Sir William Fergusson, Sir James Paget, Sir Thomas Watson, Mr. Spencer Wells, Mr. Timothy Holmes, Sir Henry Thompson, Dr. A. Farre, Dr. Radcliffe, Dr. Lionel Beale, Dr. Broadbent, Dr. Acland, and Dr. H. Monro; and several others as good might be named. Generally speaking, the likenesses are good—and, in many instances, very good indeed; and among these we are glad to notice portraits of the late Dr. Parkes and Mr. Campbell De Morgan. Of course, all the well-recognised leading men are not represented, and some are conspicuous by their absence; but the artists could only introduce the men whose portraits they had themselves taken. And then, who were they to appoint to tell them who are "leaders in medicine and surgery"?

MEDICAL MICROSCOPICAL SOCIETY.

A SOIRÉE was given by this Society in the room of the Century Club, Pall Mall-place, on Friday last. The rooms were well filled, and numerous very interesting specimens of normal and morbid histology, as well as instruments, were exhibited. Among these were a series of twenty typical specimens of Tumours, by Messrs. Needham, Urban Pritchard, and others; a new Microphotographic Apparatus, for taking photographs without a heliostat, by Mr. Giles; other Microphotographs, by Mr. Fowke; a Microtome of new construction, requiring a very small quantity of ice, by Mr. R. C. Williams; other Microtomes (on Rutherford's and Ranvier's principles), by Dr. Pritchard and Mr. Golding Bird; specimens of Absorption-Spectra, by Professor Ray Lankester; "Differential" Warm Stage, by Mr. Golding Bird; modification of Stephenson's Binocular Microscope, by Mr. Bevington; besides instruments by Messrs. Browning, Beck, Pillischer, and others. The whole collection, which well illustrated the objects and activity of this very useful Society, occupied the attention of the members and visitors till a late hour.

MEMORIAL TO THE LATE DR. PARKES, F.R.S.

AT a meeting recently held at the residence of Mr. Erichsen, it was resolved "to establish at University College, London, a permanent memorial to the late Dr. Parkes, in such a form as to aid scientific investigation and practical study in the subjects to which Dr. Parkes's life was especially devoted." In furtherance of the above resolution, and in aid of the memorial fund, a public meeting is to be held at University College on July 18, at 3 p.m., with Sir William Jenner, Bart., in the chair. It is hoped that a sufficient sum of money may be collected to establish a museum and laboratory of hygiene similar to those now existing at Netley. No such museum at present exists in London; and we fully agree with the promoters of the scheme as to the great practical value which would result from such an establishment, especially in connexion with University College, which, it must be borne in mind, is a place for the education, not only of medical men, but also of architects, engineers, and others, on whose thorough instruction in sanitary details the health of the public so largely depends.

DEPUTATION TO THE HOME SECRETARY REGARDING VIVISECTION.

AT a meeting of the Parliamentary Bills Committee of the British Medical Association, held on Monday, the 3rd inst., at the office of the Association, a memorial was unanimously adopted, setting forth—"that the number of persons in Great Britain engaged in the pursuit of physiological and medical research by experiment on living animals is very small, in all, perhaps, not exceeding twenty"; showing fully and forcibly "that no special legislation whatever is called for in respect to any existing practice of experiment on animals in this country, nor is there any probability of its being required"; and that "the present Bill goes far beyond the recommendations of the Royal Commission, and the just inferences from the weight of evidence before them"; and recommending certain amendments to the Bill "if it be further prosecuted." We are sorry that we cannot find space to give the memorial at length, but it does not, and indeed hardly could, contain any new arguments.

It was resolved on the motion of Dr. Pavy, F.R.S., seconded by Dr. Lauder Brunton, F.R.S., that the Home Secretary be requested to receive a deputation with the object of presenting the memorial; and we are glad to learn that the Home Secretary has appointed to receive the deputation on Monday next, the 10th inst., at half-past two o'clock in the afternoon, at the Home Office. Members of the profession desirous of attending with the deputation are requested to communicate with the General Secretary of the British Medical Association, 36, Great Queen-street, W.C., with the least possible delay.

THE GILBERT BLANE BEQUEST.

MR. ERRINGTON has given notice of his intention to ask the Secretary to the Admiralty whether, under Sir Gilbert Blane's bequest, any funds are available for publishing the successful essays for the "Blane Medal"; if so, whether he will consider the expediency of publishing such essays; and if not, of sanctioning their publication in the medical journals. We are in a position to anticipate the answer the honourable gentleman will no doubt receive—viz., want of funds. As the sum left by the late Sir Gilbert Blane was only £300, the dividend on which appears in the treasurer's report of the Royal College of Surgeons to amount to only £8 18s. 6d., and seeing that the medal is of the value of ten guineas, clearly the College of Surgeons are not gainers by this bequest.

SCARLET FEVER AND BOARD SCHOOLS.

A VERY important memorial, influentially signed by members of the medical profession in Liverpool, has been recently brought under the notice of the chairman of the School Board of that town. It has been felt that to compel children by law to attend school, without at the same time insuring to them, as far as possible, immunity from the risks of infection—of which the school is not unfrequently the channel—is unjust; and the memorial prays that there shall be a periodical medical inspection of the children of all Board schools, in the same way and for the same purpose as there is a systematic medical inspection of emigrants.

SIR WILLIAM FERGUSSON.

WE have the pleasure to report that Sir William Fergusson continues to make good progress and to regain strength. He now walks downstairs, and, weather permitting, he will be taking a daily drive.

PARLIAMENTARY.—MEDICAL PRACTITIONERS BILL—VACCINATION—MEDICAL ACT AMENDMENT (FOREIGN UNIVERSITIES) BILL.

IN the House of Commons, on Thursday, June 29,

The Medical Practitioners Bill passed through committee.

On Tuesday, July 4,

Mr. Sclater-Booth, in reply to Sir Charles Forster, said that although his attention had not been called to the case of Sampson Benton, against whom proceedings had been authorised by the Guardians of the Walsall Union, after six previous prosecutions for non-compliance with the Vaccination Act, he frequently had his attention called to similar cases. The views of the Department had been expressed in a letter addressed to the Guardians of the Evesham Union, but the final decision must be left to the Guardians. After two convictions they must consider the special circumstances of each case, and whether they are likely by further prosecutions to effect the vaccination of the child. If that was likely to be the result, no doubt further proceedings should be taken; but

whether the Guardians were justified in the present case depended on the circumstances.

On the motion of Mr. Russell Gurney the House went into committee *pro formâ* on the Medical Act (Qualifications) Bill, when some amendments were introduced.

On Wednesday, July 5,

Mr. Cowper-Temple, in introducing the Bill for amending the Medical Act—with a view to allow foreign qualifications to be registered in England—referred to the past agitation on the subject, and said that at present the only way for women to prove their competency to practise medicine was by studying and taking their degrees abroad. There was a vast field for female practitioners in India, which would of itself absorb more women-doctors than were likely to present themselves. There were in India 50,000,000 Mohammedan and Hindoo women who would never allow a man to come into their apartments to prescribe for their ailments. And the want of women-doctors was felt so strongly by the Indian Government that at Madras and Bareilly various attempts had been made to educate a body of native young women in order to give to their own sex the benefit of surgical and medical treatment. The Bill would open this field. It would also enable women who were now practising in England to do so legally, whereas at present their certificates were irregular—they were not acknowledged by the profession. The Medical Council proposed a new examination, distinct from any now in force, and a new class on the Register. Such a plan, though now merely suggested, might be effectual, and if the Government would undertake to bring forward a Bill he would withdraw this measure.

Mr. Wheelhouse spoke in strong condemnation of the Bill, on the ground that "we have too many improperly qualified persons practising under the present system."

Dr. Ward seconded the amendment for the rejection of the Bill.

Dr. Lush urged that "the Bill should be passed with some amendments" although he did "not think there was any great demand for female medical aid in this country."

Dr. Cameron congratulated the House on the progress which the question had made within the last few years.

Dr. Playfair pointed out that the objection which had been raised by the University of Edinburgh with respect to the admission of women to the study of medicine was simply due to want of the necessary accommodation for the purpose, that the subject was now receiving the attention of the Royal Commission, and that the Scotch universities were anxious to consider how far the object could be carried into effect. He might add that, although there were upwards of 3000 medical men in his constituency, he had not received a single letter asking him to oppose the Bill, although he had received one from the College of Physicians in Edinburgh pointing out serious difficulties in the way of putting its provisions into operation. He only wished further to observe that there was another measure on the subject before the House—that of the Recorder of London;—and what he would suggest was that the Government should accept that measure and lend their aid in passing it this year, for there were several objections to the Bill of his right hon. friend near him as it was drawn.

Lord Sandon said that the Government could not concede the principle of admitting women with foreign qualifications to practice in this country. The Medical Council had, in reply to the Government inquiry, stated that they were not prepared to say that women ought not to be excluded from the profession; but if they were admitted the Council desired to make certain recommendations, one of which was that it was desirable that the education and examination of female students should be separately conducted. The Government further consulted privately several leading members of the profession, and also the ladies who had prepared themselves. The Government then became aware that the Recorder proposed to bring in a Bill to enable the corporations and the universities, if they chose, to admit women to the profession. That was referred to the Medical Council, who still adhered to what they had formerly said, did not object to the Bill itself, and proposed two or three amendments in it. The Government then came to the conclusion that it was their duty to assent to the Bill of the Recorder, taking care to make it clear that it was permissive and not compulsory, and that women were not to be admitted to the governing bodies of the corporations or the universities.

The Medical Practitioners Bill was read a third time.

Dr. O'Leary said that at the proper time he would adduce good reasons why ladies should not be allowed to qualify for the medical profession.

The amendment and the motion for the second reading were by consent withdrawn.

A DESCRIPTION AND EXPLANATION OF THE

METHOD OF PERFORMING POST-MORTEM EXAMINATIONS

IN THE DEAD-HOUSE OF THE BERLIN CHARITÉ HOSPITAL; WITH ESPECIAL REFERENCE TO MEDICO-LEGAL PRACTICE.

By PROFESSOR RUDOLPH VIRCHOW.(a)

(*Continued from page 551 of last volume.*)

Conclusion of Case II.

B. *Internal Examination.—a. Cranial Cavities*

18. Scalp divided by an incision across from one ear to the other, and reflected forwards and backwards. A few drops of blood seen emerging from the anterior portion—these more numerous posteriorly; in front also a close network of distended vessels in the aponeurosis and pericranium. No other spots of extravasated blood, with the exception of those mentioned (in No. 8) in the left frontal region.

19. The aperture mentioned in No. 8 is now seen more distinctly; but there are no fissures surrounding it, and no increase in the quantity of blood in the periosteal vessels.

20. The skull-cap is now removed, the saw being carried horizontally round below the aperture. The bones are difficult to saw through, and on being removed are found to be almost entirely composed of compact substance, and six or even seven or eight millimetres thick. The left frontal sinus is filled with pulpy matter, consisting of whitish, soft, brain-like substance, and dark-red clots, which are partly separable. The right frontal sinus is empty. No fissures are visible in the bones forming the sinuses; but the vessels, as far as they can be made out with the naked eye, are much distended with blood. The external opening (the transverse diameter of which in the outer table is eight millimetres, the diameter from above downwards being six millimetres) has an irregularly hexagonal shape, and leads directly into the left frontal sinus. In this sinus there is another opening, having the same direction, and passing through the inner table just above the orbital plate. This opening is almost completely closed by fragments of cerebral matter and clots of blood; after these are cleared away, a somewhat irregular, but here rather triangular, opening is found, the sides averaging six millimetres. At the upper part, and close to the opening, there are two larger and two smaller scales of bone, splintered off from the inner table; these are, however, still loosely connected with the bone.

21. The form of the skull is seen on section to be somewhat oblique, the right half becoming wider posteriorly, the left narrower in front. On the left side there is incipient obliteration of the coronal, as well as of the spheno-parietal suture. The right lambdoidal suture is completely obliterated. On removing the pericranium, recent red osseous deposits on various parts of the surface of the skull, especially numerous on the posterior upper part of the temporal ridge. The inner surface of the calvaria dotted over with numerous large pits, principally in the neighbourhood of the anterior fontanelle.

22. The dura mater everywhere thin and diaphanous, except in the neighbourhood of the longitudinal sinus, where it is of a dull whitish colour, and traversed by numerous red vessels. On the left side, in front of the anterior part of the brain, there is an aperture in the dura mater, very irregular in shape, out of which protrude soft broken-up masses of brain substance, mixed with blood; these are continuous with the previously mentioned *débris* in the aperture in the skull. The opening in the dura mater is on an average from six to seven millimetres wide; its margins are somewhat dentate and wrinkled. There is no blood extravasated anywhere else between the dura mater and the bone.

23. The superior longitudinal sinus anteriorly narrow and empty; posteriorly, rather wide, and filled with dark semi-fluid blood.

24. On the right side, the dura mater much distended by a bluish mass, which gleams through it. The arteries of the

(a) From the *Charité-Annalen*.

dura mater filled with blood as far as their small ramifications, and projecting considerably above the surface of the membrane.

25. On separating the dura mater on the right side, a large clot of blood, dark-coloured, is found to overlay the whole right hemisphere of the brain. It is slightly moist; its own weight causes it to slide from its position; and it amounts in quantity to twenty-five cubic centimetres. Some portions adhere pretty firmly to the surface both of the dura mater and of the pia mater. On washing the parts with water, the source of the hæmorrhage is found in an aperture in the brain, situated nearly at the posterior part of the middle lobe, two fingers'-breadth behind the end of the fissure of Sylvius; clots of blood protrude from this opening. The pia mater all around this spot is infiltrated with blood, especially at the anterior perforated spot; also to a less degree in the sulci of the middle and posterior lobes, and to some extent in those of the anterior lobe.

26. At the anterior extremity of the right anterior lobe, close to the falx cerebri, the pia mater appears more thickly and deeply infiltrated. This appearance is not connected with those above described; it is more marked inferiorly and in front, where, at the same time, the consistence of the cerebral substance is softer and more yielding.

27. A third, apparently also independent spot, is quite close to the longitudinal fissure at the top of the vertex, under a somewhat thickened part of the pia mater; it projects somewhat, and is surrounded by a quantity of fluid blood, which spreads also freely towards the dura mater.

28. The head being raised and drawn forward, a leaden bullet, measuring in one direction eight, in the other six millimetres, falls from the parts described in No. 25. This bullet is quite flattened, and bright on one side.

29. Sulci of brain on right side very deep; perceptible bevelling off of the convolutions just behind the vertex.

30. The dura mater being removed on the left side, blood is found effused on the surface in much less quantity; it is, however, equally coagulated, and is more adherent to the membranes, especially to the dura mater. The pia mater infiltrated with blood, but only to a slight extent, anteriorly near the spot where the external opening touches the brain, the infiltration extending no further than a finger's-breadth towards the base, and not quite so far towards the convexity of the brain. A clot of blood eleven millimetres long and five millimetres thick in a small depression of the surface close by the side of the falx cerebri, on the margin of the longitudinal fissure at the vertex; this extends a finger's-breadth further backwards than towards the right side. All around the spot the vessels are much distended, and posteriorly the pia mater infiltrated with blood.

31. There is, in addition, an extravasation of blood in shallow layers between the falx cerebri and the projecting wall of the left hemisphere, amounting in quantity to scarcely a teaspoonful.

32. The left hemisphere of the brain also appears depressed; the surface of the convolutions is even flatter than on the opposite side.

33. The brain being removed, its base is seen to be infiltrated with blood to an irregular extent: this is especially marked in the direction from the aperture in the anterior lobe towards the olfactory nerve, at the anterior part of the middle lobe, around the infundibulum, as far as the pons Varolii, and even in places as far as the medulla oblongata. The blood for the most part is contained in the meshes of the pia mater, but in several places there are clots obviously non-adherent.

34. The pia mater delicate throughout, its vessels filled with blood up to the smaller branches.

35. The brain itself appears shorter, and the convolutions more simple, on the left side than on the right. The consistence good, with the exception of those spots already mentioned.

36. Behind the above-mentioned (No. 22) opening in the dura mater, corresponding to the aperture in the bone, and which is just below the anterior part of the left anterior lobe, there is also a large perforation in the pia mater, fourteen to eighteen millimetres in circumference. Beneath this there is a funnel-shaped excavation, surrounded by soft *débris* of brain-substance, and a few large clots of blood. An oblique incision being made, extending from this spot transversely across to the opening (mentioned in No. 25) in the outer part of the right hemisphere, a continuous canal is exposed: this has a total length of thirteen centimetres, and extends through the middle of the brain-substance, particularly through the base of the corpus striatum, and has a diameter anteriorly of twelve millimetres, posteriorly of eighteen millimetres; it is filled with coagulum and copious *débris* of brain-matter. The wall of the canal is soft throughout, formed directly of brain-substance, and dotted over with numerous spots of extravasated blood.

37. The point on the vertex of the right hemisphere (described in No. 27) turns out to be a sanguineous infiltration of the pia mater, five millimetres deep. Nothing abnormal found below the other spot particularly referred to in No. 26.

38. The cerebral ventricles are empty, the choroid plexus and the large vessels of the walls of the ventricles filled with blood. The upper vessels of the velum delicate and transparent.

39. Optic thalamus and corpus striatum pale, but not dry.

40. The white substance of the hemispheres is pale and dry; in a few places only, blood escapes from the divided vessels. The grey substance for the most part pale, but in places reddened to some depth.

41. The fourth ventricle is empty; the cerebellum generally pale, but less so on the left side, where the grey substance is somewhat reddened; and the white substance appears to be more infiltrated with a watery fluid.

42. The pons is pale and firm, as is also the medulla oblongata.

43. In the posterior fossa of the base of the skull a large quantity of fluid blood has collected during the examination; this has escaped from the large bloodvessels of the vertebral canal.

44. The transverse sinus almost empty. In the middle fossa of the base of the skull, on the left side, the dura mater much covered with blood.

45. On removing the dura mater, it is found that several fissures of the inner table extend from the opening in the skull (No. 19, 20) to the orbital plate. The cracks are filled with coagulated blood, but they extend for a distance of only seventeen to eighteen millimetres in a backward direction.

b. Thorax and Abdomen.

46. A continuous incision, carried as directed from the chin to the pubic symphysis, and the abdominal cavity first laid open. Abdominal organs in their normal position. The intestines lie very far back. No foreign body in abdomen. The parts exposed of a pale colour generally; only the small intestines slightly reddened.

47. The diaphragm on both sides reaches the lower border of the fifth rib.

(1.) *Thorax.*

48. The sternum having been removed as directed, the lungs recede very slightly from the wall of the thorax; their anterior portions distended with air, and buoyant, much reddened in places. Between the lobules there are rows of large air-bubbles; and in some spots these coalesce, and form large, continuous level patches.

49. The left lung is free throughout. The pleural sac contains, at a rough guess, forty-five cubic centimetres of a thin, watery liquid, of a dirty-red colour.

50. On the right side the upper parts of the lung are somewhat bound down by connective tissue; at the base and back part of the pleural cavity there is a very minute quantity of fluid of a similar kind to that found on the other side.

51. The heart, just the size of the man's closed first, is very rigid, and somewhat flattened on its anterior aspect and over the right auricle. The coronary arteries empty; the coronary veins distended only in their primary ramifications, and somewhat deeply placed. Only a small amount of fat about the pericardium, on which there are a few small detached spots of a deep-red colour, scarcely as large as a millimetre.

52. About forty cubic centimetres of dark blood, for the most part fluid, containing a small buffy clot, escapes from the right auricle. The right ventricle contains blood of a similar kind, dark-red in colour, not more than twenty cubic centimetres, with very faint traces of coagula. In the left auricle the quantity of blood amounts to thirty cubic centimetres, and it is more coagulated and as dark, with a few spots of a faint buffy colour. On the other hand, only a very slight clot with a gelatinous buffy coat occupies the left ventricle.

53. The aorta so narrowed as only to be capable of admitting the tip of the ring-finger. The pulmonary artery only a little more capacious. A stream of water being poured in, none passes into the ventricles. Valves on both sides thin; not discoloured by blood. Narrowing of the mitral valve, which

will not admit of two fingers, caused by thickening, contraction, and adhesion of the slip of the valve posteriorly. Muscular tissue much attenuated, of a brownish-red colour.

54. On the left lung rows of air-vesicles in great abundance (as described in No. 48) on the lower part of the anterior border, and at the tongue of the upper lobe, and also in various places at the lower border of the lung at the base. Posteriorly, both lobes appear to contain but little air, and are of a tolerably uniform bluish-red colour; the lower lobe somewhat greyish-white, owing to thickening and serous infiltration, here and there, of the investing membrane. Numerous small, slightly raised patches of extravasated blood scattered about over both lobes.

55. A large quantity of thick bloody froth escapes from the left bronchus. On cutting through the lung, entire portions appear red and filled with frothy liquid, but in other respects unchanged.

56. The same appearances are found on the right side, but the rows of air-vesicles are less numerous. On the other hand, all parts of the lung contain serous exudation, and the lung-tissue is of a deep-red colour.

57. The tongue, retracted behind the jaws, is covered with a dirty brown coating, but normal in other respects. Some bloody mucus in the pharynx. Both tonsils very large, projecting almost like tumours, and seen on section to contain friable masses in the follicles; parenchyma much increased.

58. Veins of the neck filled with dark fluid blood. Arteries empty. Nerves normal.

59. Œsophagus contains only a small quantity of light brownish matter.

60. Epiglottis slightly compressed laterally; glottis open. Larynx and air-passages filled with thick frothy fluid, containing a few yellowish-brown flakes. These being removed, the mucous membrane of the upper part is seen to be traversed by an open network of vessels. In the lower parts the vascular network is close, and of a deep-red colour.

61. Aorta narrow, walls thin; contains only fluid blood. The superior vena cava has similar contents.

(2.) *Abdomen.*

62. The spleen is 14·5 centimetres in length, 10 centimetres in its greatest breadth, and 2·7 centimetres in its greatest thickness; it is very flabby, and somewhat wrinkled. On section, blood exudes from a few large vessels. The Malpighian corpuscles are unusually large, reaching even 1 millimetre in diameter. Splenic pulp scanty and brownish-red.

63. Left kidney 10 centimetres long, 4·5 centimetres broad, 2·9 centimetres thick; flabby; capsule easily separable; surface smooth, of a dark brownish-red colour; veins easily distinguishable. The tissue on section very dark red; Malpighian corpuscles very prominent, but no other change.

64. Left supra-renal capsule firm; cortical substance slightly developed, medullary substance more so.

65. Right kidney 9·2 centimetres long, 4 centimetres broad, 2·5 centimetres thick; in other respects, as on the left side.

66. Right supra-renal capsule resembles left one.

67. Bladder not much distended. Urine clear, and amounting to about 80 cubic centimetres. Bladder normal.

68. A little clear fluid in both tunicæ vaginales. The substance of the testicles pale but normal.

69. The stomach somewhat distended, its pyloric portion contracted; the veins on the external aspect but slightly distended, and only the larger ones manifest; its general aspect pale. It contains about 150 cubic centimetres of a greenish, thick fluid. The mucous membrane of the fundus is stained greenish-yellow, in the other parts pale red, and towards the pylorus somewhat granulated.

70. The small intestine is contracted almost throughout its extent, only the most deeply situated portions are somewhat distended, and contain liquid. On the external aspect the large veins appear very full, as also some lacteal vessels in the upper portions of the bowel.

71. The mesenteric glands small and slightly reddened. Mesentery loaded with fat.

72. The upper part of the duodenum contains a whitish fluid; lower down, the contents are decidedly yellow. On pressing the gall-bladder, greenish-yellow bile flows freely from the orifice of the gall-duct. Pancreas pale; normal.

73. On opening the jejunum it is found to contain some light grey matter, here and there yellowish and consistent; in its lower portion some thinner fluid deeply tinged with bile. The ileum is almost empty, and contains only a few greenish, tolerably consistent fæcal lumps.

74. The large intestine contains pulpy, greenish-brown fluid masses, mixed with hard fragments, as far as the descending colon; in this latter portion, consistent and formed fæces.

75. Mucous membrane of the jejunum very thick; the villi in the upper part enlarged and milky for absorption of chyle. Lower down, marked reddening of the valvulæ conniventes as far as the place where the contents are coloured with bile; the mucous membrane here becomes also deeply bile-coloured. Lower down, and as far as the beginning of the ileum, the villi are faintly red. Peyer's patches slightly injected, and the glands enlarged in the lower portion of the ileum. There is also enlargement of the solitary glands close to the ileo-cæcal valve.

76. The mucous membrane of the large intestine very pale, and only in the lower part of a greenish-grey colour.

77. Liver about seventeen centimetres from front to back, twenty-three centimetres broad, and eight centimetres thick; externally greyish-red; smooth and tense; on section, very uniformally reddened, but only a small quantity of blood escapes on the whole, and that merely from the larger vessels. Acini scarcely perceptible, but on closer examination they are seen to be surrounded by a faint light grey ring.

78. Gall-bladder filled with a somewhat ropy, but otherwise clear, dark grey gall.

79. Inferior vena cava moderately distended with blood, for the most part fluid.

This case is a truly remarkable example of the tolerance exhibited by the brain towards injuries of the gravest character. It seems almost miraculous that anyone could possibly live twelve hours with a gunshot wound extending from the left frontal region and the apex of the left anterior lobe to the external aspect of the middle lobe on the right side (just above the parietal eminence), completely traversing, therefore, in an oblique direction, the right hemisphere of the brain, and also the extra-ventricular part of the corpus striatum. It is only to be accounted for by the smallness of the projectile, and to some extent, also, perhaps, by the slight force which it possessed. The projectile must have been about the size of a pea (five millimetres in diameter), judging from an unused bullet which was found upon the man. The width of the track of the wound in the brain (anteriorly twelve, posteriorly eighteen millimetres) is therefore quite out of proportion to the width of the aperture of entrance in the integument (three millimetres), and in the bones (six to eight millimetres), and also to the projectile. There can, therefore, be no doubt that the track of the wound in the brain was originally much narrower, and that the width which it finally attained was due to the increasing effusion of blood. The symptoms, therefore, of compression of the brain gradually developed as the extravasation increased.

That the force of the projectile was very slight is evident from the fact that not only was there no injury to the bone in the neighbourhood of its place of exit from the brain, but there was even no laceration of the dura mater. The force of the bullet, primarily weak, was still further reduced by its having traversed two layers of bones in its passage through the left frontal sinus; and, on the other hand, the fact that both blood and cerebral matter found an exit through the frontal sinus may well have assisted to retard the development of the symptoms of compression. It thus happened that death resulted not from the brain primarily, but (in a medico-legal sense) from the lung, and, strictly speaking, was due to suffocation. Just as so often occurs in injuries to the head caused by contusion, a fatal œdema of the lung became developed in consequence of the pressure of the extravasated blood upon the medulla oblongata. How greatly the respiration was affected is shown by the interstitial emphysema, which was more extensive in this case than I have ever seen it in the asphyxia of cholera. We should notice, by the way, a combination in itself so very unusual, for, according to current notions, œdema and interstitial emphysema ought strictly to exclude each other.

The widespread indications that the digestive process had not yet terminated, allow us to suppose that the suicide had taken his last meal shortly before the commission of the deed. In addition to this, there are various appearances, which I have grouped together in the summary, indicating the occurrence, in a very early stage, of numerous natural deficiencies, which amply warrants us in drawing conclusions as to the psychological development. The chlorotic condition

of the aorta, which may well be connected with the endocarditis mitralis, certainly not very common in so young a man; the obliquity of the cranium, together with the want of symmetry and somewhat defective formation of the brain, are all of them appearances well worthy of observation.

If there were any doubt about the case, and had it been made the subject of legal inquiry, we might summarise our opinions provisionally as follows:—

(1.) That death resulted from œdema of the lung, consequent upon a gunshot wound of the brain.

(2.) That there is no evidence from the autopsy to contradict the assumption that the deceased came to his death by his own hand.

(To be continued.)

FROM ABROAD.

The Concours and the Paris Faculty of Medicine.

In the *Union Médicale* of July 1, M. Amédée Latour, who has for so many years advocated the restoration of the *concours* for the choice of Professors in the Paris Faculty of Medicine, in place of the present system of nomination by the Minister of Public Instruction from names presented to him by the Faculty, comments with painful surprise at the change of opinion that has recently come over the Faculty respecting this matter. Only five years since—in 1871—a report of Prof. Gavarret, recommending the restoration of the *concours*, was unanimously agreed to, with the exception of one vote; and now (in 1876), when the question has been again brought before the Faculty, it has decided against the *concours* by the votes of eleven against ten of the twenty-two professors present, one declining to vote. There were also six professors absent, and of these four would have voted for the restoration of the *concours*, re-establishing it, as far as a vote could do so, by a majority of the twenty-eight members of the Faculty. Still, although there would have been a majority, this would have been indeed a slight one, and would indicate the loss of ten votes within so short a period as five years. The following are the names of the twenty-two professors who were present: —1. *In favour of the Concours:* Profs. Richet, Gavarret, Depaul, Gubler, Gosselin, Trélat, Broca, Béclard, Pajot, and Baillou. 2. *Against the Concours:* Profs. Chauffard, Charcot, Regnault, Parrot, Vulpian, Würtz, Sappey, Le Fort, Potain, Lasègue, and Sée. Prof. Hardy, who was present, abstained from voting. The absent Professors were MM. Tardieu, Verneuil, Bouchardat, Dolbeau, Robin, and Axenfeld: and of these the first four would have voted for the *concours*. The only members of the present Faculty who were elected by *concours* are Profs. Bouchardat and Gavarret.

Professor Koeberle, of Strasburg.

A correspondent of the *Allg. Wien. Med. Zeit.* (No. 20), gives some interesting particulars of this celebrated surgeon, to whom he recently paid a visit at Strasburg. He graduated with great distinction in that university, manifesting great proficiency in almost every branch of medical and surgical knowledge, and was soon appointed Professor of Anatomy. He is, in fact, a kind of universal genius, for it is difficult to name a branch of knowledge with which he is not acquainted. He is not only a good painter and sculptor, but also an excellent machinist and architect, and is as good a microscopist and chemist as he is a turner. For this last occupation he has a well-appointed workshop; and all the casts taken from the cases he has operated upon come from his own modelling-room. He manufactures, himself, most of the surgical instruments which he uses. His garden, which in the season produces fruits so early that they might seem to be grown in Algeria, is also his own work. The house which he has built is a model of house-building, and is adorned with sculptures from his own chisel. The 250 ovariotomies which he has performed since 1862, with almost incredibly successful results, are eminently his own work. It would seem incredible to those who have not seen him at work in his turnery, his smithy, and his studio, that such an amount of work could have been got through by the hands of a man who is scarcely fifty years of age, and who is in the receipt annually of 300,000 fr. for his ovariotomies and other surgical operations. Koeberle is a thorough Alsatian Frenchman, and bears the present political position of things in Alsace-Lorrain with difficulty. Almost all his former colleagues at the University have joined the new University at Nancy, a few who had served their thirty years being pensioned off. Sédillot, the most distinguished among them, went to Paris. The German Government would have been very willing to have maintained the *status quo*, at least for a time; but this was not possible, for while very few of the Strasburg professors could have taught in German, the mass of them being body and soul Frenchmen, would not have consented to renounce their country. As observed, the inheritance of Strasburg has fallen to Nancy; and it is only on Sundays and holidays that the former professors come to visit their old friends. The change has been a disadvantageous one for them, Strasburg being a far more eligible residence for a professor than Nancy—yet do they all appear willingly to have accepted the alternative. Koeberle is one of the professors who has neither received a pension from the French Government, nor would accept a post from the German. His first ovariotomy was practised in 1862, he not having learned the mode of performing it in any hospital or witnessed its execution by any master. A proficient in the knowledge of anatomy and surgery, and convinced of the feasibility of this and similar operations, he entered upon the course which has brought him such renown.

REVIEWS.

The Cholera Epidemic of 1873 *in the United States.* Pp. 1025. Washington, 1875.

The mysterious disease which has at fitful intervals decimated the populations of the habitable world, prevailed with great severity in 1873 in various parts of the United States, and especially in the valley of the Mississippi; and the Government ordered reports to be made as to the mode of origin of the disease, the means by which it was propagated, and all other particulars which might tend to prevent or limit its future outbreaks. The result has been the ponderous but valuable volume now before us, which does not aim at settling questions still under dispute, but merely sets forth a series of facts collected from various sources, together with such conclusions as the reporters think may be fairly drawn from the premises, the chief object being the exclusion of the disease hereafter from the United States. As it is totally impossible to give even an abstract of the enormous mass of facts contained in the book, we can only glance at the contents, which are thought by the compiler to justify a series of propositions, briefly explained as follows:—

Malignant cholera is assumed to be caused by the access of a specific poison to the alimentary canal, and it is maintained that this poison is developed spontaneously only in certain parts of Hindostan. Out of that country the poison in question is contained primarily in the ejections—namely, the vomit, stools, and urine—of a person already infected with the disease. In order to set up anew the action of the poison, a certain period of incubation, with the presence of alkaline moisture, is required, the period being completed within one to three days; the process being hastened by a temperature favouring decomposition, and by moisture or fluid of decided alkaline reaction, and being retarded by the opposite circumstances. Favourable conditions for the growth of the poison are found (1) in ordinary potable water containing nitrogenous organic impurities, alkaline carbonates, etc.; (2) in decomposing animal and vegetable matter possessing an alkaline reaction; and (3) in the alkaline contents of the alimentary canal. The period of morbific activity of the poison is said to be characterised by the presence of bacteria, or, in other words, "a cholera-ejection, or material containing such, is harmless both before the appearance and after the disappearance of bacteria, but is actively poisonous during their presence." The morbific properties of the poison may be preserved in a state of activity for an indefinite period in cholera-ejections dried during the period of incubation. The dried particles of cholera-poison may be carried in clothing, bedding, etc., to any distance, and when liberated may find their way direct to the alimentary canal through the medium of the air, by entering the mouth and nose, and being swallowed with the saliva; or, less directly, through the medium of water or food in which they have lodged. The poison is destroyed naturally by contact with acids—(1) those contained in water or soil; (2) acid gases in the atmosphere;

(3) the acid secretion of the stomach. It may be destroyed artificially (1) by treating the cholera-ejections or material containing them with acids; (2) by such acid (gaseous) treatment of contaminated atmosphere; (3) by establishing an acid diathesis of the system in a person who has received the poison.

We have transcribed the above propositions almost literally, in order to avoid the possibility of misrepresenting, in the smallest particular, conclusions drawn on so difficult a subject as the origin, spread, pathology, and treatment of cholera. Cautious as they are, the difficulty of drawing them must have been very great, and the reporter admits that many points of great interest and importance are still quite undecided, as, for instance, the question why the disease is perennially endemic in India, and, notwithstanding the constant intercourse with that country, is epidemic elsewhere only at long intervals; the conditions, either meteorological, telluric, or diathetic, which are necessary for its spread even in India; and the treatment of the malady when it is established in the system. All these matters are excluded from consideration by the American reporters, who deal only with generally accepted facts and the measures which are based upon them.

Still, as the author of the introductory chapter observes, the deductions which may be drawn from the propositions laid down are of wide applicability. As it is now generally admitted that the treatment of cholera, when it has once developed itself in the human body, is very unsatisfactory, the prevention of the disease becomes a problem of the deepest importance, and involves many questions connected with the sanitary supervision of ocean travel and traffic, including the subject of quarantine, the mode of dealing with cholera on board ship, and the treatment of a suspected or infected ship on arrival in port. The exclusion of the disease in future from the United States appears, as we have before observed, to be the main ultimate object of the reports of which the whole of this large book consists, although a great mass of information is given as to the particulars of the epidemic in the various districts; and a very interesting history is given of the travels of Asiatic cholera in Asia and Europe and in North America.

As may be well conceived, from the number of reporters and the immense field of observation, the reports are of unequal merit, the details are often tedious in perusal, and the arrangement of the materials is not always satisfactory; but, nevertheless, the accumulation of facts brought together is very valuable, the statistical details are very ably drawn up, and the illustrative maps are useful accompaniments of the letterpress.

The practical lessons to be drawn in reference to the exclusion of cholera from a given country or district in which it is not endemic are very clearly explained in the book. The fact being established that the cholera-poison, whatever it may be, is conveyed from one region to another by means of human beings, and also by their clothing or bedding, it is especially necessary to watch every outport at which any infected person or material might possibly arrive; to appoint sanitary officers at every seaport to examine ships on their arrival from foreign countries; and to insist on the adoption of strict measures of sanitation in every vessel where the disease might exist. As cholera, unfortunately, sometimes breaks out in ships at sea, from a few hours to many days after leaving port, in such a case a careful supervision should be exercised on the health of all the crew and passengers. The source of infection should be isolated if it exist in a human being, and destroyed, or neutralised, if it be in the shape of clothing, bedding, etc.; and all excreta should be removed as soon as possible. The writer of the first article in this volume strongly insists on the necessity of putting the passengers and crew on a mineral acid regimen, and he recommends the serving out of *sulphuric acid lemonade*, under the supervision of an officer, who should insist on the use of this acid liquid by everyone on board. Evidence is given at length as to the value of the acid prophylaxis of cholera, and it is affirmed that the cumulative evidence of the experience of the last sixty years fully warrants the favourable opinions advanced.

We have only to add that this volume must have involved enormous labour, and could have been produced only by the combined efforts of a whole army of observers and reporters under State direction. No less than 324 pages are devoted to the bibliography of cholera, the list apparently including the contributions made on this subject in most of the languages of the world.

Des Difformités des Doigts (Dactylolyses). Par le Dr. G. Beauregard. Paris, 1875.

This is a large essay on a small subject, and consists of descriptions, taken from various sources, and with many divisions and subdivisions, of a variety of diseases affecting the fingers. The most interesting part of the work is that upon the curious disease known as "Ainhüm," a very complete account of which is given, derived chiefly from the papers of Drs. Da Silva Lima and Wucherer, and the description of a specimen of the disease exhibited by Dr. Hermann Weber to the Pathological Society. This disease, which affects only the Ethiopian race, consists of a very slow spontaneous amputation of the little toe, due to some interference with the nutrition of the member leading to its gradual degeneration, atrophy, and separation. Some illustrations of the affection are reproduced from the works of Drs. Da Silva Lima and Taylor. Cases of syphilitic and scrofulous dactylitis are also described and figured, but nothing is added to the excellent description of these affections published in 1871 by Dr. R. W. Taylor, of New York.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, May 19.

Dr. Buchanan, President, in the Chair.

The minutes of the preceding meeting having been read and confirmed,

Dr. Corfield (the Secretary) proceeded to read the report of the Council upon matters recently referred to them by the Society. Dr. Tidy having moved—"That the resolution respecting the Aylesbury Dairy Company, passed at the meeting of the Society of April 22, authorising experiments to be made at their dairy, be rescinded," the Council are of opinion—First, that it would be most desirable that observations should be made upon the relative value of the different food-supplies for cows by the Society, with a view to aid Parliament in fixing a proper standard for pure milk, if legislation be presently contemplated with a view to further check the adulteration of milk. Secondly, that monthly analyses of samples of the metropolitan water-supplies be continued as heretofore by the Society; that the tests for albuminoid ammonia be added to the usual tests; and that the Society's analyst be not allowed to act in the capacity of analyst for any of the water companies. Thirdly, that it is too soon to recommend alterations in the existing by-laws with respect to the regulation of slaughter-houses in the metropolis, sufficient time not having elapsed for observing the effect of recent legislative control of slaughter-houses.

Dr. Stevenson considered that it was desirable that the Society should have a variety of chemical processes for testing the presence of albuminoid ammonia in water, and particularly to compare Professor Wanklyn's process with the more elaborate tests of Professor Frankland.

The Chairman, agreeing with this proposal, said that by such processes of comparison the Society would be in a position to judge with some degree of accuracy as to the range of personal error, and to get a check upon other investigators. He thought Frankland's process too laborious for the Society to undertake, but was glad that the Government should continue to use that process.

Dr. Tripe moved, and Dr. Corfield seconded, the proposal of the Council with reference to the appointment of an analyst, which was carried.

Typhoid Fever.

Dr. Tripe then rose to call in question a statement, which had been currently reported, to the effect that at the recent Sanitary Conference in London Dr. Wanklyn had expressed an opinion that six inches of porous material would be quite sufficient to clear away all germs of typhoid fever.

Dr. Stevenson objected to the matter being officially discussed until some authoritative statement had been laid before the Society, representing Dr. Wanklyn's precise views on the subject; the more so because on the previous day he himself had overheard Dr. Wanklyn say that he was not sure whether typhoid fever was propagated by germs or not.

The matter was then allowed to drop for the present.

Metropolitan Slaughter-Houses.

Dr. Dudfield, commenting upon his proposals for more stringent regulation of slaughter-houses, said that he would only ask the Society to reaffirm that which they had already approved, and which they had some time ago pressed upon the Metropolitan Board of Works—viz., regulations which were now in several cases being enforced by law. He desired that other metropolitan officers of health should benefit by the experience of the Kensington Vestry, and be able to enforce in all cases these more stringent regulations as approved by the magistrates at the Court of Sessions.

Dr. Stevenson thought it would be better to watch for a little the working of the by-laws, before any modification or any unwritten law be urged upon the Board of Works or given to the inspectors of nuisances.

Regulation of Cowsheds and Dairies.

With reference to the proposed by-laws for regulating metropolitan and urban cowsheds and dairies, Dr. Dudfield asked that each clause should be considered *seriatim*, and any further alterations suggested. He reminded the Society that the Commissioners of Sewers have adopted these proposals in their entirety, and urged upon the members not to postpone the consideration of the subject, as speedy legislation was most desirable.

Insanitary Dwelling-Houses.

Dr. Corfield here mentioned that he was prevented from drawing attention to the ruling in the case of Wilson *v.* Hatton, involving the question as to whether a tenant under an agreement to take a house can repudiate the contract on account of defective sanitary condition, because the case is still pending in the courts of law.

Conveyance of Typhoid Fever Germs.

Dr. Tripe, again commenting upon the public statement of Professor Wanklyn respecting typhoid germs, asked if, Nessler's process having failed to detect ammonia in solution, the absence of typhoid germs was therefore to be counted upon.

Dr. Tidy, as the result of considerable experience in the examination of suspected waters, had found that infusoria might be kept out of water by filtration, but that the ova of such must occasionally pass through six inches of charcoal, because he had detected the infusoria when examining filtered water which had been for some time hermetically sealed.

Dr. Stevenson hoped that no one would be found to put forward such a blank and naked statement as that alluded to by Dr. Tripe, which proved nothing at all. The general opinion was that a well with 100 feet of downward filtration, without any fissures or gaps in the strata, was safe; but percolation laterally into the well was, of course, a very different matter.

Dr. Corfield referred to the official report of a speech made by Professor Frankland, in which he alluded to a hill in Switzerland through which it could be demonstrated that the germs of typhoid fever had passed, and poisoned those residing on the other side—a mile and a quarter in distance. Common salt was dissolved in the water, and it was detected on the other side of the hill; but not so fine flour, which would not dissolve.

Metropolitan Water-Supply.

Dr. Tripe then brought forward his proposals for amending the law relating to water-supply and water-supply apparatus in metropolitan and extra-metropolitan districts, as follows:—That the absence from any dwelling-house within the metropolis of a proper and sufficient water-supply, derived from a water company's main (where there is a water company's main within 200 feet), for use for domestic purposes, shall be deemed a nuisance such as to render the premises unfit for human habitation; and if the owner of the said house shall neglect to provide the requisite supply within one month after a notice has been served upon him so to do, a magistrate may order the house to be closed in accordance with the provisions of the "Nuisances Removal Acts." That courts or places supplied by a water-waste preventer be excepted herefrom. As regards metropolitan and extra-metropolitan districts, or parishes, situated within England and Wales, the nuisance authority shall have power to take proceedings, in respect of any house on a public water service, under the Nuisances Removal Acts or Public Health Act, for the recovery from the owner of a penalty not exceeding £5 for allowing any of the following sanitary defects to exist on his premises after due notice has been served on him to remedy the evils complained of—viz., (*a*) where there is a waste-pipe connected with the cistern which communicates with a sewer, drain, or water-closet; (*b*) where there is a cistern or butt which is not lined with metal, or which is not properly covered, or where the same cistern or butt stores the water used for the water-closet and that required for domestic use, or where the cistern or butt is so placed as not to admit of being readily cleaned out, as where it is put under the floor or below the surface of the ground; (*c*) where the supply-pipe communicates directly with the closet, or where it is placed so as to allow of the water supplied to the house becoming foul through contamination of any offensive or injurious matter or thing. The Water Companies Act, with reference to providing a constant supply of water, requires that all houses destitute of proper fittings, where such supply exists, shall be deemed uninhabitable. Dr. Tripe desires, further, to require that in the absence of water-supply to any house or district the owner shall be compelled to lay on water within a period of a month. Dr. Tripe had summoned an owner for not supplying water from the mains to a house in his district, but the magistrate decided that, inasmuch as the closets in the house were supplied with water, nothing further could be enforced.

Dr. Corfield stated that he had in many cases obtained a magistrate's order to cut off the cistern overflow from the drain.

Dr. Tidy's experience was different from that of Dr. Tripe, for he had succeeded in getting the Clerkenwell magistrate to decide that houses without a proper water-supply were unfit for human habitation.

This was the last meeting of the session.

CLINICAL SOCIETY.

Friday, May 26.

R. Douglas Powell, M.D., F.R.C.P., in the Chair.

Cases of Disease of the Skin.

Mr. Balmanno Squire exhibited six living specimens of lupus, five of which were examples of lupus vulgaris, and one an example of so-called lupus erythematosus, or sebaceous lupus; and all of them under treatment in various stages by Mr. Squire's modification of the surgical process of Professor Volkmann (of Halle) for the cure (more or less permanent) of that disease. Mr. Squire also exhibited two cases of psoriasis (general psoriasis) not of a syphilitic nature, under treatment by the process of Dr. Colson (of Beauvais), viz., the wearing of vulcanised indiarubber underclothing; the one case being completely cured, the other in progress towards a cure. Mr. Squire also showed a case of extensive warty growth, affecting chiefly the right leg, and in a less degree the right thigh and arm, treated under chloroform by cauterisation by fuming nitric acid, after failure by a superficial operation by the knife under the ether-spray apparatus.

Singular Condition after an Excision of the Knee-Joint.

Mr. Barwell brought the case for inspection. The patient, a girl aged nine, was an inmate of the Cripples' Home, and came thus under his surgical supervision. It was his habit to examine on their first entry all the inmates, and thus came to his notice the fact that this child's right knee-joint had been excised. The operation had been performed by Mr. Cowell about three years ago at the Victoria Hospital for Children, and the result was very remarkable. When the child was placed in a sitting posture, the leg hung down from the knee apparently useless, and almost flaccid: there was what was called a flail-joint—*i.e.*, union by fibrous bond, more or less long, between the femur and bones of the leg. Such a condition made, as a very general rule, a useless—indeed, a cumbering—limb, and many such had been amputated at the thigh, to ease the patient of so troublesome an appendage: but this child, when placed erect upon the floor, and bidden to walk, started off quite well, and went with only that amount of limp which was necessitated by the shortness of the leg. The limb, instead of being rendered useless by the flexible condition of the union, was even more available than if the usual and desired result—complete synosteosis—had occurred. Were it feasible, great interest would attach to the anatomical examination of this limb. The ends of the femur and tibia were, one might assume, cut off quite straight, but they had

now become somewhat rounded and oblique, the line of truncation running from before a little upwards as well as backwards, in a curve whose convexity looked upwards. The end of the femur had thus assumed almost the form of a trochlea, while the end of the tibia had become a shallow hollow or groove, a sort of sigmoid notch. The bone was displaced a little backwards, its axis lying behind that of the femur. The fibula, which was evidently left entire, had fallen backwards, so as to be somewhat farther than the normal behind the tibia: it had become prolonged upwards; to it a particularly strong, well-developed biceps tendon was attached. As far as could be made out by external examination, a strong but rather thin capsule surrounded the bones. There was easily to be detected a strong fibrous cord, which ran from the apex of the fibula downwards and forwards to the lower extremity of the femur, acting as a sort of sling for this bone. Other ligamentous bonds lay beyond reach of the finger, being placed between the ends of the bones after the manner of an interosseous ligament. It was evident that some peculiar arrangement of fibres must exist, which, by their interlacement with tendons, caused the bones, when in the extended position, to lock together so firmly as to impart to this false joint rigidity enough to support the weight of the body. Whether, as the child grew older and heavier, the ligamentous bonds would remain strong enough to carry on this office was perhaps problematical. The case, however, as it now stood, was very interesting, and, as far as Mr. Barwell knew, unique. He had not found mention of any similar condition in any English or continental publication.

Mr. Cowell, under whose care the patient had been, and who had performed the operation, stated that he had not had time to discover the records of the case. He had last seen the patient two years ago, and then saw that osseous union had not occurred. The case must, therefore, be regarded as a failure to some extent. He feared that the present condition would not persist when the child grew up.

Mr. Maunder suggested that possibly the explanation of the peculiar and fortunate state of the limb in the child might correspond to the condition of the extremity not infrequently found after transverse fracture of the patella. In these latter cases, where a very wide separation and slender fibrous union existed, the patient, although unable to extend the leg to the usual degree, was yet able to stand and walk with it through the medium of the aponeurotic expansion passing from the vasti muscles to be inserted into the leg. Probably, as Mr. Cowell had said, the case must be regarded as a failure after excision, inasmuch as firm union between the bones is very desirable at the knee.

Acute Arthritis of the Knee-Joint, and Necrosis of the Entire Shaft of Tibia in an Infant.

Mr. George Brown read a paper on a case as above, in which amputation was performed, followed by recovery. He began by stating that he brought the case before the notice of the Society on account of the interest which attaches to the rare and grave surgical disease which necessitated the performance of the operation; and because he believed that it was the first case in which amputation of the thigh had been followed by recovery in a patient less than twelve months old. The patient, Jane P., aged eight months, was brought to Mr. Brown, at the Islington and North London Provident Dispensary, on December 23, 1875, apparently suffering from an affection of the knee-joint. Up to the previous evening the child was quite well. When first seen the child was well nourished, but had cut no teeth, and had an anxious expression of countenance. The right knee was slightly swollen; the leg was semi-flexed, and hotter to the touch than the left. No fluctuation; no history of injury. The patient was evidently suffering much pain; refused food, and was unable to sleep. Next day the swelling of the knee had increased; the temperature rose to 103°, and the pulse was 140. The swelling of knee and leg continued to increase until the 28th, when the right knee and calf were three inches larger in circumference than the left. Distinct fluctuation could be detected all around the joint and about three inches down the leg. On the 29th the leg was opened just below the patella, and seven ounces of purulent matter were evacuated, containing a quantity of large curdy flakes, with some oil globules. On passing the finger into the wound, the tibia could be felt quite rough, and denuded of periosteum as far as the finger could reach. The epiphysis was felt to be detached from the shaft. The temperature was then normal, to which condition it had fallen suddenly on the 28th. After abscess was opened the patient appeared to suffer much less pain, and went on well for some days; but on January 5 she had an attack of vomiting, and the leg became erysipelatous. The temperature rose to 104°, and continued very high for several days. The wound discharged pus freely, and the erysipelatous condition of the leg continued until January 23. Meantime the patient became much emaciated, and was gradually sinking. Mr. Brown then proposed amputation, to which the parents consented; and he performed the operation, assisted by Mr. F. H. Hume and Mr. Sebastian Gardner, on January 25. The thigh was amputated in the lower third by the lateral flap method. After the operation was completed the child became cold, blanched, and pulseless, and only recovered from the shock and the effects of the chloroform after artificial respiration had been kept up for some time. The stump healed almost entirely by first intention, but a small sinus remained open for nearly three months. A small spiculum of bone was then removed from the sinus, and it healed up at once. On examining the amputated limb, it was found that the entire shaft of the tibia was denuded of periosteum and necrosed; the epiphysis was completely separated from the shaft, and in it was an abscess-cavity, which opened by a small pin-hole into the joint about the centre of the external semilunar cartilage; the articular cartilages of the joint were otherwise healthy. The synovial sac was slightly thickened. Mr. Brown was of opinion that the original lesion was a sub-articular abscess in the epiphysis—probably of scrofulous origin, as no history of congenital syphilis could be obtained. This abscess first opened into the joint, and gave rise to the acute inflammation for which the patient first came under treatment. Later, the abscess extended downwards to the periosteum, causing acute periostitis and rapid necrosis of the shaft. Such cases were, fortunately, rare, and seldom came under the notice of surgeons, excepting those who have extensive practice among children. Mr. Thomas Smith has described the disease very fully in the *St. Bartholomew's Hospital Reports* for 1874, and given notes of several cases which came under his notice at the Children's Hospital, most of which terminated fatally in a rapid manner. Mr. Smith had named this disease "acute arthritis of infants." Mr. Barwell, in his work on "Diseases of the Joints," published in 1861, quotes from Stromeyer a description of a similar affection, but adds that up to that time he had never seen a case of the kind himself, neither could he find any record of a case in the writings of English surgeons. The presence of erysipelas, Mr. Brown remarked, is generally held to contra-indicate the performance of a surgical operation. In this case there was well-marked cutaneous erysipelas of both legs on the day appointed for the operation; but as it was evident that the child was rapidly sinking, it was decided to amputate at once, and run the risk of erysipelas attacking the stump. The result of the case, Mr. Brown observed, shows the wisdom of the course adopted.

After the patient had been examined by the members present,

Mr. Barwell said that he did not agree with Mr. Brown in his views as to the nature of this case. Since his work was written he had seen several cases of the kind, and had found that in them the articular cartilage of the joint was soon destroyed. In this instance, however, it was not destroyed; and he thought the case was one of acute suppuration of the tibia, spreading, as rarely happened, to the joint. He narrated the particulars of a similar case, in which he had successfully amputated the limb.

Mr. Callender thought Mr. Brown was to be congratulated upon the result of the case. He had seen similar cases, in which the shaft of the bone had been first affected, and the epiphyseal and joint trouble had been secondary to it. In regard to the existence of erysipelas at the time of amputation, it was of the superficial, fugitive variety; and, although one would rather be free from such a complication, yet he would not consider it an absolute bar to the operation at the time. Such principles also would hold good in regard to amputation in an adult.

Mr. T. Smith considered that one must speak with great diffidence, not being able to take the specimen from the bottle which had been handed round, and examine it more closely. He thought it was a case of acute inflammation of the tibia, spreading to the joint. Mr. Brown was to be congratulated on the result of his operation. Not often in amputations at that early age did one meet with success. In a somewhat similar case at St. Bartholomew's Hospital, where the little

patient was eight months old, and amputation had been performed, the child did not recover. And in Mr. Brown's case the purpuric spots, etc., would seem to show that the infant was only kept alive "by the skin of its teeth," as it were, and the result was not very encouraging for other surgeons. He had seen suppuration in the knee-joint of a child whose mother had fallen four days before its birth. At the birth its knee was hot and swollen, and a week subsequently pus escaped from a puncture of the joint.

Dr. Goodhart had seen the specimen when it was fresh at the Museum of the College of Surgeons, and it was then difficult to decide upon the exact nature of the case. But he had thought that, as it was a case of short duration, and the whole epiphysis was affected, the mischief had probably begun just below the epiphysis, and spreading thence to the periosteum over the shaft, had caused the death of the shaft. Had it been a case of acute necrosis of the bone, it would surely then have been possible to cut down upon, and remove, the dead bone before the joint had become implicated.

Mr. Maunder at first, and before hearing the case throughout, was inclined to believe that the inflammatory action had begun in the tibia, passed on through the epiphysis, and so involved the joint; but the history, very carefully detailed by the author, led him to alter his view, and to think that Mr. Brown's version was correct—that an abscess had formed in the epiphysis, and burrowed both upwards and downwards. Mr. Maunder could see no objection to this explanation, because it accorded with his experience in the adult. He would venture to criticise adversely the position selected for amputation. The child's stump was certainly a very pretty one, but, if carefully examined, the scar and the bone-end were seen to be united at one point. This would tend to prevent comfortable and steady progression on a wooden leg hereafter. He strongly advocated amputation through the knee-joint as a method causing less shock to the patient, affording little or no risk of pyæmia and osteo-myelitis, and insuring, in the highest degree possible, a useful stump. A former patient of his had presented himself at the London Hospital that day, capable of bearing the whole weight of his body directly upon the face of the stump—the condyles of the femur. The cicatrix was behind these latter, and not exposed to pressure.

Mr. Callender had merely wished to say what would be the most general view of the case as regarded its pathology. He had not at all made his remarks in a spirit of antagonism to Mr. Brown's views, which were possibly quite correct.

Mr. Hawarn observed that the case in its origin was not syphilitic. The epiphyseal perichondritis of that disease was a chronic affair, and was accompanied by other manifestations of syphilis; whereas this child was now healthy. The syphilitic affection was much less prone to suppuration than other articular diseases of infants. The fact that swelling of the joint was the first thing noticed was not fatal to the opinion that the inflammation began beneath the periosteum of the upper part of the tibia. In fact, swelling of the joint was often the first sign of acute necrosis beginning near the joint. As regarded the operation, the child would have been less collapsed if ether, instead of chloroform, had been used.

Mr. Macnamara related the case of a child, eleven years of age, at the Westminster Hospital, in which at first the ankle, and subsequently the knee-joint, became swollen. One month afterwards there was undoubted acute necrosis of the shaft of the tibia; sinuses led down into the bone, whilst there was serous effusion into the knee-joint. The boy's temperature was then high, and he was in a dangerous condition from impending pyæmia. Mr. Macnamara then cut into the knee-joint, and finding the articular cartilage at the lower end of the femur healthy, he amputated through the joint. The patient made a good recovery. An examination of the amputated limb showed that the disease had extended from the shaft to the articular cartilage, which was perforated by one small aperture.

Dr. Powell suggested that the specimen should be examined by a small committee before it was sent away.

This was assented to, and it was arranged that Mr. Barwell, Dr. Goodhart, Mr. Pick, and Mr. Brown should form such committee.

Mr. Brown, in reply, said that he had selected the oldest method of operation—that by lateral flaps,—believing that the risk of long-continued suppuration after amputation through the knee-joint would have been great. Neither could he have formed such good flaps. As to the pathology of the case, he thought that some speakers had overlooked the clinical history. The first symptoms were those of arthritis. There was pain with swelling at the joint, which was semi-flexed. There was also absence of other signs; no brawny red condition of the parts existed, as was so usually seen over the site of periostitis of the tibia. In respect to the anæsthetic used, he considered chloroform safe with children, and it was ready. The child was certainly depressed, but perhaps it had been kept too long under the influence of the anæsthetic.

(*To be continued.*)

NEW INVENTIONS AND IMPROVEMENTS.

FRENCH SOUPS.

The basis of all these soups—prepared by the Société Générale des Potages Economiques (Henry A. Wolff, 40, Great Tower-street, London)—is a concentrated beef extract; and this extract alone is sold in tablets as "Consommé," which may be used as gravy or as gravy soup; or it is formed into a variety of compound soups, which are sold, also in the dry state, in cakes or grains. Thus, soups in the granulated form are made with the concentrated beef extract and tapioca, Italian paste, wheat flour, or semolina; while soup cakes are made of the extract with mixed vegetables, with rice and vegetables, or with rice and haricot beans. We have examined and tested several samples, and have nothing to give them but praise. They are all of excellent quality, and really far better than the soups often met with in private hotels in England, while the "Julienne" soups have the full flavour of the vegetables. They are wonderfully cheap, and ought to become very popular, even in the kitchen, though the presiding genius of that region is generally vehemently opposed to all "new-fangled notions": for by boiling one of the preparations with water for a few minutes, a palatable, good soup is obtained at a cost varying from three-halfpence to threepence per head.

"TEREBENE" TOILET PREPARATIONS.

We have received from Mr. F. S. Cleaver, Red Lion-street, Holborn, various articles for the toilet prepared with terebene, which deserve, we think, to become popular. Terebene is, we believe, obtained from turpentine, and has been recommended as possessing considerable astringent, antiseptic, and deodorising properties. Of its real value in these respects we are not in a position to speak at all positively; but the tooth-powder, hair-wash, and soaps prepared with it have certainly a very pleasant, balsamic fragrance, and may be safely recommended as agreeable, cleanly, and cleansing additions to the *armamentarium* of the toilet-table.

Our Canal Population.—At a meeting of the Rugeley Ruri-Decanal Conference, last week, the following resolutions were passed:—1. That women and children, except under stringent regulations, should be prohibited from living and working in the boats. 2. That the Factory, Workshops, and Sanitary Acts should be extended to the boating population on the canals. 3. That Sunday traffic on the canals should be limited as far as possible. 4. That so long as the law does not prohibit children of school age living in canal boats, homes should be provided where such children can be boarded and educated.

Increase of Tænia in France.—M. Decroix attributes the great increase of *Tænia inermis*, which is said to have taken place of recent years in France, to the therapeutical employment of raw meat, which has of late been much extended, and also to meat being eaten too underdone—in a half-raw state. Beef and mutton often contain germs of the *Tænia inermis*, which defy detection by the most careful inspection, and the only security is to have the meat thoroughly cooked. When it is considered necessary to prescribe raw meat medicinally, that of the horse should be preferred, as it is not subject to the verminous diseases which produce the germs of tænia. It is also more easily digested than that of other animals, which are more unnaturally fed and fattened. It is well suited for feeble, chlorotic, and anæmic persons, and for workmen compelled to make great muscular exertion. Its good qualities are becoming more and more appreciated in France, as the number of horses slaughtered at Paris increased from 1821 during the first quarter of 1875, to 2370 during the same quarter of 1876.—*Abeille Méd.*, June.

OBITUARY.

WILLIAM TURNBULL, M.D.

By the death of Dr. Turnbull, Huddersfield has lost its oldest and, perhaps, most valued medical practitioner. For upwards of sixty years he was Physician to the Infirmary, and during the whole of that long period devoted himself with zeal and ability to the duties which the position involved. He was very highly esteemed by his colleagues, and was loved and trusted implicitly by all, rich or poor, who consulted him as patients. By the poor he will be especially missed, for he never allowed private practice to interfere with his hospital duties, or to infringe on the time which, as a physician, he owed to the Infirmary.

Dr. Turnbull received many and valuable marks of the confidence and esteem of his friends. In 1863 the governing body of the Infirmary resolved on placing his portrait in the Board-room. In 1872 the inhabitants of Huddersfield subscribed a large sum for the purpose of making some tangible presentation, which took the form of a timepiece, épergne, and silver salver. Lastly, some baths have been attached to the Infirmary, in "recognition of the eminent ability and unremitting services of William Turnbull, Esq., M.D."

For some months past Dr. Turnbull has been perceptibly failing in health; but he has gone about seeing his patients till within a few days before his death, so that he may be said to have literally died "in harness." He had attained the ripe age of eighty-two years.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—At the Second Commencements of Trinity Term, held in the Examination Hall of Trinity College on Wednesday, June 28, the following degrees and licences in Medicine and Surgery were conferred by the Right Hon. Sir J. Napier, Bart., Vice-Chancellor of the University:—

Baccalaurei in Chirurgiâ.—Fullerton, Ricardus; Gorman, Carolus; Maginniss, Robertus Maude; Peyton, Jones Lloyd; Sproulle, Oliver.

Baccalaurei in Medicinâ.—Benson, Arturus H.; Blunden, Gulielmus; Biddulph, Ricardus E.; Comyn, Georgius; Dwyer, Johannes Henricus; Fox, Carolus N.; Fullerton, Ricardus; Fitzgerald, Dudleius Loftus; Gorman, Carolus; Hamilton, Thomas Kinley; Hamilton, Jacobus Alexander Greer; Kenny, Gulielmus Wallace; Lambert, Gulielmus F.; Leeper, Georgius Reginald; Maginnis, Robertus Maude; Newell, Shapland Homan; Orr, David Wilson; Peyton, Jones Lloyd; Poole, Jonas S.; Power, Edvardus Ricardus; Sproulle, Oliver; Taylor, Sidneius Hamilton; Whitaker, Georgius; Wright, Gulielmus Macdowel Aikin.

Magistri in Chirurgiâ.—Barrington, H. E. W.; Corcoran, Laurentius; Fetherston, Carolus H.; Fox, Carolus Nugent; Poole, Jonas S.

Doctores in Medicinâ.—Allen, Jacobus Henricus Leslie; Crowe, Georgius Wyndham; Drummond, David; Franks, Kendal M.; Goode, Gulielmus Henricus; Kane, Nathaniel Heoricus Kirkpatrick; Macalister, Alexander (*stip. con.*); Reynolds, Jacobus Emerson (*honoris causâ*); Tuthill, Phineas Barrett.

Licentiatus in Medicinâ.—Cooper, Carolus Alfredus.

Licentiatus in Chirurgiâ.—O'Carrol, Martinus.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 29:—

Duke, Edgar, 321, Clapham-road.
Snell, Edward Arthur, St. Wilfrid's, Mortlake.
Southam, Frederick Armitage, Pendleton, Manchester.

The following gentlemen also on the same day passed their primary professional examination:—

Alford, Chas. Edward, University College.
Crick, Samuel Arthur, St. Thomas's Hospital.
Jolly, Robert William, Charing-cross Hospital.
Woodman, Wm. Edwin, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

KYNGDON, FREDERICK H., M.B., M.R.C.S., Eng.—House-Physician to the London Hospital.

OWEN-RAYLEY, L.S.A.—Assistant House-Surgeon and Dispenser to the Kent and Canterbury Hospital, *vice* — Wickham, resigned.

PRICE, HENRY E., B.Sc. Lond., M.R.C.S. Eng.—House-Physician to the London Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Surgeon Robert Arthur Bernal, M.D., has been placed on the retired list from June 26.

WAR OFFICE.—The Secretary of State for War has appointed H. F. H. Barham, M.R.C.S., to be Visiting-Surgeon for Maidstone, *vice* Hallowes resigned; and J. Oliver, L.R.C.P. Edin., to be Assistant Visiting-Surgeon for Maidstone, under the Contagious Diseases Acts, 1866 to 1869.

BIRTHS.

BANKS.—On June 16, at 28, Rodney-street, Liverpool, the wife of W. Mitchell Banks, M.D., of a son.

COLLES.—On June 29, at Bridgenorth, the wife of A. Colles, M.B., of a daughter.

HUTCHINSON.—On May 6, at Wangaratta, Australia, the wife of B. C. Hutchinson, M.D., of a son.

MAKOWSKI.—On June 29, at Ringley Mead, Reigate, Surrey, the wife of Dr. Makowski, of a daughter.

MARRIOTT.—On July 3, at Heathfield, Leicester, the wife of C. H. Marriott, M.D., of a daughter.

PICKERING.—On June 26, at South Kensington, the wife of T. H. Pickering, M.D., English Physician, at Arcachon (winter) and Dieppe (summer), of a son.

TURNER.—On June 30, at High Wycombe, the wife of Frederick Harry Turner, M.R.C.S., of a son.

WILLIAMS.—On June 27, at 9, Prince of Wales-road, Norwich, the wife of Charles Williams, Esq., F.R.C.S., of a daughter.

MARRIAGES.

BRATTLE—GHAEN.—On June 29, at Christ Church, Forest-hill, Kent, Astyanax, only son of the late Dr. Brattle, late of Sulhampstead, Berks, to Rosa Cecilia, third daughter of Magnus Ghren, A.I.C.E., F.C.S., of Lower Sydenham.

CONNELL—WHATELY.—On June 29, at St. James's Church, Piccadilly, John Beresford, only son of the Rev. John Connell, of St. Vincent, West Indies, to Paulina, second surviving daughter of G. F. Whately, M.R.C.S., of Great Berkhampstead, Herts.

EARLY—STURTON.—On June 26, at Christ Church, Croydon, Richard Thomas Early to Edith Lucy, youngest daughter of William Sturton, M.R.C.S.

FAUSSET—FAIRBAIRNS.—On June 28, at St. Mary's, Stoke Newington, Herbert John Fausset, M.D., of Tamworth, to Louisa Mary, daughter of the late Mr. Frank Fairbairns, of Poplar.

FORBES—CHURCHILL.—On June 14, at St. Andrew's Church, Ardtrea, county Tyrone, Ireland, Stuart J. Forbes, Esq., of Yardley Chase, Jamaica, eldest son of the late Rev. William Forbes, Rector of Maudeville, Jamaica, to Isabel Ferrier, second daughter of Fleetwood Churchill, M.D., of Dublin.

MALE—NORTON.—On June 28, at St. Peter's, Belsize-park, Henry Davis Male, of 1, Victoria-park-square, to Juliana, youngest daughter of the late J. Howard Norton, M.D., of Nantglass, Carmarthenshire.

SARSON—SYMES.—On July 4, at St. Saviour's, Pimlico, George Sarsen, M.A., Curate of St. Martin's, son of John Sarson, J.P., of Kibworth, Leicester, to Mary Jane, elder daughter of Edmond S. Symes, M.D.

SPENCER—ROSENBERG.—On July 4, at St. Swithin's, Walcot, Bath, Francis Henry Spencer, M.D., Army Medical Staff, son of Francis Spencer, F.R.C.S., of Chippenham, Wilts, to Hannah Fuller, widow of the late George F. Rosenberg, of the Society of Painters in Water Colours.

STONE—FRENCH.—On June 28, at the parish church, Appledore, Kent, Valentine Stone, F.R.C.S. Ed., of Laurencekirk, N.B., to Ellen, daughter of the Rev. M. D. French.

TAAFFE—YEARSLEY.—On July 4, at the parish church, Brighton, Rickard John Taaffe, of Lincoln's-inn, barrister-at-law, eldest son of Dr. Taaffe, Medical Officer of Health for Brighton, to Jane, eldest daughter of the late John Yearsley, Esq.

DEATHS.

EVANS, LAWRENCE HARDWICKE, fourth son of Nicholl Evans, M.D., at Cheshunt, on July 3, aged 4.

MANNING, ESSIE ANNA, wife of Leonard Archibald Manning, M.A., M.D. Dub., and elder daughter of the late William Thorne, Esq., of Haughton, Shifnal, Salop, at Llanymynech, Oswestry, on July 1, aged 26.

PLAYFAIR, THOMAS, M.D., at Schloss Gayen, near Meran, in Tyrol, on June 14, aged 60.

ROBERTS, GEORGE OGILVY, L.R.C.P.E., L.R.C.S.E., eldest surviving son of Dr. W. A. Roberts, of 47, Queen-street, Edinburgh, at Granton Lodge, Granton, on June 30.

TAYLOR, JAMES, M.R.C.S., suddenly, at No. 5, Ashley-road, Bristol, on July 2, aged 60.

THOMSON, THOS. RICHARD HEYWOOD, M.D., R.N., at 14, Finch-road, Douglas, Isle of Man, on June 27, aged 62.

TURNBULL, WILLIAM, M.D., at Ramsden-street, Huddersfield, on June 30, aged 82.

WARE, ISABELLA, widow of the late Samuel Ware, Esq., and only surviving daughter of the late Lancelot Hare, M.D., of Upper Gower-street, at 27, Queen's-gardens, Hyde-park, on July 1.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

AMERSHAM UNION.—Medical Officer. Candidates must possess the qualifications required by the Consolidated Orders of the Local Government Board, a certificate of qualification to vaccinate, and a certificate of being duly registered pursuant to 21 and 22 Vic., chap. 9, sec. 34. Applications, with testimonials, to Henry Bedford, Clerk, not later than July 17.

BRIGHTON HOSPITAL FOR SICK CHILDREN.—Two Surgeons. Candidates must be graduates in surgery of one of the Universities of the United Kingdom, or Fellows or Members of the Royal College of Surgeons of England, registered under the Medical Act to practise both medicine and surgery. Applications to Wm. Brown, Secretary, on or before July 11.

HANTS COUNTY LUNATIC ASYLUM, KNOWLE, FAREHAM.—Two Assistant Medical Officers, both of whom must be duly registered under the Medical Act. Applications, with testimonials, to Dr. Manley, the Superintendent, on or before July 10.

HOSPITAL FOR SICK CHILDREN, 49, GREAT ORMOND-STREET.—Medical Registrar. Candidates must possess some legal qualification. Applications and testimonials, on or before July 13.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE.—Visiting Physician. Applications, with testimonials, to Francis Baily, Secretary, before July 20.

MITFORD AND LAUNDITCH UNION.—Medical Officer. Applications, with testimonials, to Charles Wright, East Dereham, on or before July 14.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Physician (Out-Department). Candidates must be graduates of a university in the United Kingdom, or if holding a foreign degree only, must be members of the London College of Physicians. Applications, with testimonials, to George Scudamore, Secretary, Lower Seymour-street, Portman-square, W.

SEAMEN'S HOSPITAL, GREENWICH, S.E.—House-Physician and House-Surgeon. The former must be a member or Licentiate of the Royal College of Physicians of London, or a Licentiate of the Company of Apothecaries; the latter must be a Fellow or Member of the Royal College of Surgeons of England. Candidates must be unmarried, and under the age of thirty years. Applications, with particulars of professional qualifications and references as to moral character, to Henry C. Burdett, on or before July 12.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—House-Physician (who will also be required to act as Chloroformist, Medical Registrar, and Medical Pathologist). Candidates must be graduates of a British university, or be possessed of such medical qualifications as are satisfactory to the Medical Committee and the Weekly Board. Testimonials to the "Chairman of the Medical Committee," not later than July 24.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Alderbury Union.—Mr. J. R. Perkins has resigned the Second District; area 12,892; population 3914; salary £100 per annum.

Bakewell Union.—Mr. J. H. Clay has resigned the Cromford District; area 2662; population 3084; salary £15 per annum.

Totnes Union.—Mr. O. Kiernan has resigned the Buckfastleigh District; area 14,070; population 3366; salary £30 per annum.

APPOINTMENTS.

Bingham Union.—Henry Williams, M.R.C.S., L.R.C.P., to the South District; Thos. P. Wright, M.R.C.S. Eng., L.S.A., to the East District.

Fulham Union.—Alex. Wm. McLeod, M.R.C.S. Eng., L.S.A., to the First District.

THE late Mr. Robert Cheere has bequeathed legacies of £1000 each to King's College and to King's College Hospital.

ELECTRO-PUNCTURE IN ANEURISM OF THE AORTA.—The *Gazzetta Med. Ital. Lombardia* of March 25, April 29, and May 6 contains detailed accounts of two additional cases of aneurism of the ascending portion of the aorta successfully treated by Prof. Ciniselli by means of electro-puncture.

AT a meeting of the Health Committee of the Liverpool Town Council on the 29th ult. it was agreed to recommend the appointment of a deputy medical officer of health. It was understood that the recommendation would be made with the entire approval of Dr. Trench, the present distinguished medical officer, whose health unhappily has for some time been bad.

LONDON HOSPITAL.—The distribution of prizes will take place on Thursday next, July 13. As the right hon. W. E. Gladstone has kindly consented to preside, the ceremony is looked forward to with great interest. It is well known that the promoters of the Female Medical School are trying hard to secure the new wing, which has just been opened, for their hospital practice, the want of which is now one of the few barriers between them and the examining boards. We shall be curious to see whether Mr. Gladstone touches on this point, and, if so, the line of argument he will adopt.

THE annual meeting of the Lancashire and Cheshire Branch of the British Medical Association was held last week at Southport, and was largely attended. In the course of the proceedings it was stated that the number of members had increased from 150 to 500. Dr. Davies-Colley thanked the members, on the expiration of his office of chairman, for the kindness and courtesy shown him, and proposed as his successor Dr. George Woods, of Southport. Some professional papers were then read to the meeting by Dr. J. Haddon, Dr. Reginald Harrison, and Dr. Caton; and in the evening the members dined together at the Victoria Hotel, Southport.

LIQUEUR DE LA GRANDE CHARTREUSE.—M. Decaisne recently communicated to the Académie de Médecine an account of the results of the investigations he has been pursuing concerning the effects of the "Liqueur de la Grande Chartreuse" prepared in such increasing quantities by the Trappists, and the "Eau de Melisse" prepared by the Carmelites. The costly price of these articles, he says, alone prevents their doing the same amount of mischief as is done by absinthe; and even with this he has been able to observe six cases of complete alcoholism, which he details in his paper, produced by the use of "Grande Chartreuse." The same herbs are used in the three preparations, all containing active and even dangerous essential oils in somewhat varying proportions. In equal doses they produce similar effects on the nervous system.—*Gaz. Hebd.*, June 16.

LACTIC ACID AS A SOPORIFIC.—Dr. Mendel, after adverting to Preyer and Meyer having written on the employment of this substance, states the results of his own employment of it at the asylum to which he is physician, and also in private practice. He has found that in cases in which sleeplessness was caused or accompanied by pain, lactic acid does not procure sleep. It is, however, a remedy to be recommended when insomnia comes on in the course of generally enfeebling diseased conditions, and during convalescence after serious disease. It is also of use as a tranquillising means in insanity, and especially in the excitable forms of this. How far its methodical employment may be useful as a curative agent in certain forms of psychical disease requires further investigation. Dr. Mendel states that it is best administered as an enema; but so given, even when much diluted, it irritates the rectum too much to allow of its being retained. This is obviated by neutralising the solution with carbonate of soda. From five to twenty grammes may be employed at bedtime, to which about the same quantity of soda may be added, employing only enough water to produce an enema capable of filling a small enema-syringe.—*Deutsche Med. Woch.*, April 29.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

E. Markham Skerritt.—The communication shall appear as soon as possible. A woodcut does not appear necessary.

Tyro.—The wine at one shilling a bottle is good sound Bordeaux, and possesses all the elements of good sound wine, with no excess of acetic acid. That at two shillings does not contain more of the elements of wine, if so much; but it is older, nicer, more refined, lighter in digestion, and well worth the extra shilling to anyone who can afford it. It is the difference between high-bred and low-bred, or frieze and velvet: the frieze is as warm, but not so fine.

N.—When women become members of the College of Surgeons there will be female attendants, special retiring rooms, lavatories, etc. There will also be a female librarian and secretary, and female students in the Hunterian Museum.

Meticus.—The dose of the tincture of aconite, P.B., is three minims every three hours. It is said to reduce feverish heat; but the evidence is, from the circumstances of the case, unsatisfactory.

Cecil W.—Dr. George Cleghorn, when he left the University of Edinburgh, in 1736, went to the island of Minorca, where he resided for thirteen years. After his return he published a treatise on the "Diseases of Minorca," a work which has been considered an excellent model of what may be styled medical topography. Dr. Cleghorn settled in Dublin in 1751, and died there in 1789.

Sanitarian.—In reference to the absence of a public mortuary in the district, considerable discussion took place at a special meeting of the Westminster Board of Works on Monday. The matter was eventually referred to the Works Committee for consideration and report, pending which it was resolved to enter into immediate negotiation with the joint vestries, to place at the disposal of the Board the mortuary at Petty France disused workhouse. The inconvenience and risk arising from the want of a mortuary in the district has recently been brought before the Board by the Commissioner of Police and the Local Government Board.

THE LATE SURGEON-MAJOR FLEMING.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reference to your interesting notice of the late popular and much-esteemed Surgeon-Major Fleming, let me say that it was he, and not his predecessor, Dr. Brown, who refused promotion in order to remain with the 37th Regiment. He was an early advocate of vaccination in Ceylon, and received a handsome piece of plate as a testimonial of his exertions. AMICUS.

London, July 2.

Precedent.—Bacon's remark is that "a froward retention of custom is as turbulent a thing as an innovation, and they that reverence too much old times are but a scorn to the new."

THE VACCINATION ACT AND THE SECRETARY OF THE LOCAL GOVERNMENT BOARD.

A moroing contemporary states that at the hearing of several summonses a few days since, before the Rugby Bench, for non-compliance with the Vaccination Act, the plea "conscientious objection" and previous conviction for the same offence was in each case urged by Mr. Amos Booth, a member of the Anti-Vaccination Society, Leicester, in "mitigation" of the penalty to the minimum of one penny. He declared that when the Bill was passed the Government intended persons to be prosecuted, but not that a system of persecution should be carried on; and he also stated that Mr. Sclater-Booth, the Secretary of the Local Government Board, with whom he (Mr. Booth, of Leicester) had had an interview, said that the Government only intended that parties should be prosecuted once, and not over and over again, and further that the Government had issued notices to boards of guardians and vaccination officers, advising them to that effect. The full penalty was, however, in each case imposed.

COMMUNICATIONS have been received from—

Dr. E. MARKHAM SKERRITT, Clifton; Dr. JOHN PATTERSON, Constantinople; Mr. W. N. HIRON, Buenos Ayres; Mr. J. E. LANGWORTHY, London; Mr. GURNER, London; Mr. W. S. TURNBULL, Huddersfield; Dr. T. J. DE LISLE, Guernsey; Dr. G. V. POORE, London; Dr. PAYNE, London; THE SECRETARY OF THE MEDICO-CHIRURGICAL SOCIETY; THE SECRETARY OF THE FACULTY OF PHYSICIANS AND SURGEONS, Glasgow; Dr. CARTER, Liverpool; Messrs. T. COOK and SONS, London; Mr. T. M. STONE, London; Mr. BECHER, London; THE REGISTRAR OF THE UNIVERSITY OF DUBLIN; Mr. BARKER, London; Mr. R. G. WHITFIELD, London; Mr. FRANCIS FOWKE, London; THE SECRETARY OF THE BIRMINGHAM MEDICAL BENEVOLENT SOCIETY; Dr. ALEXANDER M. BUCHANAN, Glasgow; Mr. MORRIS, London; Mr. ATKINS, Weymouth; THE REGISTRAR OF APOTHECARIES' HALL, London; Mr. E. W. TOYE, London; Dr. CLEMENT GODSON, London; Dr. F. CHURCHILL, London; Dr. J. PEARSON IRVINE, London; Dr. J. C. THOROWGOOD, London; Mr. T. T. WHIPHAM, London; Mr. GEORGE BROWN, London; Dr. DAUITT, London; Mr. J. CHATTO, London.

BOOKS AND PAMPHLETS RECEIVED—

Charles Kelly, M.D. Lond., Second Annual Report on the Condition of the Combined Sanitary District of West Sussex—In a Few Words the Truth about Sewage—Braithwaite's Retrospect of Medicine, January to June, 1876—William Odling, M.B., F.R.S., A Course of Practical Chemistry—William Dale, The State of the Medical Profession in Great Britain and Ireland—Dr. D. Ricardo Ballota Taylor, Influencia de las Altitudes y Latitudes en el Desarrollo de las Enfermedades del Pecho—Bentley and Trimen, Medicinal Plants, part x.—Tilbury Fox, M.D., Atlas of Skin Diseases, part x.—Jonathan Hutchinson, Illustrations of Clinical Surgery, fasciculus iv.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—The Shield—Nature—Medical Temperance Journal, July—Furniture Gazette—Students' Journal—Manchester Courier—Veterinarian, July—Popular Science Review, July—Monthly Microscopical Journal, July—Obstetrical Journal, July—British and Foreign Medico-Chirurgical Review, July—Archives Générales de Médicine—Practitioner, July—St. Leonards and Hastings Gazette—Rugby Advertiser—Indian Medical Gazette, June—Huddersfield Examiner—Monthly Homœopathic Review, July—Edinburgh Daily Review—Toronto Sanitary Journal, June—Southport Visiter.

APPOINTMENTS FOR THE WEEK.

July 8. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

10. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

11. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

12. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

13. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

14. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 1, 1876.

BIRTHS.

Births of Boys, 1218; Girls, 1179; Total, 2387.
Average of 10 corresponding years 1866-75, 2125·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	621	554	1175
Average of the ten years 1866-75	665·1	612·2	1277·3
Average corrected to increased population ...	...	...	1367
Deaths of people aged 80 and upwards ...	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	15	2	2	3	...	1	...	6
North... ...	751729	...	3	3	1	8	...	3	1	5
Central ...	334369	...	4	3	1	4	1	...	...	8
East	639111	...	1	6	1	3	...	2	2	14
South... ...	967692	3	7	12	2	10	1	2	4	16
Total	3254260	3	30	26	7	28	2	8	7	49

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·838 in.
Mean temperature	62·9°
Highest point of thermometer	81·8°
Lowest point of thermometer	48·2°
Mean dew-point temperature	52 1°
General direction of wind	N.E. & S.W.
Whole amount of rain in the week...	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 1, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending July 1.	Deaths Registered during the week ending July 1.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2387	1175	81·8	48·2	62·9	17·17	0·00	0·00
Brighton	100632	42·7	57	37	73·2	50·7	59·7	15·39	0·00	0·00
Portsmouth ..	124867	27·8	78	52	...	...	...	...	...	...
Norwich	83430	11·2	61	27	81·2	50·0	60·2	15·67	0·36	0·91
Plymouth	72230	61·8	44	28	79·5	49·3	63·1	17·28	0·10	0·25
Bristol	199539	44·8	146	68	87·2	47·4	62·7	17·06	0·00	0·00
Wolverhampton ...	72549	21·4	45	23	76·9	43·0	59·4	15·22	0·15	0·38
Birmingham ...	371839	44·3	317	137	76·6	48·0	59·8	15·45	0·00	0·00
Leicester	113581	35·5	70	2	80·2	45·8	60·8	16·01	0·00	0·00
Nottingham ...	93627	46·9	75	23	79·2	45·5	61·0	16·11	0·00	0·00
Liverpool	521544	100·1	403	222	...	...	...	...	...	...
Manchester ...	357917	83·4	271	185	81·0	47·0	61·0	16·11	0·05	0·13
Salford	138425	26·8	148	78	78·3	43·0	67·9	14·39	0·08	0·20
Oldham	88609	19·0	95	47	...	...	...	...	...	...
Bradford	173723	24·1	132	69	73·0	51·8	59·2	15·11	0·03	0·08
Leeds	291580	13·5	247	122	77·0	50·0	61·2	16·22	0·02	0·05
Sheffield	274914	14·0	197	92	77·0	48·7	60·0	15·56	0·02	0·05
Hull	136933	37·7	96	39	72·0	48·0	58·9	14·94	0·45	1·14
Sunderland ...	108343	32·8	86	35	74·0	51·0	56·9	13·83	0·04	0·10
Newcastle-on-Tyne	139929	26·1	92	51	...	...	...	...	0·10	0·25
Edinburgh	215146	51·3	124	73	75·0	45·0	59·9	15·50	...	...
Glasgow	545144	90·4	382	209	79·4	47·1	60·2	15·67	0·43	1·09
Dublin	314666	31·3	199	143	79·7	46·2	61·8	16·56	0·04	0·10
Total of 23 Towns in United Kingdm	8028595	37·7	6754	2935	87·2	43·0	60·3	15·73	0·09	0·23

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·84 in. The lowest was 29·76 in. at the beginning of the week, and again on Thursday afternoon, and the highest 30·01 in. on Tuesday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture VII.

MEDICO-LEGAL ASPECTS OF DEATH.

(*Concluded from page* 30.)

(III.) A further consequence in the decaying body, from the evolution of gases, is the effusion of fluid into its interior. The gaseous fermentation of the masses of blood accumulated at death in the heart and larger bloodvessels not only suffices to propel this fluid onwards to the capillaries, but the *vis a tergo* increasing, ultimately forces it further in the direction where it meets with least resistance. Hence originate those *effusions*, consisting of the serum tinged with the colouring matter of the blood, met with most copiously in the cavities lined with serous membranes. These effusions are most frequently encountered in the pleura and pericardium, and less usually in the peritoneum. The quantity of such fluid may amount to some pounds. Its colour is commonly a brownish-red, and it exhales a putrid odour. The effusion is seldom met with in the cavities till some weeks after death; probably, never during the first week. It has never been found coagulated.

Both Orfila and Devergie assure us that they have never observed these effusions within the cavities of the hollow organs lined by mucous membranes.

The accumulations of cerebro-spinal fluid at the base of the brain and in the theca vertebralis, though less frequent, are phenomena of a more puzzling kind: and the discrimination between the effects of disease or injury during life, and the results of post-mortem change, may readily elude our grasp.

It would be difficult to confound the post-mortem effusions encountered in the pleura, pericardium, and peritoneum with effusions of blood, serum, or pus of vital origin. The homogeneity of the fluid in putrid bodies; the absence from it of pus or false membranes; the colour, different from that of blood, which becomes quite black when it putrefies—these serve as so many tests which would characterise these effusions.

A further characteristic feature in the series of changes undergone by the body after death is the *softening* of its tissues. The softening, however, occurs equally as an effect of inflammation during life as of decomposition after death. From each of these sources it may be met with on the surface and in all the textures of the body, though most frequently encountered in the brain, spleen, and gastro-intestinal membrane.

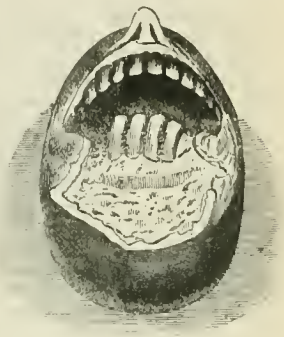
Certain deficiencies of *the surface of the body* encountered in decaying bodies are occasionally of a puzzling character, and their origin may not often admit of being traced successfully, whether to such cadaveric softening or other altogether independent causes. Thus, in bodies which have lain for some time in water, the scalp may be awanting over a great part of the head, but whether from cadaveric softening or the erosive action of water it may be impossible to decide. It is known that the previous existence at these parts of bruises, lacerations, or contused or other wounds, favour ready disappearance of the soft parts of the exterior in that medium, from the erosive action of water independently of decomposition. It must be borne in mind, besides, that such breaches of the surface of the body may be traceable in drowned corpses to the ravages of fishes or crustacea.

In the dead body left exposed to the atmosphere for some time, certain breaches of continuity occasionally met with on the surface, simultaneously with advancing putrefaction, would give little room for mistake. For instance, rats and other vermin will attack such a corpse, gnawing such exposed parts as the face and fingers. I show you a wax cast (Fig. 1) of the face of an old woman found dead in her room several weeks after her death. Similar erosions were found on the hands and face of a decaying corpse found suspended in a wood at Newe (Aberdeenshire) a few summers ago (Fig. 2). The distinctive appearances in this instance were attributed by the gamekeepers on the estate to squirrels.

It may not be out of place to remark here that the effects of voracious animals, either in or out of water, present a different aspect from those traceable either to the erosive action of water, or the progress of putrefaction—the former injuries presenting distinct, well-defined, and sharp margins; the edges of the latter, on the contrary, being usually ill-defined and softened.

Fig. 1.

Fig. 2.



The softened brain in the decaying body is sometimes, from the gases evolved within the cranium, forced along the cerebral and internal jugular veins—giving an appearance which might simulate phlebitis; while, again, the softened gastro-intestinal mucous membrane might suggest the action of irritant poison in the living.

To distinguish cadaveric from inflammatory softening, the following tests have been proposed:—

Firstly. *Vital softening* is rarely *general*, but almost always limited in the adult within very narrow bounds. In putrefaction, on the contrary, it invades the whole of an organ, the diminution of consistency being in proportion to the density of its different constituent parts. To take the cerebral mass, for example, *the lobes* are softer than the cerebral protuberance; *the cerebellum* than the cerebrum, etc.; and the same cause acting at the same time upon all these parts will produce an amount of softening in proportion to their respective densities in the healthy state.

Secondly. *Vital softening* rarely affects *the whole* of any one *viscus*, as is the case with cadaveric softening, particularly in such organs as the spleen, lungs, and liver. Such general vital softening has, however, been encountered in the brain by Billiard. One instance, closely approaching to this—certainly very unusual—occurrence, I have met with in practice in a young man of seventeen.

Thirdly. When acute inflammation leads to softening, the substance of the inflamed organ is usually infiltrated with serum or pus, and not unfrequently its investing membrane will show traces of vascular injection, adhesions to the walls of the cavity, or effusion of serum into the cavity. Of course, where the softening is the effect of putrefaction, no such appearances are observable.

Lastly. In doubtful cases of softening of portions of the brain, pathologists recommend recourse to be had to the microscope, and insist that vital softening may readily be distinguished from cadaveric by the presence of *exudation corpuscles* in the one and not in the other.

With the exception of the last, these tests are equally applicable to softenings encountered in the lungs, kidneys, liver, and heart. *In the lungs* it would be difficult to confound the *cadaveric* with the *inflammatory softening*. The latter follows the red or gory hepatisation. Of the two states the former could alone be mistaken for cadaveric engorgement, though there is little analogy between a softened mass, impregnated with fluids, easily tearing in all directions, brownish, diffluent, and putrid, and the hepatised tissue of an inflamed lung, soft, homogeneous, indurated in certain points, and of the consistence of the healthy liver. After putrefaction had advanced some way there would be no means left for knowing whether the softening had been caused by putrefaction or not.

It is not so easy to carry this distinction to the different states of *the spleen*. This organ is very easily softened by

putrefaction. The smell might be of some use, supposing a case where the other organs of the body were sound, while the spleen was softened. In the opposite circumstances nothing positive as to its source could be determined.

The same thing holds true of *the heart*. When the softening of *the heart* is attended with the coloration of its tissues, or with the yellow hue of withered leaves, it is said to be a proof of *vital softening;* but it is when it is attended with the coloration of its membranes or texture that there are doubts of its source.

The same remark applies to *the liver*.

Nothing at all resembling *the gelatiniform softening of the stomach* has been observed to be produced by putrefaction. *The solvent action of the gastric juice on this organ* after death presents a marked contrast to the change induced by decomposition. The illustration of these points, however, we must reserve till we come to discuss the subject of irritant and corrosive poisons under Toxicology.

Another phenomenon in the process of decomposition is the appearance of *blisters on the surface of the body*, containing more or less greenish or reddish fluid. When the putrefaction has taken place *under the ground*, besides these reddish or greenish blisters at certain parts of the surface of the body, at other parts, particularly over the feet, the cuticle is seen raised into plicæ, and thickened and blanched as from the action of a poultice or soaking in water. Precisely the same appearance is met with in bodies which have lain *in water;* first in the hands and feet, and subsequently at the knees and elbows—a peculiarity to which we shall have to return under Death by Drowning.

Another product of putrefaction, under certain circumstances, is a saponaceous matter termed *adipocere*. This change takes place very readily in young subjects; in those who are very fat; in the water of privies; less promptly in stagnant than in running water; readily in moist, rich earths; very rarely in dry soils; and all the more readily if the bodies are piled upon each other, the lowest being the first saponified.

It will not be necessary to pursue into details the further progress of the putrefactive process, as having but little or no bearing upon our subject; suffice it to state generally that the muscles become softened and greenish; the softened brain takes a greyish or ashy tint, the interior of the softened heart a dark-red dye, the flaccid stomach and intestines various shades of red and blue; on the detachment of the cuticle the skin exudes a brownish liquid; larvæ appear about the nose, eyes, and mouth; the surface takes on a brown tint; the abdomen bursts, giving exit to gases and putrid fluids; and the brain escapes by the orbits.

If decomposition is not arrested at this stage, the soft parts of the head, chest, and neck, and subsequently of the limbs, fall into putrilage, leaving the chest and belly fallen in; the lungs collapsed, contracted, slate-blue, and lacerable; the stomach softened, of a whitish-grey, with blue spots; the intestines shrunk into small dimensions and dry; and the spleen reduced to a black pulp.

At a later stage the soft parts of the face and of the chest have disappeared; the abdominal parietes are seen resting on the spine; *the muscles of the limbs* are like rotten wood, those of the body absent or adipocerous; *the brain* like glazed earthenware; *the lungs* are flat, hard, and glued to the vertebræ; *the liver* flattened, blackish-brown, and slightly dried; and *the stomach* a mere hollow cylinder.

Finally, if the body has been buried, the bones are disarticulated, and the remains of the soft parts of the chest and belly are found adherent to the spine, in the form of a black, humid, glossy matter, of less than an inch in thickness.—(Devergie, "Méd.-Lég.," vol. i. pages 104-171, *pass.*)

Notwithstanding the admitted *variations* which are observable in the periods occupied by the series of changes which we have just traced in the decay of the body after death, attempts have been made to obtain some tolerably sure data for enabling us to *approximate at least* to the particular period which its decay has reached in individual instances, calculated from the time of the decease.

The earliest of these attempts was made by Devergie, at the Morgue in Paris, from the examination and histories of bodies there exposed on their removal from *the water*, after a stay of different periods in that medium, as discovered by him on careful inquiry. Devergie argued, correctly, that *the temperature of the water* being more *uniform* than that, at least, of *the atmosphere*, if not of *the earth*, would, if correct approximations could be obtained, be the most likely to yield data that might be useful in practice. Caspar, however, urging that the process of decomposition being essentially the same in the different media, and only modified as to its rate by the qualifying circumstances which we have enumerated, independently of the media in which it may take place, proposes to "establish a general ratio for all the three media."—(Vol. i. page 37.)

But little reliance is to be placed on the data furnished by either of these authors. Devergie has made the formal attempt to give precision on the point in question, by laying down, in the first volume of his work, data for determining the period a body in winter must have remained in water ("Méd.-Lég.," vol. i. pages 26-8), and subsequently the modifications these data will have to undergo to adapt them for the other seasons of the year.

In testing these data of Devergie's in 113 observations of drowned bodies (prior to 1851), at different seasons of the year, I found that, judging by them, very large allowances must be made for the not inconsiderable variations in the periods fixed by this author (vide *Med. Gaz.*, new series, vols. xii. and xiii.). Caspar's data refer to bodies *exposed to the atmosphere*, and are as follows—*i.e.*, assuming the temperature to be the mean of the two seasons:—

(1.) *The greenish discoloration of the abdomen* and *the softening of the eyeballs* indicate that the person has been dead *from twenty-four to seventy-two hours.*

(2.) *After three to five days*, the green discoloration has become deeper, and extended over the whole of the abdomen, including the genitals; while similar patches have begun to appear on other parts, especially the back, lower extremities, the neck, and sides of the chest.

(3.) *In about eight or ten days*, the greenish patches have coalesced, and changed to a reddish-green; gaseous products have become developed in the abdomen; the cornea has become concave; *the sphincter ani has relaxed;* and the ramifications of the subcutaneous veins can be traced on the neck, breast, and limbs.

(4.) *After fourteen or twenty days*, blisters have appeared on the skin, and the development of gases has become general, distending the whole body.

(5.) Lastly, *after this period* it is impossible to determine the date of the decease.—(Syd. Ed., vol. i., pages 38-40.)

To complete this subject, we have only to add that Caspar considers that, as a general rule, "at a tolerably similar average temperature the degree of putrefaction present in a body after lying *in the open air* for one week (or month) corresponds to that found in a body lying *in the water* for two weeks (or months), or after lying *in the earth*, in the usual manner, for eight weeks (or months)."—("For. Med.," vol. i. page 37.)

General Cialdini.—The humble medical student who in 1832 supported himself in a poor hotel in the Rue de la Harpe, by translating the works of Voltaire, Rousseau, and Velpeau into Italian—General Cialdini—is shortly to return to Paris, this time as the Italian Ambassador.—*Gaz. Hebd.* July 7.

The Ospedale Maggiore of Milan.—This is the largest and best administered institution in Italy, having accommodation for nearly 3500 patients. In ordinary times however, it has rarely more than 2800 inmates, which gives about seventy cubic metres of air for each patient. In spite of its vicinity to a stagnant canal and the absence of artificial ventilation, it is the healthiest hospital in Italy. This result is brought about by strict observation of hygienic rules, by the employment of disinfectants, and by the prompt removal of patients suffering from zymotic diseases from contact with the other patients. It is greatly to be regretted that the immense clinical resources of this immense establishment are lost for the purposes of teaching. The Faculty of Medicine of the province is situated at Pavia, which is too far off (twenty miles) to allow of students frequenting the hospital at Milan at the same time that they are studying at Pavia. It has often been a question of transferring the Medical Faculty to Milan; but the old city, which is so proud of its celebrated University, has hitherto been able to prevent any change—even the commencement of medical education at Pavia, and its completion at Milan. Pavia, indeed, has a well-managed hospital, but the resources of a city of 30,000 are not equal to the supply of the needs of a large school. If a school of medicine were founded at Milan, that of Pavia would soon be deserted.—*Gaz. Hebd.*, July 7.

ORIGINAL COMMUNICATIONS.

CASE OF

DEATH FROM RUPTURE OF A VERY SMALL INTRA-THORACIC ANEURISM.

By JOHN C. THOROWGOOD, M.D., F.R.C.P.,
Physician to Victoria-park Hospital for Diseases of the Chest; Lecturer on Materia Medica at Middlesex Hospital.

Mr. T. H., aged forty-two years, whom I had known for some five years as a dentist rising into considerable practice, came to me one morning in April last, complaining of very severe pain whenever he swallowed food. The seat of the pain appeared to be about the cardiac orifice of the stomach, and as soon as the morsel swallowed had entered the stomach the pain ceased.

The only ailment for which I had been called in before had been obstinate pains, like those of rheumatism, about the body generally, associated with profuse night-sweats. Of late the health had been remarkably good, and flesh had been gained to some extent. So little importance did the patient attach to the pain on swallowing food, that he was contemplating an excursion into the country on the very day on which I was consulted; but from this intention I dissuaded him. It was about April 16 when I saw him for the symptom just alluded to, and at that time the pulse was 96, tongue clean, spirits good. Careful examination showed some little increase of hepatic dulness towards left; no cardiac murmur, but second sound seemed unduly loud; no cough; breath-sounds normal; no vomiting; bowels open. Patient told me that some years ago he had had a similar attack of pain in swallowing, attributed to congestion of liver, which in a few days passed away. I prescribed a powder of hydrargyrum c. cretâ and pulv. ipecac. co. at bed-time, and an antacid laxative mixture. Three days later he was no better. The pulse was small; at one time it would be 96, and six hours later would fall to 72 or thereabouts. A motion from the bowels was described to me as inky black. These symptoms alarmed me more than they seemed to do my patient, but he promised to rest and take the dose of tincture of opium which I ordered. Nothing new in the way of physical signs.

On April 21, at 9.30 a.m., just as I was leaving for a distant visit to the country, my poor friend came to me in much suffering. The pulse was 96. Tongue clean. Bowels loose, but motions not unhealthy in appearance. The pain was now complained of in the back and under the right shoulder. Feeling very uneasy about him, I recommended him at once to see Dr. Andrew, who made a careful examination, and detected a murmur audible below the xiphoid cartilage, and so down to umbilicus, where it ceased. Later in the day this murmur could not be heard.

Towards the evening of Friday, April 21, the suffering of the patient increased fearfully; and Mr. Maunder, who was called in, injected one-fourth of a grain of acetate of morphia into the tissue of the arm. After this a short mitigation of pain took place, with a sensation as if something had given way in the chest; and presently great collapse came on, relieved for a time by an injection of brandy into the rectum, but ultimately fatal at 9.30 p.m. on the 21st.

Dr. Andrew was of opinion that death was due to the rupture of an aneurism. The correctness of this opinion was proved by the post-mortem examination made by Dr. Andrew, Mr. Maunder, and myself on the 23rd.

On opening the abdomen we found nothing worthy of remark; but, on proceeding to open the thorax, blood-stained fluid ran out from the right pleural cavity, and from this cavity was removed a large quantity of this bloody fluid, mixed with clot. Behind the descending part of the aortic arch was felt a solid mass, which on examination proved to be formed by the posterior mediastinum stuffed with clotted blood, and this blood had forced its way down the mediastinum, and must, by its pressure, have been the cause of the pain complained of at the cardiac orifice of the stomach. The parietal pleura on the right side had given way on the spine close above the diaphragm.

Just below the origin of the left subclavian artery was a small aneurismal pouch on the posterior aspect of the aorta, which had ulcerated into the mediastinum and formed a swelling of laminated blood-clot. Just below this was another small aneurismal swelling, which had not ruptured, and was large enough to admit the tip of a finger. The aorta was very atheromatous. The escape of blood into the right pleural sac must have taken place very shortly before death, for certainly on the morning of the 21st there was no evidence of anything like pleuritic effusion on that side. The intensely severe pain during the last few hours of life we thought due to the tension caused by the blood dissecting and forcing its way down the tissues of the posterior mediastinum.

It would not have been easy to have recognised by physical signs during life a small aneurism, not bigger than a small walnut, on the posterior part of the descending thoracic aorta. It is, however, not improbable that the attacks of pain in the limbs which occasionally came on in the winter might have been connected with some pressure-effects of the small aneurism in its early and formative stage.

It is not very uncommon to meet with cases of pain of long standing about the thorax and arms, which eventually proves to be associated with some form of intra-thoracic tumour, causing pressure, and so stretching and irritating certain nerves.

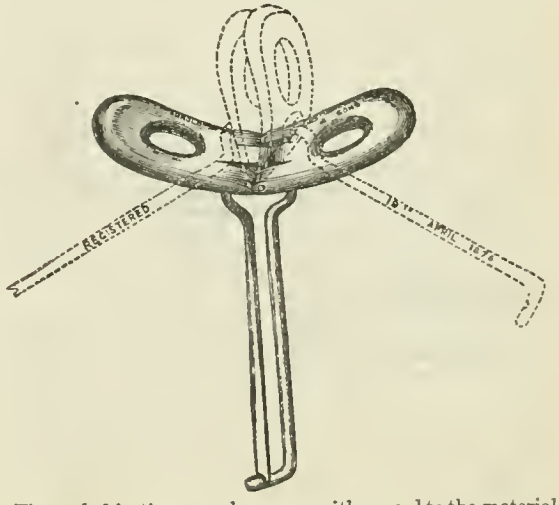
61, Welbeck-street, W.

IMPROVED FORM OF PESSARY.

By CLEMENT GODSON, M.D., M.R.C.P.,
Assistant Physician-Accoucheur to St. Bartholomew's Hospital; Physician to the Samaritan Free Hospital for Women and Children, etc.

In the treatment of diseases of women among the poorer classes we meet with a large number of cases for the relief of which Zwank's pessary is the best adapted—I allude to those in particular in which the uterus has been completely procedent for a length of time; where there is an absence of support in the soft parts, no fat, and frequently but little or no perineum. All the varieties of Hodge's pessary, especially Greenhalgh's improved form with bars, are tried; but directly any force is exerted upon them by straining or coughing, they are immediately expelled; and the only pessaries which are likely to be retained are either the trumpet-shape with braces attached, or the Zwank. The former is, as a rule, strongly objected to by the patient on account of the braces; while the latter is almost always declared free from discomfort, and there is none more popular among this particular class of women.

But every variety of Zwank hitherto in use has its objections. Speaking of them as a body, it is said that they are dangerous, as liable to give rise to pressure upon the soft parts, causing fistulous communications with the bladder and rectum. Such is certainly the case if they be left in for a length of time without removal; but such a complication is impossible if, as should always be directed, they be removed each night after retiring to bed, and replaced in the morning before rising.



The real objections are, however, with regard to the material of which the pessaries are constructed, and the mode of fastening. First, there is that form which is kept together by means of elastic tubing; this is the most objectionable variety of all, though largely employed on account of the price. The rubber

is sure to split sooner or later; and, under any circumstances, it becomes full of and sodden by the secretions, and therefore extremely fetid. A better form is that made of vulcanite, which is fastened by means of a screw; but it is frequently broken by being overscrewed, the discharges get into the interstices of the screw, and it cannot be released; and often the adjacent hairs get entangled, giving rise to considerable pain; and so Zwank's pessary with many has got into disuse.

To obviate these objections, I have contrived a form of Zwank which has been manufactured for me and registered by Messrs. Arnold and Sons, of Smithfield, and it has already proved to be a very useful pessary. It is shown in the accompanying illustration. The upper part is made of vulcanite, and is extremely cleanly, light, and durable. The lower portion, or feet, employed for locking, is made of metal. Directly these feet come in contact with the slightest pressure they lock; and they are as easily released by pressing with one finger upon the spring, and at the same time pushing the curved extremity down with the thumb. It may be suggested that this portion will give pain, by pressing externally; but this, in practice, will be found not to be the case. The patient walks about and sits down with perfect comfort. The expense —a very important item—is very little more than that of the cheapest form; while it will outlast at least three or four of these. It is considerably cheaper than those varieties worked by means of a screw, whether made of vulcanite or metal.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASE OF PYÆMIA FOLLOWING DENTAL CARIES.

(By Dr. JAMES F. GOODHART.)

Dental caries—abscess—suppuration in the inferior dental canal—acute periostitis of the lower jaw—extension of the inflammation along the pterygo-maxillary fossa to the orbit—suppuration in both orbits, and osteitis of the vault of the skull—pyæmia. Such is a short summary of this interesting case. Its publication needs no explanation or apology, for such a result from such a cause is probably unknown. I am indebted to my colleague Mr. Howse for his ready permission that it should be published.

M. C. W., aged four years and a half, was admitted to Guy's Hospital, under the care of Mr. Howse, on September 30, 1874.

The family history was good, except that there was some account of a tumour in the grandmother. The child had been a healthy boy till six weeks before his admission, when he came home from school with a bad attack of diarrhœa. A few days subsequently he was much frightened by a fire, and it was within a short time of this that his left eye was noticed to swell. In a fortnight the other eye did the same, but no notice was taken of it. He gradually got worse, and for three weeks prior to admission he was in a drowsy state.

On admission, he was delicate and vacant-looking. The left eye was much more prominent than the right, with thickening along the upper margin of the orbit. Beneath the edge, under the eyelid, was a hard, cartilaginous, freely movable body, which reached backwards apparently into the orbital cavity above the eyeball, while it extended downwards into the eyelid. The movements of the eyeballs were perfect, and sight was unaffected. The temperature was 104·5° in the morning, and 102·7° in the evening; pulse 160.

He was seen by Dr. Fagge, who could discover no cause for the elevation of temperature. Dr. Fagge thought, however, that as the roof of each orbit was evidently affected, and the boy tottered as he walked, and was peculiarly torpid, the disease, whatever it was, had extended from the orbital fossæ to the cerebral hemisphere. The ophthalmoscope revealed only large and tortuous veins, with a small hæmorrhage on the outer margin of the right optic disc. The temperature remained high, and he rapidly became much worse, losing control over his evacuations, and he died nine days after admission.

Autopsy.—The eyeballs were hardly prominent now, but the left upper lid was full, and a hard, movable mass could be felt along the orbital ridge. The scalp was normal; and nothing wrong was noticed till, on the removal of the vault of the skull, the dura mater in its frontal part and the longitudinal sinus for half its length were rough and of an olive-green colour from purulent infiltration of the membrane. The corresponding inner surface of the skull was of the same greenish tint and rough all over, partly from the deposition of a layer of new bone; partly from an irregularly excavating caries. Confining the description still to the bones of the skull, nothing further was noticed till the roof of each orbit had been removed, and then a thick layer of similar green-coloured pus was exposed, lying, of course, between the bone and the orbital periosteum. The orbital cavities (muscles, etc.) were quite healthy. On the right side the pus extended all over the outer side forwards, and appeared externally over the superciliary ridge, while it passed backwards through the optic foramen and sphenoidal fissure *underneath* the cavernous sinus, across the sella turcica and groove for the optic commissure, through the right optic foramen and right sphenoidal fissure,—all this *beneath* the dura mater of the base of the skull, the bone itself being rough and carious, and part of the body of the sphenoid infiltrated with a grumous, chocolate-coloured pus. Thus it appeared the right orbit had become affected after the left. On the outer side of the left orbit pus was traced into the spheno-maxillary fossa, and thence to the condyle of the lower jaw. The articulation was free, but the whole of the condyle and much of the ascending ramus on this side was bared of its periosteum, and pus lined the inferior dental canal as far as the first molar tooth, which was decayed, lying loose in its socket, and with carious bone about it. It should also be said that, though the pus so closely surrounded the cavernous sinus on each side, yet these sinuses were quite unobstructed. So, also, was the longitudinal sinus, though its walls were very much thickened. The frontal sinuses were normal. The lump felt during life over the left superciliary ridge consisted of a tough, opaque, yellow mass, very much like some lymphomata as seen in the neck, or like a gummatous mass. It certainly had all the microscopic appearances of some new growth, but after further examination it was evidently of an inflammatory nature. Its precise situation was from the lachrymal gland externally to the inner margin of the orbital ring, and it lay half protruding from and half within the orbit, and adherent to the bone, which on its removal was bare of periosteum.

The brain weighed forty-eight ounces, and lymph was found at its base, and a dot or two of pus was found beneath the arachnoid on the left side, about an inch from the longitudinal fissure. None of the veins contained any coagula. The brain was exceedingly soft, and the number of small cavities formed by softened substance scattered throughout it was remarkable. The whole brain, cerebrum and cerebellum, was studded. Most of them were small—mere pin-points,—but one or two were larger; and they had this peculiarity: that their walls were sufficiently well defined and hard to show that they were not formed by a general softening of the brain, more advanced at some parts than others, but that they were really due to numberless local spots of disease, very probably embolic. Ecchymoses were found in the retinæ, on the pleuræ, and in the substance of the lungs, heart, and kidneys; but no emboli could be found in the vessels. The lungs contained early pyæmic infarcts, and there were early abscesses in the heart and kidneys.

Remarks.—There can be no doubt from the post-mortem appearances that the source of all this mischief was a decayed tooth. It had led to caries of the bone, to suppuration in the inferior dental canal, and thence the pus had followed the course which has been described. The case is one, perhaps, rather curious than instructive, though as a record of a bare possibility it is worth remembering. It is a good illustration of the bad results which may follow a slight amount of mischief in an unhealthy subject, and is remarkable in that there is no history of any toothache, swelling, or other trouble about the jaws. Excepting a bad attack of diarrhœa, the first symptom noticed was swelling, first of one eye, and then of the other. Notwithstanding that by the time the second eye was affected, as shown by the inspection, there must have been considerable suppuration at the base of the skull, about the pituitary fossa, and very probably about the vault also, the disease at its onset must have been peculiarly insidious, and the pyæmia of late accession, within a few days of his admission. The case has several points of pathological interest; chief of these seems to be the occurrence of chronic inflammatory tumours, such as those in the orbital fossæ, and not abscesses, though they were directly continuous with the

suppurating surfaces of the base and vault of the skull. Pus so commonly begets pus. It is not, however, always so. One occasionally finds in the lung, in cases of pyæmia of somewhat more chronic form than usual, indurated spots of chronic inflammation evidently produced in the same way as the, it may be quite adjacent, abscesses. In one instance, in a very chronic case of pyæmia after amputation of the leg, the extension of grey tubercle round the central inflammation was seen. Such cases depend upon some peculiarity in the infective material, or upon defective reaction on the part of the infected tissue, which in turn must, of course, depend upon the state of the body as a whole. Experiments on animals have shown that by varying the strength of the infecting agent, the form—or, perhaps more correctly, the degree—of cell-growth can be made to vary from abscess to tubercle. In this case, however, it was probably no dilution of the poison which led to the orbital tumours; but the whole history shows that the infected tissues were most tolerant, and not easily excited. Had it been otherwise it would have been impossible that such an amount of disease could have existed. In the case of chronic pyæmia, just referred to, the patient had lost so much blood from a uterine fibroid tumour that her leg became gangrenous from the extreme feebleness of the outlying parts of the circulation, and weeks after the amputation which this condition necessitated she died. Is this not always so in chronic pyæmia? It occurs in enfeebled patients whose tissues are in so quiet a state—*i.e.*, so accurately supplied with just the requisite amount of nutriment and energy—that they can hold their own, and no more. In such a condition, where is the blood to produce inflammatory congestions? and the tissue elements have not got it in them to multiply and make mischief. So the wandering cells are few in number; they meet with no response in their lawless excursions and indurations, and organising products result in place of abscesses. The practical point which such cases teach is this—that chronic pyæmia is one stage nearer no pyæmia at all than the local outburst in the more rapidly fatal forms. If it is chronic because, as has been said, supply and demand happen to be adjusted for maintenance only, and not for growth; how pertinent in its suggestions is the process on the treatment of inflammation in general! But, as if to contradict what has been said with regard to the relation between the orbital swellings and the pus elsewhere, the patient in question ultimately died with high fever, and apparently acute pyæmia. Well, "the worm will turn," it is said, and possibly some very fetid change may have occurred in the dental abscess, and thence have been propagated to other parts in the last few days of life. Such a view is quite in accord with the bacterial origin of pyæmia, which obtains so much credit at present. This much, however, seems certain—that the local inflammations which caused the patient's death, and those which were noticed first some time before death, were of different dates. Between the two the condition of the patient had been altered, both as to his surroundings and his diet, and quite possibly, though advantageously to the vigour of his tissues individually, not altogether to the continuance of life, so far as it was threatened by pyæmia. The logical conclusion of these thoughts is not, as some may think, that patients suffering from any of the various inflammatory diseases are to be starved and bled, and reduced to the lowest possible ebb. They only suggest caution. It is possible to do too much. Pyæmic cases, for instance, particularly, are often stuffed merely by routine. Is it always good for such cases that they should be so? It is probable that Sir James Paget's advice with regard to reduced supplies in carbuncle might with advantage be applied to many other forms of disease, both in medical and surgical practice.

BRITISH SEAMEN'S HOSPITAL, CONSTANTINOPLE.

NOTES ON THE TREATMENT OF FEVER.

[For the following notes we are indebted to Dr. Patterson, Surgeon-Superintendent.]

The treatment of the various forms of intermittent fevers with small doses of quinine by hypodermic injection has been regularly practised in this hospital since 1869. The results may be considered worthy of record.

Cases are admitted from vessels arriving at Constantinople from the ports of the Black Sea and Danube, from the ports of the Mediterranean, and (since the opening of the Suez Canal) from India and the Persian Gulf. The Black Sea and Danube types are mostly simple quotidian and tertian. The Mediterranean form has the pernicious type, often developing into "perniciosa vera," remittent in character. A specially malignant character attends the malarious fevers of Brindisi.

Two-grain injections were first tried; a short experience proved one grain to be sufficient. In pronounced quotidian and tertian, without complication, where the interval between the paroxysms is clearly defined, the treatment is of the simplest character. Two hours, or less, before the anticipated paroxysm the patient is sent to bed, and one grain of sulphate of quinine, dissolved in eight minims of warm water, with the least possible quantity of diluted sulphuric acid, is injected deeply into the subcutaneous cellular tissue of the upper arm, over the deltoid or the gluteal region. He is then covered up, and a basin of warm tea given. This small dose sometimes prevents the return of the paroxysm; it always modifies it. This is repeated three or four times in succession, and the patient is cured. No other medicine is given in the interval, except a laxative if required. One hundred and eighty-five such cases were under observation from ten to twenty days after discharge from hospital. Relapse was rare, and was almost always traceable to drink.

In graver cases, with congestion of liver or spleen, or where there is gastro-intestinal irritation, a little modification of the treatment is necessary. For instance, a patient is admitted who has already had two or three attacks of fever. The tongue is foul, the bowels are constipated, there is headache, pain in the loins, great tenderness over the liver or spleen, nausea, thirst, and general *malaise*. If the fever is due within a few hours, a hypodermic injection of quinine (one grain) is given, a sinapism over the liver, and a full dose of podophyllin. Here the paroxysm is never prevented by the first dose of quinine, but its severity is lessened. A second injection still further lessens its force, if it does not altogether prevent it; a third is nearly certain. It is seldom necessary to give a fourth, except in old malarious subjects. Should this fail, we have to fall back upon larger doses given by the stomach or rectum.

When, as often happens, the fever has an irregular period of access, an injection of one grain is given every day for five or six days, or until the time of access is supposed to have passed. The patient is then treated for a few days with tinct. ferri muriatis and quassia, with full doses of chlorate of potash. These cases are generally found to be associated with much general debility. The severer forms of malarial remittent fevers, tending towards "perniciosa," require more active treatment, and on more general principles; but in the sequelæ of these fevers—*i.e.*, blood-disorganisation and anæmia, with a tendency to irregular paroxysms of an intermittent character, which may show themselves either in "chills," fever, or profuse perspirations, and where there is invariably well-marked visceral engorgement, with anæmia and intolerance of medicines and food—the treatment by small doses of quinine, thus administered, is found to be most useful. The danger of suppuration arising at the point of insertion has been objected to; but this may be avoided if the needle be carried deep into the cellular tissue. I have only seen it happen three times, and in all three cases the patients were convalescents from Brindisi fever, and in a state of extreme debility. These remarks are based on the careful observance of more than 200 cases treated by my colleague Dr. Zelrowsky and myself. We believe the muriate of quinine to be less active than the sulphate when thus administered.

Mr. John Rogers, who has been a Medical Officer of the Droitwich Union for the last twenty-five years, has been granted, upon resigning that office, a retiring allowance of £50 per annum.

Fœtal Condition of the Lung in a Child that had Cried.—Dr. Erman, of Hamburg, relates the case of a woman who was delivered of three seven-and-a-half-months children, two coming into the world living, and the third being dead-born. Both these children cried loudly while being washed, their cries being heard in another room at some distance off. They both died half an hour after they were born. At the autopsy it was found that the whole of the lung of the one child sank in water, even when cut into small pieces; and the lung of the other did the same, except as regards a very small portion of the edge of one of the lungs. The lungs in both were undistended, dense, and of a bluish colour.—*Virchow's Archiv*, B. 66, Heft 3.

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Medical Times and Gazette.

SATURDAY, JULY 15, 1876.

THE VIVISECTION BILL: DEPUTATION TO MR. CROSS.

On Monday afternoon, Mr. Cross received a deputation of medical men holding public offices, which filled the Home Office to overflowing. Their object was to protest against the passing of the Vivisection Bill as now drawn, and to endeavour to obtain something like a just consideration of the claims of medical science. The memorial had been signed by nearly 2000 members of the profession, and, had time allowed, would doubtless have been signed by many more. Most unfortunately, as it turned out, the substance of this memorial was not read, but merely laid before Mr. Cross, so that this gentleman, who seems to have been singularly ignorant of the views taken by medical men as to the proposed Act, had to take his cue from the speeches of those who addressed him. As those speeches were rather commentaries on the substance of the objections brought forward against the proposed measure, than arguments advanced against the Bill, Mr. Cross was placed in a somewhat awkward predicament, out of which he did not escape with the best grace possible.

The most important points in the memorial were these:—"That the present Bill goes far beyond the recommendations of the Commission, and the just inferences from the weight of evidence before them, inasmuch as—1. It treats the persons who have, upon due recommendation, received a 'licence' as permanent objects of suspicion, and requires of them that they shall (*a*) apply for and obtain from the Secretary of State for the Home Department special permits or certificates for every series of experiments calculated to produce pain; (*b*) that they shall submit to whatever regulations or restrictions the Home Secretary may append to such certificates; (*c*) that they shall furnish to the Home Secretary whatever reports he may require as to such experiments; (*d*) that they shall only perform such experiments in registered places which he shall approve; (*e*) that whenever it is necessary to perform an experiment on a cat or dog, a horse, an ass, or a mule, a further permission shall be obtained from the Secretary of State. 2. It is, moreover, to be remarked that the first four of these restrictions apply to the whole range of the animal kingdom, from the smallest tadpole or mollusc, through the whole of the invertebrate as well as of vertebrate creatures. That if any legislation should be thought necessary it may be general and not special in its scope; and that it will extend Martin's Act, with such amendments of its machinery as may be found necessary to other than domestic animals, to which its operation is now limited; and that the present Bill may be withdrawn."

If, notwithstanding these representations, the Bill should be further prosecuted, it was urged that the analogy of the Anatomy Act, which alone was approved by the eminent witnesses before the Commission, should be followed, and that the Bill be amended—"1. By limiting its operation to mammals. 2. By omitting all the clauses which require special certificates in addition to licences for performing painful operations, and further special certificates in respect to dogs, cats, etc. 3. By providing that a licensed person may register any convenient place for the purpose of experiment, and that such register shall be a confidential document, accessible only to the Secretary of State, and to such officers and persons as he may appoint for the purpose of carrying out the provisions of the Act. 4. That a register of all experiments performed shall be kept by the licensed person, and that such register shall be at all suitable times open to the inspector appointed under the Act, but that no other reports or returns shall be required from persons licensed under this Act."

The chief speakers were Mr. Simon, Sir William Jenner, Dr. Wilks, and Mr. Ceely of Aylesbury; and the ground taken by these gentlemen was decidedly higher than that taken by the deputation to Lord Carnarvon. Briefly, it amounted to this: that such a measure as that proposed was uncalled for. Nothing had been proved against those who carried on experiments on living animals in this country, and any such Act as that proposed to be passed could only be looked upon as an insult to them and to the profession generally. Again, the Act is most, and, we might venture to add, absurdly, partial. As pointed out by Sir William Jenner, the only thing forbidden is science. All kinds of cruel sports are still admitted; the only thing forbidden is to make use of an animal for scientific purposes. Mr. Ceely pointed out that, under the proposed regulations, he never could have carried out his experiments as to the sheep-pox which have proved so beneficial to the country. Dr. Wilks took a still higher view of the question, maintaining that such restrictions as these proposed must react unfavourably on the general advance of moral and mental science. In the face of such a demonstration, and of such speeches, we can hardly congratulate Mr. Cross on his demeanour. He had to repress cheering on one occasion, and from what appears in the public prints this might have been more nicely done. In replying on the whole question, Mr. Cross showed himself, as we have already said, more ignorant than a Minister should be who has got the charge of such a Bill in the House of Commons. But the worst feature of his reply seems to us to be a kind of threat, that if the medical profession persisted in their opposition to the measure as now drafted, and so caused it to be thrown overboard for this year, next year it might be introduced in a more objectionable form. This could hardly be. The absolute forbidding of any experiments on animals would be an intelligible mode of settling the matter, but it would not be half so vexatious as the proposed system of licences, certificates, and police supervision. We confess, for our own part, that we are heartily glad at the prospect of the whole matter being postponed till another year. We have right on our side, and during that period clamour will have time to die down or be turned on some other object, but the arguments advanced by the medical profession will lose none of their potency. That being so,

we can see nothing save advantage to be gained by deferring legislation till another year, supposing it is to come at all. Nothing can better illustrate our meaning than a remarkable article which appeared in the *Times* on Tuesday morning; the tone and character of that article, to which we have seen no reply attempted even by professional philozoists, must have made an impression on the country at large. The attitude of the medical profession has nothing hysterical or histrionic about it. With us it is not a question of personal motive, but of intelligent conviction. The greater part of the body have never performed, and never will perform, an experiment on a living animal, but they do resent the imputation of cruelty so lavishly bestowed on their profession as a body. A few more articles like that in the *Times* will do wonders; therefore we say—Oppose the Bill to the very uttermost; it will not take much opposition to settle it for this year.

A REMARKABLE CASE OF SURVIVORSHIP.

A CURIOUS case was decided the other day by Vice-Chancellor Malins. The case belongs to a class in which not unfrequently medical men are consulted, and in which a decision is not easy. In the instance in question, the matter was decided on purely legal grounds, so that the aid of our profession was not called in; but this is not always so, and, as a consequence, it behoves our brethren to know something of the principles on which such cases are decided.

Briefly the facts of the case were these. A solicitor in New Inn died in 1869, intestate, but possessed of considerable property. He had three children, with the eldest of whom he seems to have quarrelled. This son was last seen in 1868, when he applied for relief to his father, and was sent away with half-a-crown. On the father's death, advertisements were everywhere inserted, offering a reward for any certain information as to the whereabouts of this son or of his death, but none was ever obtained. When last seen this son was unmarried. The other members of the old man's family were a son and a daughter. The daughter had married, and was the mother of a son, but had died before the action was brought. When the daughter married she had made a settlement which affected any money which might come to her by her elder brother's death. Of course, were the brother alive at the time of her own death, such settlement would be of no effect, as dealing with money over which she had no control. The executors of this lady were now moving that the portion of the estate which should have come to her by the death of the elder brother should be handed over to them, to be dealt with according to the provisions of the marriage settlement. This was the cause on which the Vice-Chancellor was called upon to adjudicate.

This apparently complicated case resolves itself into a series of propositions or queries. The eldest son (then sixty-six) was last seen in 1868; his father died in 1869. Did the son die before the father? If so, he could take no share in the property, and it would be divided between the two survivers. As the exact period of the son's death was not known, and there was no physical reason why he should be dead in 1869, the Judge, in accordance with legal rules, decided that he must be considered to have been alive in 1869, and consequently an inheritor of one-third of his father's property.

The next question was this: The eldest son being heir to a portion of his father's property, was it still to be held in reserve for his benefit should he ever turn up? or was it to be disposed of, he being now considered to be dead? Here again the law was clear. Every effort had been made to find trace of the missing man; seven years had elapsed since he was last seen or heard of, and our civil law says that the lapse of such a period is sufficient under the circumstances to warrant the conclusion that the lost individual is dead. Consequently, his share in the estate might be disposed of.

But the sister was also dead, and the question arose whether the brother or the sister died first. If the former, then that part of his share of the estate which would pass to the sister would be subject to the marriage settlement made by her. If the sister died first, then the elder brother's share would simply be divided amongst the next of kin. Now, here comes the point most important to medical men. The period of the sister's death was known; that of the brother's was not. The latter might have died on the day he was last seen, or he might have survived legally till seven years after, or might even be alive now. It was not, therefore, possible for the executors of the sister to prove the period of the decease of the brother; and this they were bound to do if they desired his inheritance to be specially disposed of.

The decision was that the elder brother having inherited from his father, but being now presumed to be dead, his inheritance must be divided among his next of kin, who were his younger brother and his nephew, the son of his only sister.

The case is a remarkable one, and well illustrates the English law on survivorship; but much more complicated problems sometimes occur, especially where a number of individuals perish at the same time, say in a railway accident, or an explosion, or a shipwreck. Medical evidence may be called in, and may be able to give a presumption in favour of one, for, as was shown in a rather famous case, it is hardly possible for several people to perish at the same moment, within the millionth part of a second of each other. But all that can thus be said is merely a presumption; and to cause property to deviate from its due line of inheritance requires absolute evidence of some kind that may be furnished by ordinary witnesses, or it may be supplied by medical authority on a basis of actual fact. This was done in the case of what at the time was known as the Chelsea murder. Here an old gentleman had made a will in favour of his housekeeper. Both were murdered. The question arose whose relatives were to inherit. Medical evidence was able to show that the woman had been murdered after the man. She had accordingly inherited under her master's will, and her relatives took the property.

WOMEN-DOCTORS.

PARLIAMENT, though not always happy in its legislative measures, is generally actuated by a true desire to do that which is honest and just, and likely to be of service to the public at large; and the spirit in which the latest attempts to let women into the medical profession was received sufficiently testifies to the common-sense view which lay hearers can take even of a difficult and professional subject. It was proposed to allow women to become registered medical practitioners with only foreign diplomas—in other words, to admit them to the Medical Register without having had any of the special training which is absolutely essential to the proper understanding and treatment of disease as seen in England. It is argued that women should have the same facilities as men for entering the medical profession; and, by way of commencement, women are to be allowed to practise with a diploma which is insufficient for men. Surely the honourable gentleman who propounded such a doctrine to Parliament is aware that many of the continental diplomas in medicine are really nothing more than mere titles; that they do not qualify the holder to practise; and that there is another and much more searching examination—*das Staats Examen*—which must be gone through before the graduate is allowed to settle down to practice. Hence, then, when he proposes to allow such diplomas to afford a legal qualification to practise, he is—unconsciously, no doubt—advocating a system which in process of time would lead to incalculable mischief and distress.

It seems to us that a very unusual course is being pursued by the promoters of this movement to remedy "an

exceptional grievance," and that their own arguments best show the weakness of their case. It is now some years since women first claimed the privilege of practising medicine, and in the interval a few, a very few, have surmounted the difficulties—not the least of which have been the sneers of their own sex—which beset them, and have graduated even with honours, and achieved a real success. All honour to these! They represent a very different class of women from those who will present themselves when all social and collegiate barriers shall have been removed. Yet, in spite of the success of these pioneers, the public—or rather, that portion of it which goes with the movement—has not yet come forward and put its shoulder manfully to the wheel with a view of removing the obstacles which are met with. Neither have the women of England, as a body, yet taken that active part in the movement which would betoken real sympathy with it, or given that tangible evidence of support which would find its fittest expression in long subscription-lists in the columns of our esteemed contemporary the *Times*, and which would most aptly characterise the movement as earnest and, above all, national. As we look round and see how churches are built, schools multiplied, and gigantic hospitals kept open by voluntary subscriptions, we are struck, by contrast, with the lukewarmness and want of heartiness of those who profess to have this cause at heart; and we are bound to regard this as a true measure of the sympathy which the general public have with it.

Our advice in this matter may be summed up as follows:—Let the public show their desire for women-doctors by providing that which the scheme at present lacks—namely, the means of attending hospital practice; let them, in other words, come forward with the funds necessary either to buy the *entrée* to an already existing hospital, or build an additional one in some part of London—there are many such—where hospital accommodation is almost *nil*; and then, when the lady-students can knock at the doors of the Royal College of Surgeons or of Physicians with their schedules duly signed in accordance with the existing regulations of these corporate bodies, we do not doubt that the gates will be opened, and the battle, so far as admission to the profession is concerned, won.

In the present state of things—no duly qualified candidate having yet presented herself—it is simply monstrous that Parliament should be asked to grant special facilities to a class of would-be practitioners, untried in, uneducated to, and, we believe, both morally and physically unfit for, the work in question. Nevertheless, when the women have removed the impedimenta over which they have control, they will be able with greater chance of success to petition Parliament to remove those over which they have no control, and doubtless they will succeed. It is in no spirit of envy, malice, or dread of competition that we adopt this policy; it is an intimate knowledge of the duties of the calling, not less than of the moral and physical requirement of those who exercise it, that has led us to this way of dealing with it.

We scarcely think that the most advanced advocate of women-doctors would desire to see mixed classes in the dissecting-room, the anatomy theatre, or the clinical wards of a general hospital; and we question, even if it were so, whether lecturers would be found who could, and would, undertake the professional chairs under such circumstances, after the well-known result of similar trials in Zürich and elsewhere.

In support of woman's general fitness for these pursuits, we are reminded that Miss Nightingale rendered distinguished and highly appreciated services to our soldiers in the Crimean War, and that, too, without suffering any of the moral contamination which is urged as a plea against women-students. This we most cordially subscribe to; but nursing is a very different occupation: it is, in fact, the very sphere in which woman can show her superiority—which no one denies—over man, and demonstrate that nature, in providing her with a different physique, intended her for the milder and more homely duties which this occupation entails.

It may, however, be taken as certain that the medical-women question is almost settled, so far as the Legislature is concerned; and the profession of medicine will very soon be as open to women as it is to men. But, as we have before pointed out, this is only part of a much larger question. If our legislators decide that women shall be admissible to one of the learned professions, they must open to them also the doors of the other two. "Law" and "Divinity" must be open to them, as well as "Physic." And one of the arguments used in favour of admitting women to our profession will certainly apply to one of the other learned professions. We have not yet, indeed, heard of any growing scarcity of solicitors or barristers, but everyone knows that there is a great and increasing want of curates; and Mr. Henley, at any rate, should therefore be an advocate for women-clergy, as well as for women-doctors. In the best interests of women themselves, the whole movement is, we think, a mistake; but we do not see that it can be denied that woman, "in both physical and mental organisation," is at least as well fitted to be a lawyer or a divine as she is to be a doctor.

THE WEEK.

TOPICS OF THE DAY.

THE question of the drainage of the Thames Valley has, it is to be hoped, advanced another stage. Last week, Major Tulloch, R.E., the Inspector of the Local Government Board, attended at the offices of the Twickenham Board for the purpose of holding an inquiry and receiving evidence of any parties interested in the said matter, the parish authorities having applied for a further loan of £15,000. Although the Local Board was very strongly represented, the meeting was not numerously attended by the general body of ratepayers. The surveyor, Mr. Ramsay, having fully explained the plans, called the attention of the Government Inspector to the difficulties experienced by the Board in deciding on the means of disposing of the sewage, adding that during many anxious months no expense in trials and journeys to distant parts had been spared. Messrs. Withers and Little, members of the Board, supported these remarks, observing that after eight years' discussion the Board had at last come to a unanimous vote to carry out the scheme now submitted to the Inspector. Major Tulloch promised to lay his report before the Government Board, but stated that he must distinctly inform the parish authorities that, upon the surveyor's scheme being sanctioned and the loan being granted, they must accept the entire responsibility involved in carrying out a precipitation and filtration scheme.

The third annual general meeting of the members of the Association of Municipal and Sanitary Engineers and Surveyors was held at the Institute of Civil Engineers on the 6th inst., Mr. James Lemon, the President, in the chair. Forty-one members were present, representing Warwick, Coventry, Manchester, Liverpool, Sheffield, Derby, Oxford, Shrewsbury, Leamington, Bristol, Ipswich, Hanley, etc. The President's opening address glanced at the various sanitary questions which had engaged or were engaging the attention of Parliament. Papers were afterwards read on "Street Tramways," on "Street Pavements as adopted in Manchester," and on "Constant Water-Supply." In the evening the members dined together at the Westminster Palace Hotel, and in responding to the toast of "The Association," Mr. Lemon, the chairman, dilated on its utility as a means of advancing sanitary science, of rendering mutual assistance, and of keeping down expenditure. The Association, although it only numbered 180 members at the present time, would, he hoped,

soon receive a large accession when its importance was fully recognised.

It is stated that the Keighley Guardians, in the face of the lecture administered to them by the Lord Chief Justice on their being summoned before him, show no signs of proceeding to comply with the order to enforce the Vaccination Act in their district. It is understood that the Local Government Board have refrained from putting the *mandamus* in force until the subject has been discussed at their next meeting. Meanwhile, it should be instructive to the opponents of vaccination to learn that, according to the testimony of the Medical Officer of Health to the Salford Board of Guardians, among the cases of small-pox recently admitted into the workhouse, numbering 400, he was not aware of one which had been revaccinated.

The *Norfolk Chronicle* states that the Lord Lieutenant of the County (the Earl of Leicester) has offered to contribute £5000 on certain conditions to the Norfolk and Norwich Hospital.

At the last weekly meeting of the Metropolitan Board of Works, an application was made by the Vestry of Clerkenwell for permission to borrow £3000 for erecting a mortuary, coroner's court, etc., on the Spafields burial-ground. The report of the Finance Committee, which was adopted, granted a loan of £2300 for this purpose. We are glad to find that the want of a mortuary for this parish, to which we have so often called attention, is at last likely to be attended to. At the same meeting a letter from Dr. Holt, Medical Officer of Health to the Westminster District Board, was read, making an official representation of an unhealthy area in the neighbourhood of Old Pye-street, Westminster, and which required to be dealt with under the Artisans' and Labourers' Dwellings Improvement Act. This was ordered to be referred to the Works Committee.

In the present state of uncertainty which appears to surround the contemplated legislation on the pollution of our rivers, it is satisfactory to learn that the Duke of Sutherland has threatened the Burslem Board of Health with an injunction, if, within a month, measures be not adopted to purify the sewage flowing into the River Trent, which runs through his Grace's estate at Trentham.

According to the latest accounts from Bagdad, the plague is decreasing. Dr. E. D. Dickson, Physician to the British Embassy at Constantinople, confirms, in a letter to the *Times*, the statement that the disease is true plague, and he adds a most important fact—namely, that, whilst on the western side of Mesopotamia, where a system of quarantine and *cordons sanitaires* was kept up, the disease did not spread, it has entered into Persia on the other quarter, free intercourse having been kept up in that direction. Fears are entertained lest, through the medium of the wild nomadic tribes, it may eventually be carried into India.

Our contemporary *Iron* states that a report by Mr. T. F. Evans on the metalliferous mines in Wales discloses conditions affecting the persons labouring in them which deserve attention. Mr. Evans finds the average age at death of the slate miners at Festiniog to be thirty-eight years; excluding accidents it is below forty-one years, or twenty-six years below the average age of death of males not employed at the mines. This also occurs among a class of workmen physically and morally superior to the average, and who receive wages high enough to secure every domestic comfort, whilst they are generally temperate in their habits, and spend their leisure "principally in religious exercises and the cultivation of literature and music." The highest moral condition will not, however, give either health or long life with bad sanitary surroundings. The dwellings of these model working-men are overcrowded and badly ventilated, their villages are imperfectly drained, the water within their reach is unfit to drink; and, moreover, their wives lack thrift, know nothing of cooking, and spend much of their husbands' earnings in gaudy finery, so that the family table is indifferently spread. One large owner (Mr. Perceval) has honourably taken the lead in improving the condition and securing the health of his workpeople, and it is to be hoped that other large proprietors who draw wealth from similar sources will shortly follow his example.

The monthly meeting of the Port Sanitary Committee of the Corporation of the City of London was held last week at Guildhall, at which the Medical Officer of Health reported that during the past month 1231 vessels had been inspected. Special attention at this season of the year is directed to the quality of the drinking-water used on board vessels frequenting the port, as negligence in this respect often results in outbreaks of typhoid fever, dysentery, diarrhœa, etc. Since the Port Sanitary Committee of the Corporation was established, the sanitary state of the latrines in the docks has been very much improved. No epidemic of any kind has occurred within the limits of the port authority during the current year, and no importations of scurvy have occurred since March.

The second inquiry into the circumstances attending the death of the late Mr. Bravo, of Balham, which was ordered by the Court of Queen's Bench, was opened on Tuesday last, before Mr. Carter, Coroner for East Surrey; Mr. E. B. Muir, barrister, sitting as assessor. The proceedings were opened at the Bedford Hotel, Balham. We shall reserve our comments upon this second inquiry until the proceedings are finally concluded.

We are sorry to see that success did not attend the spirited action of the Sanitary Committee of the Town Council of Brighton in directing proceedings to be taken against a lady living at Croydon for wilfully directing the removal of a young girl, suffering from an infectious disorder, from Croydon to Brighton, without taking proper precautions against spreading the disease. The girl, a domestic servant, was taken ill with measles, and was given by her medical attendant an order for the union infirmary. She, however, objected to going there, and wished to go to Brighton, where she had some sisters living. Her mistress accordingly engaged a fly to take her to the railway-station, and telegraphed to her friends at Brighton to meet her there, but no intimation was given to the flyman or the railway officers that she was suffering from measles. The defence was that before the girl left she received her wages in full, and in consequence was no longer in the lady's service or "under her charge"; and while the girl (Carpenter) stated that her fellow-servant (Wilks) was told by her mistress to go for the fly, Wilks said that Carpenter herself sent her for it. The magistrates considered that there was not sufficient proof that the girl's mistress had "wilfully" exposed her, and dismissed the summons. We are glad, however, to see that notice of appeal was given. The question raised is of extreme importance, especially to seaside health-resorts; and the Town Council of Brighton have set an excellent example in taking proceedings in the case.

A CONTRIBUTION TO POSTERIOR CATHETERISATION.

Under the above heading we find, in the *Centralblatt für Chirurgie*, June 24, 1876, a paragraph which is taken from the *Deutsche Med. Wochenschrift*, 1876, No. 6, describing a case of rupture of the urethra in which Volkmann resorted to this procedure. The term is perhaps not quite explicit, but it is intended to indicate the passing of a catheter into the urethra from the bladder, after having first made a supra-pubic opening into the latter. Hunter made use of a supra-pubic puncture, previously made to relieve retention, in order to treat a very tight stricture of the urethra, passing one catheter to the

distal end of the stricture through the penis, and another to the proximal end through the bladder, and then running a stylet between the two. Thirty years before, Verguin did the same thing for rupture of the urethra; but, in spite of a number of successful results obtained in cases where such fistulæ already existed, Brainard was the first, in 1849, actually to propose supra-pubic puncture as a preliminary step for the cure of cases of this description.

Volkmann's patient was a boy six years and three-quarters old, who had torn his urethra completely across, close to the neck of the bladder, and splintered the right descending ramus of the pubes. The bladder dulness reached up to the umbilicus, and owing to the irregular and ragged condition of the wound it was impossible to find the upper end of the urethra. After washing out the wound with a 3 per cent. solution of carbolic acid, and making about fifty minute punctures in the scrotum to relieve extravasation, the bladder emptied itself; but as upon the following day it was still impossible to find the upper part of the urethra, Volkmann determined on "posterior catheterisation." The high operation was selected, instead of simple puncture, on account of the comparative emptiness of the bladder. A sharply curved silver catheter was then introduced into the opening, and at the first attempt passed easily into the urethra, and so into the wound. A string was then attached to the end of the metallic catheter, and by means of this a soft instrument was drawn into the bladder, while the other end was in the same way introduced from behind forwards into the anterior part of the urethra by the help of another silver instrument. In spite of considerable fever the patient recovered without much disturbance, the wounds being treated openly. The strings attached to each end of the catheter were of great use in helping to cleanse and change the instrument.

At the end of three weeks the patient was removed at the request of his parents. All was then quite healed, and he walked without a limp, and passed his water in a full stream. The urethra was, however, so much drawn down by cicatrisation towards the fracture in the pubes that it was impossible or very difficult to introduce an instrument into the bladder.

As such a proceeding would naturally follow puncture, and not the *sectio alta*, Volkmann has made experiments on the dead body, and finds it easy to introduce a fine gum-elastic catheter with a stylet through the catheter with which puncture has been performed, but he thinks that on the living body it would be necessary to allow a fistula first to establish itself, and then, after from six to ten days, to perform posterior catheterization. He considers the operation is indicated not only in such cases as the preceding, but also in those of very tight stricture, in which it is impossible to find the upper part of the urethra even after external urethrotomy; and he draws attention to the fact that in military practice it would be easy to carry out the operation without assistance.

HEALTH OF THE PUNJAUB.

The weekly return of births and deaths registered in the Punjaub for the period ending April 29 last has just reached us. The return is incomplete, the registers of some of the districts not having been received. Comparing the results of the districts for which complete returns have been received, the total deaths registered were 4351, against 4649 in the previous week. With the exception of the Mooltan district, in which the death rate is rather high—viz., 25 per 1000—the province continues unusually healthy. As cholera prevails epidemically in some of the provinces adjoining the Punjaub, though happily not as yet in the Punjaub itself, the Sanitary Commissioner has thought it right to call to the notice of municipal authorities certain precautionary measures which should be observed; and special attention is directed to the fact that clothes are capable of receiving infection in the process of washing, which should serve as a warning of the danger arising from a practice widely prevalent in the country—namely, that of washing clothes in holes and ditches which are receptacles of town sewage. Greater facilities for clothes-washing are urgently required, and municipal committees are requested to take the subject into consideration. Three hundred and twenty deaths were registered under the head of small-pox, against 363 in the previous week, but, as before stated, the returns shows that all the large towns continue unusually healthy.

GLASGOW DEATH-RATE AND INTRAMURAL BURIAL-GROUNDS.

At the usual fortnightly meeting of the Board of Police of Glasgow, held on the 10th inst., Dr. Russell, Medical Officer of Health, submitted a highly satisfactory report. For the fortnight ending July 1 the death-rate had reached the very low average figure of twenty-one per 1000; the mean temperature of the fortnight having been 60° Fahr., and the rainfall 1·45 inches. This is the lowest fortnightly death-rate of which there is a record since October, 1870. The deaths included one from small-pox—that of a man in whose family the disease appeared about three weeks ago, but who resisted all entreaties to get revaccinated. Fevers, generally, are much less prevalent in Glasgow at the present time than they have been for a number of years back. At the same meeting the Health Committee agreed to recommend that interment in a number of intramural churchyards shall be discontinued on and after January 1 next; and that the Clerk be directed to request the Town Council to take immediate steps for providing adequate extramural burial-grounds, at a safe and easily accessible distance from all dwellings, as authorised by the Burial-grounds (Scotland) Acts. The subject of providing mortuaries was adjourned for further inquiry and consideration.

CAUTION TO MEDICAL OFFICERS OF HEALTH.

At a meeting of the Yorkshire Association of Medical Officers of Health, held last week at Harrogate, great sympathy was expressed for Dr. Deville, late Medical Officer of Health for Harrogate, who was dismissed from his appointment in consequence of a paper read by him at the last meeting of the Association at Leeds, on the health of Harrogate. It was moved by Mr. Pritchett, of Huddersfield, seconded by Mr. Pain, of Tollerton, and unanimously carried—"That this meeting approves the action taken by the committee in the case of Dr. Deville, and desires to tender to him its cordial sympathy in his present vexatious position." It would appear that the Harrogate Commissioners took umbrage at certain remarks upon the health and condition of Harrogate which occurred in his address at Leeds, and although it was stated that nothing in his paper reflected upon the Commissioners, or unduly impugned the sanitary condition of the town, he was dismissed from his post by the almost unanimous vote of the authorities. Carefully weighing the case of Dr. Deville, it may fairly be assumed that the spread of education has not yet been sufficiently extensive to do away with the thin-skinned prejudices of the commissioners of small communities; meanwhile, medical officers of health will do well to bear the circumstances in mind, and act accordingly.

SCIENTIFIC GRANTS OF THE BRITISH MEDICAL ASSOCIATION.

Applications for grants of money in aid of scientific research should be made, without delay, to the General Secretary of the British Medical Association, 36, Great Queen-street, London, W.C., in order that a specific sum may be asked for by the Scientific Grants Committee at the annual meeting of the Association to be held at Sheffield. Applications should include particulars of the proposed research. This is now the third year of these grants. In 1874, £200 was granted; this year £300 was voted at Edinburgh; and a similar sum will doubtless be required for the ensuing year.

ANOTHER CONVICTION UNDER THE MEDICAL ACT.

Last week the East London Medical Defence Association was successful in obtaining the conviction of a man named Henry Walton Spiller, under the Medical Act of 1858, for falsely assuming the title of "Doctor." For many years past the defendant has practised as a medical man in High-street, Shadwell, under the name of "Dr. Walton," and has advertised himself, by means of circulars, as being particularly skilful in the treatment of venereal diseases. It was proved that on the door of the defendant's residence was the inscription, "Walton, Surgeon," and over the window, "Dr. Walton." The defendant, who conducted his own case, said that his name was Spiller, but that he represented the firm of "Dr. Walton," and he contended that he had not infringed the Medical Act, as he had not called himself a doctor of medicine—he had simply used the prefix "Dr.," and had advertised himself as a venereal surgeon. In delivering judgment, the magistrate (Mr. Chance) said that the fact of the defendant professing to be a venereal surgeon did not at all qualify the offence. It was an equal pretence to be a surgeon. He considered it very right and proper that proceedings were taken in the case, and he inflicted the full penalty of £20, and £2 4s. 6d. costs.

OCULISTS IN THE LAW COURTS.

The recent Durham Assizes afforded another example of the mode in which some oculists contradict each other in cases where injury to the sight is said to have resulted from accident. The case was that of a builder at Jarrow, who claimed £1500 damages from the North-Eastern Railway Company, for injuries received in a collision on the defendants' line on July 1 last year, by which his vision had become seriously impaired. For the plaintiff, Dr. Heath, of Newcastle-upon-Tyne, was called, who gave it as his opinion that the optic disc was shrunken, which he feared would lead to total loss of sight. Mr. Jabez Hogg also said that he believed degeneration of the nervous system of the eye was still going on, and would go on until the sight became very much worse. There was loss of nourishment in the eyeball, showing that there had been inflammation affecting the vessels. On the other hand, Mr. Haynes Walton and Mr. George Critchett stated that they had carefully examined the plaintiff's eyes, and found them perfectly healthy. However, the jury evidently believed that the plaintiff's sight was not quite perfect, as they gave him a verdict almost immediately, with damages £220, and costs £80. Such curiously conflicting evidence from men of reputed position as oculists scarcely adds fresh lustre to ophthalmology as a science.

THE CONJOINT SCHEME FOR ENGLAND.

The objections made, by some of the bodies concerned, to the amended Conjoint Scheme for England have been under consideration by the Conference of Delegates at the College of Surgeons, and we believe that an important step has been made towards securing the general acceptance of the Scheme. It will be remembered that the Convocation of the University of London passed a resolution to the effect that, in their opinion, "The universities should take no direct part in the appointment of examiners, but that the number of representatives of the universities on the Committee of Reference should be increased." It has been decided, we understand, in conformity with that resolution, to recommend to the bodies concerned that the universities shall have as many representatives on the Committee of Reference as the corporations have; and that on the Board of Examiners they shall be represented only by assessors, or, in other words, we suppose, only by visitors. The difficulty raised by the Royal College of Physicians has, we believe, been, or will be, overcome or explained away. The objection of the University of Cambridge is the only one remaining, and this has not yet been formulated with sufficient distinctness before the Conference to allow of being dealt with; but the probability that the Scheme will be carried out certainly looks brighter now than when we last noticed the subject.

FERGUSSON AND OTHERS *v.* MASON AND ANOTHER (INTERVENING).

Most of our readers have probably noticed the reports of a suit, in the Probate Court, to establish the validity of the will of the late Mr. Nasmyth, the well-known dentist, not because there was anything unusually noteworthy in the cause itself, but because Sir William Fergusson was the chief plaintiff. And we do not refer to it on account of anything in the suit but because the defendant-in-chief was a Mr. Francis Mason. Now, both the public and the profession are well accustomed to hear the names of Mr. Francis Mason and of Sir William Fergusson coupled together, and it is, therefore, not very wonderful that many of these numerous people who glance at but do not read things should jump to the conclusion that Mr. Francis Mason of the suit we refer to is Mr. Francis Mason now Assistant-Surgeon to St. Thomas's Hospital. As, however, it is, to say the least, unpleasant to a man to be assured, or to have it believed, that he is some one else, or that some one else is he, we take upon us to say that the only points of identity between these two gentlemen is the fact that each possesses the christian name of Francis and the surname of Mason.

THE CONJOINT EXAMINATION SCHEME FOR IRELAND.

A movement to institute a Conjoint Examination is again afoot in Dublin, the University having taken the initiative step of appointing delegates to a conference, and of asking certain of the other qualifying bodies to do the same. The University delegates are the Regius Professor of Physic, the Registrar of the School of Physic (the Rev. Dr. Haughton), Dr. Apjohn, and the Rev. Dr. Carson. The King and Queen's College of Physicians have also appointed four delegates, viz., the President (Dr. Gordon), the Vice-President (Dr. Hayden), Dr. James Little, and Dr. Grimshaw. It is not proposed to invite the Apothecaries' Hall to join in the scheme on the present occasion.

THE ST. JOHN'S TRAINING INSTITUTION FOR NURSES.

The annual meeting of the governors and members St. John's House, for the training and employment of nurses, was held on Monday, at the offices of the institution, Norfolk-street, Strand, the Dean of St. Paul's in the chair. The report showed that considerable progress had been made by the institution during the past year. There were altogether 126 nurses and probationers in the establishment, which furnished a staff of sixty-one nurses for duties in private families and among the poor generally. Besides these, sixty-six pupils had been undergoing a course of training to fit them for the duties of village and district nursing.

AN ABORTION-MONGER SENTENCED TO DEATH.

At the Leicester Assizes, on Monday, Cornelius Asher, seventy-seven years of age, a herbalist, of Leicester, was found guilty of causing the death of a woman named Gee by performing an operation on her for the purpose of procuring abortion. The circumstances of the case were reported in the *Medical Times and Gazette* of May 27. It having been proved that the accused had been convicted of a similar offence in 1855, he was sentenced to death.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 11th inst., Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £80 was distributed among the various claimants.

ROYAL COLLEGE OF SURGEONS.

Mr. Prescott Gardner Hewett, of St. George's Hospital, has been elected President of the College in the vacancy occasioned by the retirement of Sir James Paget, Bart.; and Mr. John Birkett, of Guy's Hospital, and Mr. John Simon, F.R.S., of St. Thomas's Hospital, have been elected Vice-Presidents for the ensuing year. Mr. Benjamin Thompson Lowne, F.L.S., of Middlesex Hospital, has been elected Lecturer on Anatomy and Physiology, *vice* Professor William Turner, F.R.S., of Edinburgh; and Mr. J. C. S. Jennings, L.S.A., of Abbey House, Malmesbury, Wilts, a Member of the College (1841), has been admitted a Fellow of the College.

PARLIAMENTARY.—MILITIA SURGEONS—SENIOR SURGEONS-MAJOR—SIR O. BLANE'S BEQUEST—LUNACY LAWS—THE VACCINATION ACTS—POOR-LAW AMENDMENT—CORONERS—POLLUTION OF RIVERS.

In the House of Commons, on Thursday, July 6,

Mr. Hardy, in reply to Dr. Lyon Playfair, said he had no doubt the promised Warrant for Militia Surgeons would be issued during the present session in time to receive the consideration of Parliament. And in reply to Dr. O'Leary, stated that no senior surgeon-major of the army possessing the proper qualifications for promotion was passed over; but proved ability would supersede seniority which was unaccompanied by those qualifications.

Mr. A. Egerton, in answer to Mr. Errington, said that Sir Gilbert Blane in 1830 left £300 to be invested in Three per Cents. in the name of the College of Surgeons, to bestow two gold medals every other year upon naval surgeons whose essays should be adjudged to be the best. The cost of the medals exhausts the yearly interest of the £300, and leaves no funds for publishing the essays. These essays, moreover, take the form of journals, and could not be printed in their entirety, or sent to the medical journals. The more valuable portions, however, are extracted, and published in the return of the health of the navy annually presented to Parliament, and extracts of interest to the profession are sent to the medical journals.

On Friday, July 7,

The Lord Advocate, replying to Mr. Ramsay's inquiry respecting private lunatic asylums being used as refuges for bankrupts and for ministers to avoid trial by their presbyteries, said that, in the cases referred to, the proceedings of the bankruptcy contained no allusion to anything discreditable on the part of the bankrupt. As to the minister specially referred to, he still remained in the asylum, and there was no doubt that he was properly placed under restraint.

Mr. Dillwyn rose to call attention to the operation of the existing laws relating to the committal and custody of lunatics, and to move—"That, in the opinion of this House, those laws do not afford sufficient safeguards against illegal incarceration and the maltreatment of lunatic patients." He referred to the great increase in the number of lunacies throughout the country, which had led to the provision of county asylums and other accommodation for their reception; and he ascribed that increase, in a great measure, to the lax administration of the law. He thought that the law officers or some competent independent authority who would not be under any suspicion of favouritism ought to prosecute all cases of violation of the lunacy law, and to require that no person should be placed in a lunatic asylum without the warrant of some public authority. He further proposed that all private lunatic asylums should be abolished, and that all such places of confinement should be public institutions.

The House was counted out before the resolution could be passed.

In the House of Lords, on Tuesday, July 11,

The Duke of Richmond and Gordon moved the second reading of the Poor-Law Amendment Bill, by which, among other benefits, a better division of parishes, union districts, and local areas would be obtained, as suggested by the Local Government Board, with a view to assist officers of health in defining the boundaries of their districts. It also proposed to enable the managers of fever and small-pox hospitals in the metropolis to recover costs from persons, not paupers, who might from time to time come under their care on emergencies.

The Bill being generally approved, was read a second time, and the committee fixed for Monday next.

In the House of Commons,

Lord J. Hervey moved—"That further legislation is desirable with regard to the qualification and appointment of coroners and the mode of holding inquests," and gave expression to his opinion that "no one but a barrister or a solicitor ought to be made a coroner," and that it was most prejudicial to the gravity and importance of the case to hold inquests in public-houses.

Mr. Cross, in justice to the coroners as a body, was bound to say that great public services had been performed by them, and that they discharged their duties with much ability. He did not agree with those who thought that the office of coroner ought to be abolished. As Home Secretary, he knew that in cases of accidents in mines, boiler explosions, and the like, the inquests held gave satisfaction to those who were interested in them; and in all such cases he sent down a person from the Home Office to watch the proceedings on behalf of the public. The present state of the law was bad, and ought to be altered. A coroner ought to be a man with special qualification for the office. If the law was altered, the qualification for the office of coroner should be a knowledge of the law and some standing in the legal profession. With respect to the duties of the coroner, he must say that when a man duly qualified was appointed, they ought, in a matter of this kind, to leave a great deal to his discretion. He could not conceive a worse mode of election for a judicial officer than a popular election by the freeholders of the county. The reopening of the coroner's inquiry was, he thought, rather a difficult question. When a duly qualified man was properly appointed he did not think the inquiry should be rashly reopened. It would be much better to leave it to the courts of law to decide when to reopen an inquest. It might be possible to simplify the process of application for another inquiry. With regard to public-houses, they had no right to hold inquests in private houses; and they could not always secure a place other than a public-house in which inquests could be held. He thought that was a matter that might fairly be left to the discretion of the coroner.

Dr. Lush urged that some medical knowledge ought to be insisted upon as part of the qualification of a coroner.

The motion was put and agreed to.

In the *Times* "Obituary," July 11, is notice of the death of a lady at Sheerness, aged twenty-eight, of "intermittent fever supervening upon childbirth."

Sanitary Works at Rome.—The Municipality of Rome is about to undertake a great and important sanitary work. This is the opening of a cut from the Coliseum to the Tiber, for the construction of a main sewer, for the drainage not only of the Amphitheatre, but also of the entire new quarter of the Esquiline. The work will include a drain to convey the water which now keeps the lower storey of the Amphitheatre in a continual state of inundation, and is a fruitful source of fever and fogs, in spite of the masses of quicklime periodically discharged into the stagnant gulf by order of the Municipal Board of Health. The proportions upon which the work is to be conducted are colossal, as the cut will be six metres deep and three metres and a half wide, and will extend to the river in the vicinity of the *cloaca maxima*, distant from the Coliseum about 1500 metres.

Country Fellows present at the Election of Members of Council, Royal College of Surgeons.—J. Archer; Birmingham; A. Ashby, Grantham; A. Baker, Birmingham, B. Barrow, Ryde; T. W. Benfield, Leicester; E. Blackmore, Manchester; E. Bradford, Harrow; A. G. Brookes, Shrewsbury; W. Carr, Blackheath; C. H. Carter, Pewsey; E. Carver, Cambridge; J. H. Ceely, Aylesbury; R. Colgate, Eastbourne; G. Cooper, Brentford; W. Druitt, Wimborne; F. Durham, Northamptou; W. P. Goodall, Birmingham; R. Harrison, Liverpool; S. Hey, Leeds; C. H. Higgins, Birkenhead; J. Horsfall, Leeds; G. M. Humphry, Cambridge; W. D. Husband, York; E. L. Hussey, Oxford; T. R. Jessop, Leeds; R. Jones, Brackley; T. F. Jordan, Birmingham; J. H. Keeling, Sheffield; W. Lush, Weymouth; W. McCheane, Liverpool; A. F. McGill, Leeds; F. E. Manby, Wolverhampton; G. May, Reading; E. Morris, Spalding; A. W. Nankivell, Chatham; J. Ness, Helmsley; J. Nottingham, Liverpool; W. B. Page, Carlisle; R. Parker, Liverpool; G. Rawboue, Oxford; S. W. Rayne, Neweastle-on-Tyne; E. O. Spooner, Blandford; W. Statter, Wakefield; J. Wiblin, Southampton; T. W. Williams, Birmingham.

A DESCRIPTION AND EXPLANATION OF THE

METHOD OF PERFORMING POST-MORTEM EXAMINATIONS

IN THE DEAD-HOUSE OF THE BERLIN CHARITÉ HOSPITAL; WITH ESPECIAL REFERENCE TO MEDICO-LEGAL PRACTICE.

By PROFESSOR RUDOLPH VIRCHOW.(a)

(*Concluded from page* 47.)

CASE III.

A PERSON known (suicide). Gunshot wound of the chest. Death occurring in twelve days. Double pleuritis, pericarditis and myocarditis, phlegmonous mediastinitis, exudative peritonitis.

F. K., a tradesman's assistant, twenty years of age, shot himself in the chest, on the afternoon of November 8, with a revolver held at a distance of six inches from his breast, he at the time having nothing on but his shirt. He was immediately brought to the Charité. The aperture of the wound is close to the left nipple, and measures eight millimetres in diameter; it is filled up with clots of blood, and the parts around are emphysematous. The patient complains of difficulty of breathing, and pain all over the left side, where there is also dulness on percussion over the posterior and inferior parts of the chest, extending to the angle of the scapula, with bronchial expiration. The bullet was found in the back above the eighth rib, at a distance of four fingers' breadth from the vertebral column on the left side, and was removed on the following day. It was conical in shape, eleven millimetres long, and seven millimetres in diameter at its base, quite flattened on one side, especially towards its apex. The opinion of the physicians in charge of the case was, that the bullet had passed in the soft parts outside the chest, and had been stopped by the rib.

On the third day, pain came on quite suddenly in the region of the left colon, with great soreness. Manifest improvement on the subsequent days, but great mental excitement and restlessness. The aperture of the bullet's entrance closes, but inflammation and swelling occur round the opening which has been made in the back. The symptoms of inflammation in the left breast gradually diminish. Bowels somewhat confined. On the eighth day a red-coloured serum commences to escape from the wound in the back, and flows more freely during expiration. At the same time there are evident symptoms of pleuritis on the right side, and also of pericarditis. Increased fever and difficulty of respiration. On the eleventh day a puncture was made in the left side of the thorax, in the fifth intercostal space, in the anterior axillary line, and 900 cubic centimetres of a dirty brownish-red serum evacuated. The respiration then for a short time became easier, but very soon after all the serious symptoms became much aggravated, and the patient died on the thirteenth day.

Post-mortem examination (lasting three hours) :—

A. *External Examination.*

1. The body is that of a man of about twenty years of age; the height is 1·68 metre; bony conformation slight; adipose tissue in small quantity; muscles moderately developed.

2. Colour generally pale, faintly yellow; lower part of abdomen greenish. The posterior parts of the body, the head, and trunk generally, and also the extremities, covered with large pale bluish-red spots, interrupted by white patches where exposed to pressure. The intensity of the colour of these spots can be only slightly diminished by pressure. On an incision being made, numerous small veins filled with blood can be seen extending from the skin into the substance of the muscles. Fluid blood escapes from these, but there is nowhere any blood extravasated in the tissue.

3. Slight cadaveric odour; rigor mortis in the extremities.

4. Eyelids half closed; eyeballs tense; corneæ transparent.

5. No foreign body in nose or auditory meatus.

6. Lips open; teeth separated—the latter, in the upper jaw, very irregular. The tongue lying behind the teeth, and pale; the teeth of a brownish hue. No foreign body in the mouth.

7. Nothing abnormal to be found about the neck.

8. On the right side of the breast a line of four small brownish-red crusts, one after the other, but separated by intervals of various lengths. The first of these is over the fifth rib, the second over the sixth, the third and fourth are over the seventh. The upper one begins a finger's breadth below the right nipple, and at about the same distance on its inner side. The whole line is ten centimetres in length; its direction is somewhat obliquely downwards and outwards. On cutting into these spots there is neither deposit, tumefaction, nor redness. On cutting through them there are no spots of blood, but only desiccated patches, extending in the highest crust through the whole thickness of the corium, in the others only through its most superficial layers. There is a faint, quite superficial, crescentic, red spot rather more than a thumb's breadth on the outer side of the right nipple. This, on being cut through, is found to involve only the outermost layers of the corium. There are also a few more brown marks on the external aspect of the lower part of the thorax on the right side.

9. On the left side, two millimetres above the nipple, but within the areola, a small round spot about 1·5 millimetres in diameter, somewhat depressed, of a dirty brownish colour, and covered with a dry pellicle. When this is cut into, a somewhat hard cord, traversed by numerous small vessels filled with blood, and showing minute spots of blood, is found to extend obliquely outwards and backwards through the substance of the gland into the subcutaneous fat. No canal can be discovered, but in a direction outwards and downwards there are some scattered spots, slightly moist, and blackish-red in colour, both in the subcutaneous adipose tissue and in the pectoral muscles, extending down to the ribs, in a circumference of about seven centimetres. They are most strongly marked in the direction towards the axilla, where a few of these sanguineous infiltrations extend to the lymphatic glands. These latter are enlarged, hard, bluish-red externally. On being cut through they are found to be very moist, and the whole of their cortical layers of a dark bluish-red colour.

10. Posteriorly, on the left side of the chest, at a distance of two fingers' breadth from the middle line, on the tubercle of the ninth rib, the skin is separated from the subjacent parts, and exhibits a wound with sharply defined edges. The wound is four centimetres long and two centimetres and a half wide, taking almost the exact direction of the rib—viz., from within and above, outwards and downwards. It is covered with slightly dull greyish-red serum, and looks quite clean where this latter has been removed; it penetrates the soft parts in a terrace-like form to a depth of eight millimetres, and terminates in the muscles. The base of the wound is pale and smooth in the external portion; internally it is covered with a soft, velvety, very red film, which contrasts distinctly with the neighbouring parts. Only in an upward direction is there any bloody infiltration of the muscular tissue seen on incision being made into the parts around.

11. On cutting more deeply into the muscular layers lying externally, we come into a shallow cavity which communicates by a narrow opening with the base of the wound above described; it measures four centimetres and a half transversely, and three centimetres perpendicularly; its outer surface is tolerably smooth, and, like the base of the external wound, covered with a similar soft, velvety, red membrane. On opening this cavity, the body being placed on its side, air emerges from beneath with an audible sound, and a small round opening not quite two millimetres in diameter is found on the upper part of the base of the cavity. This penetrates deeply the intercostal space between the eighth and ninth ribs, but on introducing a fine probe it cannot be passed directly into the thoracic cavity. The spiral direction of the track of the wound makes it difficult to pass the probe deeply.

12. The two spots described in Nos. 9 and 10 are now connected by means of a free incision carried transversely round the thorax. The muscular septa in the neighbourhood only of the first spot are found to be distended with dark-red serum, but otherwise there is no trace of any connexion between the two wounds.

13. Four fingers' breadth external to and below the left nipple there is a roundish opening, scarcely one millimetre in diameter; the borders of this wound are sharp and rather dry. On incisions being made in various directions, dark-red bloody discolorations are found in the corium below this opening, and these are continuous with those described under No. 9. (This is the aperture of the puncture as stated by the assistant-physician in charge, Dr. N.) No distinct canal can be traced inwards from this opening. On the other hand, on cutting somewhat more deeply into the intercostal muscle, serum and bubbles of air escape from beneath, and there is a softish, reddish streak to be seen traversing the tissues.

14. Nothing abnormal about the external organs of generation.

(a) From the *Charité-Annalen*.

15. Anus closed; some fæcal matter round about it.

16. No traces of any other external injury.

B. *Internal Examination.—a. Thorax and Abdomen.*

17. An incision is carried from the chin to the symphysis pubis, dividing the integuments of the neck and thorax, and opening the abdominal cavity. Adipose layer slight; muscles of a dull-red colour.

18. The omentum found to be connected by adhesions, which are easily separable, with the anterior part of the abdominal wall and the right border of the liver. This latter organ is somewhat deeply placed, and completely covered by a delicate false membrane, which can be easily stripped off: on the left side it is dry and translucent; on the right side more greasy-looking, dull, and yellowish in colour. The omentum is of a deep-red colour, its veins being particularly full (this most marked on the right side); in the neighbourhood of the gall-bladder it is covered with opaque, yellow false membrane that cannot be stripped off, and this extends as far as the lumbar region.

19. The intestines distended with gas, covered in many places with fine, very superficial, red, vascular networks—generally, however, pale; the viscera of the pelvis only dense bluish-red, with numerous large prominent veins.

20. The pelvis contains about a tablespoonful of slimy, yellowish-red, opaque serum.

(1.) *The Thorax.*

21. During the time that has elapsed since the examination of the wound described in No. 10, a quantity amounting to eighteen cubic centimetres of thin, pale-reddish, turbid serum has escaped from this spot into a vessel placed to receive it.

22. On removing the integuments from the thorax, the tissues are found to be considerably infiltrated with blood, on the left side, in the fourth and fifth intercostal spaces; in the first of these at a distance of three, and in the second at a distance of two fingers' breadth from the sternum.

23. On cutting into the wall of the thorax on the right side, fluid escapes. This is immediately collected from the pleural sac. It is found to amount to 800 cubic centimetres, is thin, relatively only slightly turbid, and of a yellowish-red colour. It contains numerous large very loose flakes, yellowish-white in colour. The surface of the pleura on this side is everywhere covered with somewhat soft dirty-yellowish deposit, which can be stripped off.

24. The sternum being removed, the whole of the mediastinum is found to be tough and difficult to cut, many of its smaller vessels filled with blood, and the tissue throughout of a gelatinous appearance and of a dull brownish-yellow colour.

25. On the left side, the anterior portion of the lung is agglutinated to the wall of the thorax for a length of eight centimetres. After it has been separated we come to a space filled with fluid. The fluid is ladled out; it measures 900 cubic centimetres, is somewhat thick, but flows freely, is of a palish-red colour, has a faint odour, and contains a few flakes. This cavity is the pleural sac, the walls of which, except where they are agglutinated, are covered with thick, dirty reddish-yellow, closely adherent deposits, with red infiltration in some places. The upper and lower lobes are agglutinated together below. There are also adhesions which can be easily broken up between the thoracic wall and the lower part of the upper, and the anterior and lower part of the lower, lobe. These adhesions extend over a surface as large as a child's hand. In front, between the pericardium and lungs, is a closed space, containing large shreds of gelatinous coagula. This cavity is found to be an incapsulated part of the pleural sac.

26. The pericardium much thickened externally. Internally, extensive deposit of rough, stiff, elastic membrane, both on the parietal and visceral layer. The cavity contains about forty cubic centimetres of pale-reddish serum, mixed with yellowish flakes. The firm deposit is most abundant on the anterior portion of the parietal layer; and, corresponding to this, the heart is covered anteriorly by similar false membrane.

27. The heart itself is somewhat larger than the closed fist of the man. It is rigid, its surface slightly arched, comparatively pale in colour. The right auricle contains about ninety cubic centimetres of dark-red coagulated blood. The right ventricle contains a very small quantity of fluid blood, but a few large, gelatinous, buffy masses. The left auricle contains scarcely two tablespoonfuls of dark blood, very slightly coagulated. The left ventricle is almost empty.

28. The heart is then removed. The arterial valves close. On being opened, a marked red infiltration throughout the lining membrane. The muscular tissue firm; on the right side greyish-red; eighteen millimetres thick. On the posterior wall it is closely marked to a depth of eight millimetres with very extraordinary yellow spots and stripes. These spots being immediately subjected to microscopical examination show the primitive muscular fasciculi to be without cross-markings and filled with coarse fat-granules. No other abnormal appearances.

29. A very large quantity of dark, partly buffy coagula escapes from the large vessels of the thorax.

30. The left lung is rather flat, and contains but little air. Its serous covering on the upper and anterior parts is thickened, opaque, here and there yellowish; on the inferior and posterior parts of a dull-red colour, softer and more lubricous, dotted over in several places with soft, grey, roundish granulations. In three places the covering of the lung is relatively smooth, and shows scarcely any deposit. These places are circumscribed by tolerably sharp edges, with salient and receding angles. There are similar places corresponding to these on the wall of the chest. The first of these spots is close to the anterior border of the upper lobe, near the agglutination described in No. 25. The second spot is on the lower tongue of the upper lobe. The surface of the lung is here induplicated in two directions, meeting in an angle, and taking a course towards the spot immediately to be described. The third spot is on the lower and anterior aspect of the lower lobe, and here in a line, one below the other, we find (*a*) on the surface turned to the cleft between the upper and lower lobes, one centimetre from the border, a roundish depression of a reddish colour, three millimetres in diameter, exhibiting, on incision, a perforation of the pleural investment; (*b*) two round spots close to one another, two and a half to three millimetres in diameter; one of which is upon, the other close in front of, the border. These being cut through, are found to be yellowish-white channels in the pleural membrane and the adjacent pulmonary tissue. The latter is in this spot somewhat firmer, and of a deep-red colour to a depth of eight millimetres. On section the tissue in the upper lobe is found to contain very little air, is of a red colour throughout; but it is only from the larger vessels that any blood escapes. The lower lobe contains still less air, and is moderately red; dark thick blood escapes from the vessels.

31. The right lung is covered throughout its whole extent with firmly adherent but separable deposit; on the upper and middle lobes the pleural covering is whitish and thickened. On section the tissue is found to contain but little air, and is somewhat grey in colour; this is the case also in the lower lobe.

32. On the inner aspect of the thoracic wall on the left side, exactly upon the eighth rib, at a distance of four fingers' breadth externally from the vertebral column, there is a solution of continuity, twelve millimetres long and five millimetres wide, of a somewhat long oval form, the long diameter being parallel to the axis of the rib, the borders gradually sloping off, and of a yellowish colour. In the base of this wound the bone lies exposed. In order to examine the parts more closely, this rib and the ninth are removed together, and it is now seen that, at the spot corresponding to the external wound, the inner surface of the eighth rib, for a length of fourteen and a breadth of ten millimetres, is quite laid bare, and the soft parts stripped off. At this spot there are two small linear fragments of lead, the larger three, the smaller one and a half millimetres long, wedged into the compact tissue of the bone. Round the denuded portion of the rib the tissue is raised up like a wall, thickened and much reddened. Beyond this wound, anteriorly, and on the same rib, a triangular, greyish-yellow spot is found on the costal pleura, which exactly corresponds with a similar triangular spot on the inferior lobe of the lung, immediately below the smooth spot described in No. 30, and in the direction of the appearances detailed under (*a*) and (*b*) in the same paragraph. A continuous canal connects the denuded portion of bone with the cavity mentioned in No. 11.

33. In the anterior lateral portion of the circumference of the left pleural cavity, in the intercostal space between the fourth and fifth ribs, three centimetres from the attachment of the cartilages, is a deepened cleft, placed transversely to the course of the third rib, seven millimetres long, and rather more than three millimetres wide; running somewhat obliquely from above and within, downwards and outwards, ending above the border of the fifth rib, and separating the fasciæ superficially. The floor of this cleft is tolerably smooth,

slightly scaly. The borders of the cleft are sharp, neither thickened nor reddened; in its base several small, angular, blackish fragments of lead are contained in the tissue. This spot corresponds to an area of the pulmonary pleura, free from deposit, and which had previously been adherent (No. 25).

34. Lower down in the intercostal space, between the fifth and sixth ribs, and almost exactly in the middle, there is a somewhat long cleft, with tolerably straight borders; it is scarcely two millimetres long, and its lateral edges are close together. It leads directly externally into a small canal through the muscles. Its position corresponds to the external wound described under No. 13, but there is no open passage from one to the other.

35. The veins of the neck are tumid, and contain thick blood; arteries and nerves normal.

36. The œsophagus contains a yellowish-grey fluid, and numerous fragments of food. Mucous membrane pale. Palate much reddened, with very prominent venous networks; follicles of the tongue slightly swollen.

37. The larynx contains a few similar yellowish-green fragments of food. Below, a little frothy liquid in the air-tubes. Mucous membrane somewhat thick; that of the air-tubes very red, owing to numerous vascular networks, which are distinctly visible.

38. No change in the walls of the aorta; only a little thick blood in its descending portion.

(2.) *The Abdomen.*

39. The spleen adherent on its upper aspect, 12½ centimetres long, 7½ centimetres broad, 3·6 centimetres thick, firm on section, and pale; the pulp rather greyish-red and uneven, containing much blood and slightly indurated, but only in a part which is covered externally by dirty yellowish-white membrane. Follicles small and grey.

40. Left kidney 12 centimetres long, 5 centimetres broad, 3·2 centimetres thick. The capsule easily separated; surface smooth, brownish-grey-red in colour, superficial veins slightly distended. On section somewhat general faintly grey cloudiness of the cortical substance, which appears bluish-red. The Malpighian corpuscles prominent on the cut surface, slightly reddened.

41. The left supra-renal capsule reddish-grey in its cortical substance; tissue between it and kidney abundant and full of blood.

42. Right kidney 11 centimetres long, 6 centimetres broad, 3·2 centimetres thick. The surface somewhat more darkly red than on the other side. In other respects, the same appearances both here and in the supra-renal capsule as on the other side.

43. Urinary bladder strongly contracted; contains a tablespoonful of dark yellowish-brown urine. In other respects normal, as are also the prostate and vesiculæ seminales.

44. Testicles, both superficially and in their substance, somewhat bluish-red in colour, owing to numerous veins; in other respects normal.

45. Stomach rather capacious, containing a large quantity of greenish liquid and numerous fragments of food. Mucous membrane pale, whitish-grey, tolerably thick, somewhat wrinkled towards the pylorus.

46. The duodenum contains a large quantity of bilious pasty fluid. A drop of bile exudes on pressure from the orifice of the gall-duct, and also when the gall-bladder is pressed.

47. The liver twenty-five centimetres broad, twenty-two centimetres from front to back, and eight centimetres thick; the whole of its external surface covered with yellowish-white false membrane. On incision, the large vessels only found filled with blood. The tissue pretty uniformly brownish-grey, brittle, somewhat dull-looking. The acini large, externally yellowish, internally greyish-red. Gall-bladder slightly coloured; bile greyish-brown, with yellow flakes.

48. Pancreas somewhat flabby; its posterior portion infiltrated with blood.

49. The mesenteric glands somewhat enlarged; their cortical portions somewhat white. But little fat about the mesentery.

50. The small intestine contains a large quantity of pasty bilious matter; in the lower portion the contents are fæculent and foul-smelling. The mucous membrane is rather thick; in the jejunum reddened only in a few spots; a few turgid veins in other places. The only change in the glands is a very slight swelling of the solitary follicles in the lower part of the ileum.

51. The large intestine contains soft fæces; mucous membrane rather thick; some difficulty in removing the adherent fæces; nothing abnormal.

b. The Cranium.

52. The soft parts cut through according to the directions, and reflected backwards and forwards; nothing abnormal.

53. The skull of a somewhat long oval form, much reddened posteriorly, and presenting a pitted depression on the frontal bone, just in front of the coronal suture, and to the right of the mesial line. On section, diploe scanty but red. Bones of skull four millimetres thick. Internal surface somewhat irregular in consequence of various depressions in the middle part of the frontal bone and along the sagittal suture; these are apparently due to elevations of the pia mater.

54. The dura mater translucent, thickened, and copiously supplied with blood in the middle and anterior portion. The longitudinal sinus rather large, filled with buffy coagula. Inner surface of the dura mater on both sides smooth, exhibiting in places networks of distended vessels, but no abnormal deposit.

55. The surface of the cerebral hemispheres symmetrical in shape. The convolutions rather large. Veins very large, much distended with dark blood, particularly at the back of the head.

56. Pia mater everywhere translucent, exhibiting large wart-like excrescences along the median longitudinal fissure and under the frontal bone.

57. Scarcely any fluid in the lateral ventricles. Posterior cornua obliterated. Choroid plexus and vessels of the velum of a dark-red colour.

58. On section the cerebral hemispheres found to be very moist, and the veins much distended. From these latter large drops of blood exude all over the cut surface. Grey substance shining and of a dark-reddish tinge.

59. The grey substance of the large ganglia reddened; the tissue very moist throughout. Corpora quadrigemina pale.

60. Fourth ventricle empty. Cortical portion of cerebellum uniformly reddened; veins of medullary substance distended.

61. The arteries at the base of the brain regular in their course, filled with dark blood. In the pia mater of this part nothing abnormal.

62. The grey substance of the pons Varolii and medulla oblongata slightly reddened.

63. The sinuses at the base of the skull filled with dark thick blood. The dura mater thin and delicate. Condition of the bones normal.

There is much that is worthy of remark about this case. Apart from the fact that the extensive peritonitis did not occur as a clinical symptom (we must now regard as such the pain in the region of the left colon, which was noticed on the third day of the disease, but which afterwards quite subsided), the rapidity with which death occurred must obviously be explained by the pericarditis and the resulting myocarditis. Some time ago (in my *Archiv*, 1858, vol. xiii. page 266) I reported several cases of malignant pericarditis, in which I demonstrated acute fatty metamorphosis of the muscular tissue, and showed that the morbid process advanced from without to within. I have several times since observed this very dangerous complication, of which the case before us is another and a very instructive example.

The peritonitis, and also the pericarditis, and the pleural inflammation on the right side, have no immediate connexion with the wound caused by the bullet. The probability is that all of these are the result of the phlegmonous mediastinitis, which in this case quite takes the form of a malignant erysipelas. The occurrence, however, of this mediastinitis is not a little extraordinary, for the bullet did not immediately injure the mediastinum; and, moreover, the anterior portion of the track of the bullet showed no indications of mischief, for it was completely closed by the first intention. There is, therefore, nothing else but to assume that all these morbid processes have extended themselves from the posterior part of the track, which was certainly in an unhealthy condition, and which was converted into a perforating wound when the bullet was excised. It is, therefore, very extraordinary that when the examination was made there was no disagreeable odour about the opening in the back.

Notwithstanding this, however, a propagation of infectious matter from this quarter is indicated by the extensively diseased appearance of the left pulmonary pleura, and the alterations so unusually great for so comparatively short a period as twelve days. The pleura was so thickened, dull,

and wrinkled, and so dotted over posteriorly with real sprouting granulations, and in large area almost trachomatous, as to present an appearance such as is only met with in very malignant forms of inflammation. Those portions of the pleura primarily agglutinated appeared, after separation, both on the lung and on the wall of the chest, so smooth and delicate that they looked quite normal when contrasted with what has just been described.

The autopsy has not confirmed the supposition that this was a case in which the bullet, in consequence of the retracted position of the left side of the chest, took a curved direction through the external soft parts from the place of entrance near the nipple, until it was stopped posteriorly by the eighth rib. Certainly, it appeared at first as if the sanguineous infiltrations (No. 9) extending to the axilla corresponded with the course taken by the bullet. But the further examination showed that the bullet had taken an entirely opposite direction, and that the infiltrations were caused only by the loose cellular tissue being filled with blood in the direction of the lymph-current. Even the axillary glands were so infiltrated with blood as to prove distinctly that their appearance was due to absorption. I draw particular attention to this, inasmuch as I am well aware that in medico-legal practice due regard is not paid during life to this form of propagation of sanguineous infiltrations, so very important, and yet so often misleading, owing to the great possibility of a false interpretation.

The shot has entered just above the left nipple, and taken an oblique direction outwards, downwards, and backwards; it has left the wall of the chest, first of all, in the fourth intercostal space, and then entered the pleural cavity; it has then grazed the lung, but only a small portion of it—viz., the surface of the left lower lobe turned towards the cleft between the two lobes; it has then passed over the internal surface of the eighth rib, at a distance of four fingers' breadth from the vertebral column, and close to this spot perforated the eighth intercostal space. Here it remained lying in the soft parts under the skin of the back until its early removal.

Strange to say, at the end of the channel of entrance, just where it passes obliquely over the upper border of the fifth rib, several small pieces of lead, obviously portions of the bullet, were found covered up in the soft parts. At the first glance, they might be compared with the fragments of lead embedded in the bone, at the posterior part of the circumference of the thorax, where the rib has been laid bare by the bullet. However, a closer consideration proves that this is not the case. The latter were obviously splintered off when the bullet struck against the rib, and they correspond probably to the small scratches found on the smooth compressed surface of the much-flattened bullet. The former, on the other hand—those which are closed up in the anterior wound,—could not have been splintered off by the rib, for its border, although very close to the bullet's course, has not been touched by it. These must, therefore, have been stripped off previously, perhaps in the grooved barrel of the revolver, and driven into the wound when the shot was fired.

The medico-legal conclusions in this case are as follows:—

1. That death was caused by a series of violent inflammatory attacks in the thoracic and abdominal cavities, inflammation of the heart being the principal factor.
2. That these inflammatory attacks were the result of a gunshot wound of the thorax.
3. That there is nothing to contradict the assumption that the fatal shot was fired by the deceased himself.

Opposition to Vaccination.—At the last Rugby Petty Sessions two persons were each fined £1, and 19s. costs, for neglecting to have their children vaccinated. Both defendants have opposed the carrying out of the provisions of the Vaccination Act for some years past.

St. George's (Hanover-square) Vestry and Infectious Diseases.—After a lengthened discussion, the following resolution was carried at the last week's meeting of the Vestry of St. George's, Hanover-square:—"That the Committee of Works, acting as the Sanitary Authority of this parish, consider and report to this Vestry whether it is desirable, and, if so, what arrangement can be made with the district registrars, and with the medical men in the parish, in order that the Vestry may have the earliest information of the existence of infectious diseases in the parish, so that steps may be taken to prevent the spread of the same."

ANNUAL FESTIVAL OF THE ROYAL COLLEGE OF SURGEONS.

The annual festival of the Fellows of the Royal College of Surgeons took place on Thursday last, at the Albion Tavern, when Mr. T. B. Curling, F.R.S., late President of the College, occupied the chair, and was surrounded by a great number of distinguished London and provincial surgeons.

After the usual loyal and patriotic toasts, given by the able chairman (to which Surgeon-General F. Longmore, C.B., responded for the Army, paying an eloquent tribute to the memory of his lamented colleague, Professor Parkes; and Mr. Alfred Cooper for the Auxiliary Forces), Mr. Hilton proposed "The Medical Council," to which Dr. Andrew Wood replied in a lengthy and interesting speech.

Sir Henry Thompson, in proposing "The Medical Corporations," said: Sir, it falls to my lot to propose a toast which must necessarily possess considerable interest for us all. It does so because it relates to the great medical corporations of this country. And here I must note how it contrasts with that to which my friend Mr. Hilton has just spoken. The "Medical Council" is an institution of quite recent date; the "Medical Corporations" belong almost to remote antiquity by comparison. And in relation to them I confess that it is not so much as representatives of surgery that we meet here, but rather as members of one of the most ancient guilds in the City of London. I like to look back, and to feel that we belong to a succession of ancestors; and that on the present social occasion we may think of ourselves and of each other rather as a guild or fraternity of good fellows than as the latest products of a scientific education. I need not tell you—what all the world knows—that we began as "barbers" more than 400 years ago; how that, in course of time, some of the barbers cultivated a taste for the "craft and mystery of surgery"; and how there has been developed in time, by a process of "differentiation," a class of surgeons pure and simple, cultivated as we know them to be at the present day. And each in their turn did good work and true in their day and generation as years rolled on. And soon after them their brethren the Physicians set up their College, with a special and most laudable object in view. Their aim was from the first the purification of the profession: the upholding of its character, the discouragement of quackery and mere venal practices, the development of education, and the cultivation of high principles among their members. And so the two corporations worked on, improving the craft and elevating the men; and in later time aided materially by similar and valuable aid from the Company of Apothecaries—another early guild—in their united purpose. The result of all this is that a high standard of character as well as of education has been maintained; and I take it that this is a matter of value as great to the world at large, and to the profession also, as progress in the healing art itself. Purity of aim, disinterestedness, the exercise of benevolence, have become the distinguishing marks of a profession which, I firmly maintain, stands pre-eminent in society for the possession of these qualities. And thus it is that best and most efficient answer is given by its own high character to those bitterly cruel and heartless attacks which are at this moment being made by ignorant and thoughtless persons in a fanatical spirit, under the name of humanity, on the medical profession. Now, I will not detain you further than to say that there are here present at our board to-night two distinguished members of the craft, in the persons of the Presidents of the College of Physicians and Surgeons respectively—two men of whom I may fairly say, without fear of being charged with making any invidious distinctions, that I should be unable to find any identified more closely with all that is highest and most honourable in the ranks of our profession. I give you, then, as a toast which I know you will receive with enthusiasm—"Prosperity to the Royal College of Physicians, coupled with it the name of its distinguished President, Dr. Risdon Bennett; and the Royal College of Surgeons, and with it its no less distinguished head, Sir James Paget."

Dr. Bennett, in replying for the Royal College of Physicians, spoke of the colleges as representing the true character of British medicine, and believed that, whatever might come of *Staats Examens* or Conjoint Schemes, the colleges would always hold an important place in the institutions of the country, and that, so long as they continued to foster a high standard of culture and professional acquirements, they would retain the

esteem both of the profession and the public, and that they did exercise an important influence on the Government.

In acknowledging the toast on behalf of the Royal College of Surgeons, Sir J. Paget said that the lately adopted custom for the President of the College to print a full report of all the affairs of the College during his year of office would have rendered it unnecessary for him to make an official speech, even if the President of the College of Physicians had left him anything to say. Accepting the toast as including good wishes for the prosperity of the College of Surgeons, he reminded the Fellows present that they need not limit themselves to wishes, for they could have what they would. The honour and prosperity of the College were, in their best sense, the sum of the honour and prosperity of every Member and Fellow—a sum to which every one could contribute, and in which every one shared. Their toast, therefore, should mean, not merely "we wish for the prosperity of the College," but "we will have it."

"The Provincial Schools" was proposed by Mr. J. E. Erichsen, who said the toast he had to propose would, he felt sure, meet with the most cordial acknowledgment from the metropolitan, and the warmest sympathy from the provincial Fellows. Science had annihilated time and distance, and had diffused itself widely over the country. The metropolis was no longer the only centre of medical science and education. There existed throughout England schools of medicine which served to keep the lamp of medical science ever brightly burning in the provinces. These schools served a threefold object. They not only enabled a large body of young men (who from circumstances might be unable to come up to London) to pursue their studies for the profession, but they maintained a high standard of professional knowledge in the country. No one knew a subject accurately until he had to learn it himself, in order to teach it to others; and the teachers in the schools were necessarily the masters in their art. But besides this, the provincial schools were centres of science, shedding the light of knowledge over the surrounding districts. So much was this the case that when the question of licensing places for the performance of scientific experiments on animals came before the Royal Commission on Vivisection, of which he was a member, it was felt that no difficulty would occur, as the provincial medical schools which would be licensed were so numerous as to be within easy reach of any man in the provinces who wished to prosecute scientific researches. These centres of medical science and education were like the recently established "military centres," intended to encourage that very profession for the promotion of which they had been established. They had shown their appreciation of the eminent men connected with those schools by happily electing into the Council that day one of the most distinguished of the provincial surgeons—Mr. Wheelhouse. He would couple the toast of "The Provincial Schools" with the name of one of the ablest practical surgeons of the day—Mr. Reginald Harrison, of Liverpool.

Mr. Reginald Harrison, in returning thanks for the provincial schools, expressed his belief that in these schools the work of education was being carried on with great energy and determination. In several—more particularly in Manchester, Liverpool, and Leeds—increased facilities had been provided at a very considerable outlay, and every disposition had been shown by all the schools to give effect to the modern improvements in educating students, the most important of which had emanated from the Council of the College of Surgeons. So long as the licensing bodies discharged their duties in the stringent manner required of them, schools of medicine in the provinces, instead of doing harm, were, on the contrary, productive of much good, inasmuch as they formed centres in largely populated places for scientific and educational work, and induced men to engage in such work who would not otherwise do so. Mr. Harrison was sure that the provincial schools, as well as provincial surgeons, were exceedingly pleased with the very hearty manner in which Mr. Wheelhouse's candidature had been received by the Fellows generally, and with his election that day to the Council of the College.

"The Metropolitan Schools" was eloquently proposed by Mr. C. G. Wheelhouse, the recently elected councillor, and responded to by Mr. G. W. Callender, F.R.S.

"The Chairman" was proposed by Mr. Savory.

"The Visitors" by Mr. John Simon, F.R.S., who, during his short speech, was much cheered for his kindly recognition of the officers of the College. Speaking of Mr. Trimmer he said that, though not a member of the Council, he possessed the knowledge necessary for that office, and happily gave that body the great benefit of his experience. Mr. Simon also spoke highly of his administrative ability. He concluded by saying, "I have often thought, gentlemen, if by some great convulsion of nature this College were to be destroyed, and all whom we most value in it were reduced to ashes, to be restored again to life by the touch of a magician's wand, the first tremulous movements indicating restoring animation would be seen in the ashes of our dear respected friend, Mr. Thomas Madden Stone, as having been the most active spirit of the past."

After a cordial vote of thanks to Mr. Allingham, the excellent Honorary Secretary, the proceedings were brought to a close.

THE HUNTERIAN MUSEUM.

From the annual report of the Conservator (Professor Flower), which has just been submitted to the Council, it appears that the additions to the Pathological Series have been of much the same character and value as former years. Among the noticeable additions is a remarkable example of a peculiar form of hypertrophy of several of the bones of the same subject, presented by Sir James Paget, the President of the College. The valuable specimen of recovery from a fracture of the upper lumbar region of the spine, which occurred twenty-seven years before death, lately presented by Mr. T. Carr Jackson, is not sufficiently macerated to be included in the list of finished preparations. Mr. Spencer Wells, a member of the Council, has recently presented a considerable collection of pathological specimens.

In the Osteological Collection the principal additions include a very fine and perfect skeleton of the Nilotic crocodile. The animal, a male, twelve feet long, was shot by the Honourable C. P. F. Berkeley, and presented to the Museum. Particularly large specimens of two species of fish—a sheat-fish (*Silurus glanis*), five feet six inches in length, and fifty-three pounds in weight, and a carp (*Cyprinus carpio*), twenty-seven pounds in weight,—both from Berlin, have been presented by Lord Odo Russell, Ambassador to Germany, through Mr. Frank Buckland. They have both made excellent and instructive skeletons.

The Museum has profited by the late expedition to observe the transit of Venus at the Island of Rodriguez. A fine series of bones of the extinct dodo-like bird peculiar to that island, called "solitaire" (*Pezophaps solitarius*), being part of the collection made by Mr. H. H. Slater, naturalist to the expedition, has been presented by the Royal Society, to which body the scientific work of the expedition and the distribution of the collections was entrusted.

The visit of his Royal Highness the Prince of Wales to India has also been the means of enriching the collection by skeletons of tigers and bears. These are particularly acceptable, as the skeletons of these animals already in the Museum are of individuals which have died in captivity in this country, and therefore not very favourable examples for osteological comparison. Owing to some unavoidable delay in unpacking them, they are not yet ready for exhibition.

The Collection of Human Crania has received many valuable accessions during the year, particularly in a series of ten skulls of natives of the New Hebrides Islands, lately rendered notorious as the scene of the lamentable death of Commodore Goodenough, R.N. Three of these skulls were collected by Dr. Corrie, Surgeon to H.M.S. *Pearl*, and forwarded direct to the Museum; and the remainder by Captain Goodenough himself, and sent by him to Colonel Lane-Fox, President of the Anthropological Institute, by whom they were presented to the College. Their anatomical peculiarities, which are very marked, have formed the subject of a memoir read a few days ago at the Anthropological Institute by Mr. G. Busk, F.R.S., a member of the Council.

The body of an ancient Egyptian mummy of the twenty-sixth dynasty, about 400 B.C., which was unrolled in July last at Stafford House, has been presented by the Duke of Sutherland, and articulated as a skeleton.

Mr. Alban Doran, F.R.C.S., Assistant in the Museum, has formed a very interesting collection of the auditory ossicles of various species of animals, which is the most perfect that has

been brought together. All these minute but highly characteristic bones, which have hitherto been hidden in the recesses of the crania of the specimens in the Museum, have been extracted and displayed in such a manner as clearly to show their distinctive peculiarities. Sir Victor Brooke, Bart., and Professors Parker and Garrod have made contributions to this series. Mr. Doran has lately communicated to the Royal Society a memoir describing the peculiarities of the auditory ossicles of the orders of primates, carnivora, rodentia, and ungulata.

The Series of Normal Human Anatomy has been continued by several elaborate preparations, showing the distribution of the nerves, made by Mr. William Pearson. Some beautiful injections of the placenta of several animals, illustrating the views of the donor, as expressed in his recent lectures at the College, have been presented by Professor Turner, of Edinburgh.

In the new department of surgical instruments, Sir William Fergusson, Bart., has presented, among other instruments of interest, a series of early forms of lithotrites, including some designed and constructed by himself.

The number of visitors to the Museum during the past collegiate year is represented by 6493—a considerable increase over former years.

The collection must all be dispersed at once, owing to the approaching primary and pass examinations.

FROM ABROAD.

Pessaries.

At a recent meeting of the Société de Thérapeutique (*Gaz. Hebd.*, July 17), Dr. Garral presented a new pessary, which he termed the "flat ring elastic pessary." He had found that ring pessaries with rounded edges, brought in contact with the internal surface of the vagina, do not always admit of exact application over a sufficient extent of surface, and are liable to glide away. The ring, moreover, is liable to assume the vertical position, instead of remaining horizontal, and thus to present its upper portion to the os uteri. To remedy these inconveniences, M. Garral has had elastic ring pessaries constructed which are flat, light, and of small size. They are lighter and less thick than the old rings, and possess, on this account, a double advantage. Being more raised, they compel a reflexion of the vagina towards the uterus, so that this canal loses so much of its length, maintaining the organ more in its physiological position. The flat rings being more hollowed out than the round, the os uteri has more space for its lodgment, especially when enlarged. These rings are easily elongated by compression at opposite points of their circumference, rendering their introduction easy by the patients themselves.

M. Delioux stated that he was of opinion that the cases are very few in which pessaries are required, and he could only understand their utility when there is an enormous prolapsus uteri with eversion of the vulva. As a general rule, their utility is very dubious, and M. Delioux mentioned that Dr. Guéneau de Mussy is very much of his opinion, preferring sponges hollowed out in shape of mushrooms. M. Delioux himself prefers a simple plug of pretty firm wadding. With this, a well-made hypogastric belt, and injection of tannin or alum, the walls of the vagina contract so as to hold the uterus. As engorgement of the cervix uteri is the chief cause of the prolapsus, it is to the treatment of this our attention should be chiefly directed. MM. Créquy and Dujardin-Beaumetz have both found this new pessary to act admirably. M. Moutard-Martin shared M. Delioux's scepticism as to the utility of pessaries; and the fact that this new one is stated to be capable of retention for a long time is, in his opinion, a bad feature, likely to give rise to the production of ulcerations and vegetations. For many years past he has employed little bags of muslin, three or four centimetres long, equal in size to three fingers joined together. These are incompletely filled with linseed meal and some powder of oak bark, and dipped in tepid water immediately before introduction. As a long thread is attached which hangs out beyond the vulva, the patient herself passes in a new bag every morning, and removes it in the evening. M. Vigié stated that he had prepared for M. Guéneau de Mussy, in order to prevent the sponges he uses becoming putrefied, sponges soaked in paraffin. M. Delioux sees no advantage in this, as the pessary or plug (which always should be introduced by the practitioner himself with the aid of Fergusson's speculum) should be changed morning and evening, or, in case of necessity, at most at the end of two or three days. M. C. Paul believes that this pessary of M. Garral possesses certain advantages—its breadth allowing the uterus to enter completely within it, and to remain suspended, so to say, in a state of equilibrium. For its application, it requires that the vagina should be in a relaxed condition; but if the caoutchouc has been well prepared, this pessary may remain *in situ* two or three days without inconvenience. A necessary condition is that the uterus should be in a state of retroversion, for if there is anteversion the pessary is of no use. M. Paul has found the linseed vaginal cataplasms of M. Moutard-Martin of utility in uterine affections. In a case of metro-peritonitis, relief was produced very rapidly. The bags must not be too large, or their introduction becomes difficult. M. Bucquoy related that while an *interne* of Louis he had seen true cataplasms applied to the vagina. They were made thin and rolled around a small stick, which, having served as a means of introducing them, was withdrawn. This practice, which was an excellent one, seems to have entirely fallen into neglect, M. Fournier, of the Lourcine, being the only person who now employs vaginal cataplasms. M. Fournier makes use of voluminous cataplasms which quite distend the vagina; and he states that he was first induced to resort to this practice by having observed the effects which had several times resulted from his pupils having forgotten to remove large wadding plugs that had been introduced. In each instance these, so far from having acted prejudicially, had proved of service in treating vaginitis. M. Moutard-Martin stated that he employed his bags in descent of the uterus, and especially in anteversion. It is in this case essential that the practitioner should introduce them himself, in order that they may be passed into the posterior *cul-de-sac*. The desire to pass urine and the difficulty of walking at once cease; and he never employs any other pessary.

Topical Applications in Surgery.

A discussion recently took place in the Philadelphia County Medical Society (*Phil. Med. Times*, April 29) upon a paper bearing the above title, which was read by Dr. Allen, Surgeon to the Philadelphia Hospital. The tendency of the discussion was chiefly in regard to such applications made to the ear; but Dr. Allen's paper itself took a more general view of the subject, treating of the operation of these agents especially with respect to their strength as influenced by the elements of the tissue acted upon. Each locality of a given tissue exhibits, he observes, its own method of responding to the agent. Thus, for ordinary use in the larynx a solution of sixty or eighty grains of nitrate of silver or more to the ounce is constantly resorted to; while applied to the urethra such a solution would cause violent, or even destructive, inflammation. The reason of the contrast is found in the structure of the muco-perichondrial membranes of the larynx, as compared with the thin, sensitive urethral membrane, with its outlying cavernous tissue, and its abundant muscular endowment. The highly organised conjunctiva will not allow of a strength of solution that may be freely applied to the lowly organised muco-periosteum of the middle ear. Gum-tissue responds languidly to local impression by reason of the close union between it and the bone, and may be placed in the same group with the lining membrane of the middle ear. The tincture of iodine employed by the dentist is supersaturated—a strength sufficient to vesicate the surface of the skin. The adenoid tissue of the roof of the pharynx and the tonsils is also extremely resistant. Excessively strong applications are here necessary, the ordinary tincture of iodine (or, indeed, any ordinary preparation of iodine) being of no avail. Saturated solution of nitrate of silver, fuming nitric acid, or pure carbolic acid, can be used in these localities for indurations, etc., with excellent results.

"In this connexion may be mentioned the coarsely follicular structure of these growths, especially of the tonsil, in connexion with topical applications. I have been in the habit of applying agents of concentrated strength as above described to these pockets. It occurs to me that this is the proper method of reaching the seat of trouble, instead of 'swabbing' rudely the exposed surface. By taking a cotton-carrier (such as is employed in treatment of the ear), and soaking the cotton tip in the selected agent, a thorough application to the *entire* surface can be made in a few minutes. Such treatment is especially applicable to the chronic enlargement so common

with these glands. Where it is advisable to remove the tonsil by London paste, it can readily be accomplished by the same procedure. To apply these substances to the roof of the pharynx with precision, the aid of the rhinal mirror is required. I have found such treatment little complained of—much less so, indeed, than the rasping method (by instruments introduced through the nose), as recommended by Meyer."

In the discussion which followed, Dr. Laurence Turnbull observed that, so far as related to the ear, he could not quite agree with the lecturer that there was so great a distinction between the effects of remedies applied to the eye and to the middle ear; for the eye, in diseased conditions, would sometimes bear very strong applications. Nor could he admit that the middle ear is almost as insensible to irritating and stimulating agents as the mucous membrane of the mouth. Much depends upon the mode of procedure. If the application is limited, and made with great care, the parts being afterwards cleansed, or the agents neutralised, all will be well; but if strong solution of persulphate of iron, chromic acid, or nitrate of silver, are injected or poured into the meatus, to pass through a perforation into the delicate and important region of the middle ear, there is much risk of injury. Even simple catarrhal inflammation is accompanied by periostitis; and when from any cause this becomes serious, the inflammation may, through the roof of the tympanum, reach the middle or posterior lobe of the cerebrum. The posterior wall also may become affected after a severe application, the cerebellum, and not unfrequently the lateral sinus, becoming implicated. The strong solutions of nitrate of silver (80 to 240 grains to the ounce) are said by Schwartz and others to be of excellent service, but they may also do great harm. Immediately after using strong solution of the nitrate, the ear should be syringed out with a solution of common salt, which should penetrate wherever the caustic has gone—the insoluble chloride of silver thus formed coming away in large flakes. Dr. Turnbull has known a case of death, and another of facial paralysis, follow after a strong solution of the nitrate had been poured into the meatus, so that recklessness in this procedure must be guarded against. As to burning away enlarged tonsils by a paste of caustic lime, he has found it a very tedious process, and he much prefers, as a more speedy and more efficient remedy, the removal of a portion with the knife. Dr. Allen explained that he did not recommend pouring strong solutions into the meatus, but their careful application, after the ear had been washed out, to the desired locality, with the aid of the speculum—keeping the application, in fact, under perfect control. Chronic otorrhœa is often kept up by polypoid granulations, and these he never removes by cutting, but, after washing out the ear, applies Monsell's solution on cotton directly to the part. He has also used with good effect in otorrhœa, especially when following scarlatina, two drachms of salicylic acid dissolved in a pint of water by the aid of phosphate of calcium. He often gives this to patients to use themselves, as a douche.

Dr. Strawbridge said that in his own experience, which had been very large, he had often been perfectly astonished at the small amount of pain induced when strong (say a drachm to an ounce) solutions of the nitrate had been employed, and had run through the Eustachian tubes to the throat. Dr. Burnett observed that in chronic ear-disease, such as otorrhœa, the mucous membrane is less sensitive to topical applications than in the normal state. He had often used the saturated solution (480 grains to the ounce), and found that it only caused a slight burning, referred chiefly to the Eustachian region. He has, however, left off the use of chromic acid in crystals for the destruction of polypi, on account of the long-continued pain it causes. For this purpose he now uses with complete success Merck's chloro-acetic acid, applied by means of a small pledget of cotton to the part to be destroyed, while the ear is perfectly illuminated—little pain being caused when the acid is skilfully applied without touching the meatus, and this being readily removed by syringing with warm water. Dr. Winslow, who has had much to do with ear affections at the Children's Hospital, has not found the chloro-acetic acid cause so little pain as stated above, while, owing to its volatile nature, it causes temporary irritation in the pharynx. He has never found anything beyond a slight burning attend the use of the nitrate. Dr. Risley explains the insensibility of the ear to strong washes by the presence of profuse muco-purulent discharges in these cases, which are cleansed away with difficulty. He had repeatedly passed solutions of nitrate of silver and chloride of zinc through the Eustachian tube into the throat, producing unpleasant symptoms, without any bad results. Dr. Hall has also found but little pain caused by strong caustic agents in the middle ear. He does not think that the nitrate has much caustic effect, as polypi continue to grow under a forty-grain solution. From its affinity to albumen the nitrate does not reach beyond the surface. He has found a twenty-grain solution of chloral hydrate a good application in some cases of otorrhœa. Dr. Atlee spoke of the value of the nitrate in the solid form. It causes little pain, and when applied to a very sensitive or raw surface, as in granular inflammation of the os uteri, it relieves pain by forming a protective film of coagulated albumen. Owing to its superficial action, and its combination with the tissues as an albuminate, it should not be regarded as a caustic.

Turning to the more general view, Dr. Atkinson inquired as to the best means of treating pruritus, as he had found Dr. Bulkley's formula (chloral and camphor, of each a drachm, rubbed up with an ounce of glycerine), although excellent, only temporary in its effects. Dr. Duhring said that he gives the preference to carbolic acid over all other remedies, prescribing a solution of suitable strength in glycerine and water—usually five minims to the ounce, and not exceeding fifteen minims, beyond which strength it becomes irritating. He, however, relies most on internal treatment, varying with the case. He cannot imagine how nitrate of silver can be considered other than a caustic. In lupus vulgaris the best means of treatment is to destroy the nodules of cellular formation by repeated applications of the solid stick; and in molluscum sebaceum, the recurrence of the tumours is best prevented by incising them and applying a point of nitrate to the base. Dr. Castle pointed out the effect of the nitrate in granular conjunctivitis and other affections of the eye as full proof of its caustic nature.

REVIEWS.

Food Chart, giving the Names, Classification, Composition, Alimentary Value, Rates of Digestibility, Adulterations, Tests, etc., of the Alimentary Substances in General Use. By R. Locke Johnson, L.R.C.P., etc. London: Hardwicke and Bogue, 192, Piccadilly, W.

A table or chart is like an ever open dictionary of one page, in which the student finds his information well arranged and condensed; for limited space forbids tediousness. There is, however, the opposite defect: that there may not be space to convey the desired information plainly. One use of a table is to adorn the walls of the lecture-room or laboratory, so that the wandering eye may get information when it least aims at it. The author of the table before us has attempted a great deal, and has succeeded to a certain extent; but we suspect that much of the information he has thought fit to give is useless. What, for instance, is the use of the hackneyed old table of the rate of digestibility or mean time of chymification of different kinds of food, after Beaumont, founded on the experiments on Alexis St. Martin? "Reasted beef without bone," we are told, is digested in three hours; "sucking pig, roast," in two hours thirty minutes; roast pork, five hours fifteen minutes. Eight kinds of cheese are said to vary from three to four hours. When different times are given for bread, butter, cheese, beef, carrots, potatoes, and the other ingredients of a dinner, does anyone seriously believe that the chyme formed passes out of the stomach in regular order? Moreover, such a table takes no notice of the "quality" or of the "quantity" of the articles designated. Will not, for example, a small piece of tender goose be more digestible than an overdose of tough hare? In the body of the table, which treats of the composition of alimentary substances, adulterations, and tests, the author has attempted to put into a table what can only be done in a book; but as regards details of analyses, the tabular form is well adapted for them. In treating of "rhubarb" the author gives the constituents of the medicinal root instead of the refreshing leaf-stalk.

Cup and Platter; or, Notes on Food and its Effects. By G. Overend Drewry, M.D., and C. Bartlett, Ph.D., F.C.S. London: Henry S. King and Co. 1876. Pp. 159.

This is not a complete treatise on food and its varieties, abounding in facts and figures like the admirable lectures of Dr. Letheby, but is rather a series of "notes." As it seems

to us, the authors presume their readers to be already acquainted with the subject, or to have access to other works; and these notes give a kind of running commentary, calling attention to the chief points to be learned for practical use, and to the chief errors that infest the popular mind. The writers are often vague, but not tedious. They refute the popular idea of the necessity of absolute purity in water, and show that hardness has its compensation: they show up the folly of lactometers; they revile such of the "infants' foods" as are merely baked flour, and praise condensed milk; they treat us to an account of the horrors of the soft, tender, over-fatted flesh-meat which abounds at Christmas. This leads us to wish that they would visit some countries where the fibre of flesh is tenacious and destitute of fat, before they write a new edition. They say a good word for good beer and its effects in promoting digestion, though, alas! they speak as if the table-beer which nourished their childhood had been mere swipes; they tell us nothing new about wine, but they recognise its aldehydes and ethers, and repudiate the nonsense written concerning sulphate of potass in sherry. On spirits and stimulants generally what they say is sensible enough, but not novel. They seem to crave for a kind of censorship "to expose the unblushing falsehoods put forward by advertisers of all kinds of food," and long for the day when marvellous virtues shall no longer be ascribed to corn-flour and jelly. If they live to that day we fear they will be somewhat tired of life.

Philosophy and its Foundations; with an Appeal to Scriptural Psychology. London: Simpkin, Marshall, and Co. 1876. Pp. 94.

If we may quote from the preface, "The things discussed are what are called 'subject and object' (that is, thought and being, mind and matter), and the relation in which these stand to each other. This of course introduces, *first*, the question as to the foundations of mind (intellect—what is it? and intelligence—on what is it based); *second*, the phenomena of mind (perception and imagination, memory and association, and all the details of reason, such as judgment, inference, and moral sense); and, *thirdly*, other collateral questions of deepest importance, such as the *data* on which we pronounce and must pronounce for an external world, the *data* on which we ground our ideas of space and of time, the *data* on which we envisage the peculiar characteristics of cause, and the *data* on which we rest the plea of necessity in the relation of effect as the phenomenon of cause." It will thus be seen that this is a book for those whose thoughts are wide and deep, more especially as the foregoing part leads up to a consideration of the Scriptural doctrine of the Ψυχή, σάρξ, πνεῦμα, and their respective functions, animal, moral, and spiritual. The book is solid reading; but not more obscure than its subjects render unavoidable.

The Education and Training of the Feeble in Mind. By J. Langdon Down, M.D. Lond., etc. London: Lewis. 1876. Pp. 17.

A reprint from the *Social Science Transactions*, well worthy the perusal of all who have children of defective minds to treat or to maintain.

Sanitary Work in Villages and Country Districts. By George Wilson, M.A., M.D., etc., Medical Officer of Health, Mid-Warwickshire, etc. London, 1876. Pp. 42.

A thoughtful and well-considered account of sanitary practice as applicable to villages and scattered habitations. He shows how easily some dangerous nuisances might be abolished by a little care and common sense, and how difficult it is to find those elements. We fear he is a little too lenient to *dumb wells*, which have the double imperfection of wasting sewage, and of allowing it to find its way into drinking-water.

The New Medical Faculty of the University of Geneva.—The arrangements for this new Faculty are now completed, and the following are the names of the professors:—Schiff, physiology; Laskowousky, anatomy; Zahn, pathological anatomy and histology; Révilliod, clinical medicine; Julliard, clinical surgery; D'Espine, general pathology; Reverdin, general surgery and operations; Prévost, therapeutics; Dunan, hygiene; Gosse, medical jurisprudence; Vaucher, midwifery and diseases of women; Vulliet, polyclinic; Brun, pharmacology; and Olivet, psychiatry.—*Berlin. Klin. Woch.*, June 19.

GENERAL CORRESPONDENCE.

THE TIMBROMETER.

Letter from Mr. Charles S. Roy.

[To the Editor of the Medical Times and Gazette.]

Sir,—My attention has been directed to a paper in your issue of June 24, entitled "The Timbrometer, etc.," by Ernest Houston Forjett, etc. In that paper Dr. Forjett says in so many words that "the instrument was designed by him," and the way the paper is written leads one to believe that the ideas are his own. Such is not the case, however. Without going into details I may say distinctly that Dr. Forjett got the ideas from me, and that he first saw the instrument in my hands. While living with him last winter in the Edinburgh Royal Infirmary as Resident Physician, I invented and used various instruments to test the theories of such writers as P. Niemeyer, Skoda, Gerhardt, etc., and some of these instruments I showed, after repeated requests on his part, to Dr. Forjett. I trusted to his sense of honour to make no improper use of what I showed him. At that time he asked my leave to have one of these instruments made for his own use. This instrument I was astonished to find described by him in your paper.

What I have asserted above can easily be attested by any of last winter's residents at the Edinburgh Royal Infirmary.

I am, &c.,

Charles S. Roy.

Brown Institution, Wandsworth-road, S.W., July 10.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 23.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

On Ingravescent Apoplexy: a Contribution to the Localisation of Cerebral Lesions.

Dr. Broadbent remarked that Sir Thomas Watson, following Abercrombie, described three forms of apopletic attack: the first sudden, with loss of consciousness and stertorous breathing; the second beginning with sudden pain in the head, faintness, and vomiting, followed by gradually increasing coma; the third characterised by sudden hemiplegia, without loss of consciousness. To the second of these modes of attack the term "ingravescent" had been applied. Its characteristic features were absence of loss of consciousness at the outset, gradual accession of symptoms, and speedily fatal termination; and the cause was invariably found to be a large extravasation of blood. The object of the communication was to show that not only is the hæmorrhage large in these cases, but that its situation is, within certain limits, constant, and also that an anatomical explanation can be given of the phenomena of the attack. The seat of the hæmorrhage was described as being the outer side of the extra-ventricular corpus striatum (lenticular nucleus of foreign writers), between this ganglion and the "external capsule"; and the explanation offered was as follows:—The large amount of blood extravasated arises from the large size of the vessels here found, and from the slight resistance opposed to the effusion; and the absence of loss of consciousness is due to the fact that there is little laceration of fibres or compression of the brain. The situation and relations of the clot are best seen by opening out the fissure of Sylvius, when the convolutions of the island of Reil will be found to be obliterated and spread out over the effused blood. Afterwards, by the usual sections, the further course of the extravasation into the ventricle or into the substance of the hemisphere can be traced. The following cases were related:—*Case* 1.—A man, aged fifty, was suddenly seized with giddiness and slight mental confusion; left hemiplegia was early noticed, but there was no loss of consciousness. He was brought immediately to St. Mary's Hospital; and, though a little excited, he gave an accurate account of the circumstances attending the attack. There was left hemiplegia, with relaxation of the paralysed limbs; no

distortion of the face, but extreme conjugate deviation to the right of the head and eyes; marked hemianæsthesia affecting the face and body as well as the limbs; slight reflex action on tickling the left sole. The pulse was 108, long and firm, but weak. A tendency to sleep became manifest: and the nature of the case being recognised, an attempt was made to bleed. Three veins were opened in the arms, but only a trifling amount of blood could be obtained; the jugulars could not be made to fill sufficiently, and vomiting interrupted further proceedings. The patient continued to sleep, but could be roused till about eight hours after the attack, when stertor suddenly set in; he was then found to be quite unconscious and in about twenty minutes he died. During the final stertor, the lateral deviation of the eyes ceased; the heart was felt to beat for seven minutes and a half after cessation of respiration. On post-mortem examination, hæmorrhage of large amount was found to have taken place between the corpus striatum and external capsule, flattening out and distending the convolutions of the island of Reil, forming a cavity along the outer side of the corpus striatum and thalamus two and a half or three inches long, and penetrating the lateral ventricle by a fissure extending almost the entire length of its outer angle. All the ventricles were filled with blood. There were hæmorrhages into the lungs, spleen, and liver. The kidneys were contracted and granular. *Case* 2.—A woman, aged forty-five, had slight paralysis on January 8, 1871, which soon passed off. On the 11th she suddenly lost power in the left limbs, and vomited. She slept almost continuously for two or three days, waking at intervals, and then appeared to be quite sensible. The urine and fæces were passed involuntarily, and bedsores formed. After about three weeks the patient was brought to the hospital, and was then found to have left hemiplegia, with some distortion of face and hemianæsthesia. She died three days after admission. On post-mortem examination, hæmorrhage was found to have occurred between the corpus striatum and the external capsule, bulging out the island of Reil, and dissecting off from the hemisphere both corpus striatum and thalamus, and displacing them inwards. The blood penetrated the corpus striatum about its middle for a short distance; it did not reach the ventricles. Stenosis of the mitral orifice, embolisms in the spleen, and contracted granular kidney, were also found. *Case* 3.—A cabman, aged sixty, who nine months previously had had a "fit," was noticed by a policeman, about 1 a.m., to be sitting on the box, apparently drunk. He was ordered to get down; answered, "All right," and obeyed; got into his cab, and was driven to a police-station. Here he vomited matters smelling of spirit, and was considered to be drunk by the medical officer who was called in, till left hemiplegia became obvious. When first seen at the hospital, some hours later, he was unconscious, and had less hemiplegia, with rigidity and hemianæsthesia. Reflex movement could be provoked in the paralysed limb. Apparently there was deviation of the eyes. He died on the day after admission. Hæmorrhage had taken place between the corpus striatum and the external capsule, dissecting off the ganglion and the thalamus from the hemisphere, and entering the ventricle by a fissure in its outer angle, at about the middle of its length. The body of the intra-ventricular corpus striatum was thus cut off from its tail and from the thalamus. The clot in the ventricle was not very large, and blood had not entered the other ventricle; that in the hemisphere extending forwards nearly to the apex of the frontal lobe. The kidneys were contracted and granular, and the heart hypertrophied. *Case* 4.—A woman, aged fifty-six, previously healthy, began to drop parcels which she was carrying, and felt giddy. She walked some distance, sat down, and became unconscious. When brought to the hospital an hour later, she was apparently unconscious, had left hemiplegia, with rigidity, and continual movements of right limbs. She could be roused, and then answered intelligently. She died two days later. Hæmorrhage had occurred in the situation described in previous cases, taking a direction forwards into the frontal lobe, dissecting off the corpus striatum, and bursting into the ventricle. *Case* 5.—A coachman was grooming his horse on the evening of December 10, 1875, when he felt a numbness in the right arm; he did not fall, or lose consciousness. Hemiplegia came on gradually in the course of an hour; he vomited, and afterwards went off into a heavy sleep. When brought to the hospital next day, his mind was confused, his speech rapid and indistinct and exactly like that of a drunken man, and he had right hemiplegia with lateral deviation of the eyes (not of the head), and very marked hemianæsthesia. He improved a little, but on the 15th the temperature rose rapidly, being always a degree higher on the paralysed side; and he died on this day. The hæmorrhage in this case was between the external capsule and the ganglia, but further back than in any of the cases previously reported, and the blood had penetrated into the ventricle between the thalamus and the intra-ventricular corpus striatum, and had also dissected up the posterior end of the thalamus from the segmentum, and damaged the superior corpus quadrigeminum. Dr. Broadbent remarked that the occurrence of extensive extravasation of blood in the situation described has been noted by Charcot, Bouchard, Bourneville, Prévost, Duret, and others, and the cases related connected it with the ingravescent mode of attack. Duret had shown what the author had observed independently, that the vessels entering the brain at the anterior perforated space and in the fissure of Sylvius for the supply of the corpus striatum, run up between the grey substance of the ganglion and the external capsule; some of them are of large size, and their mode of termination predisposes to rupture. This is the great cause of the liability to large hæmorrhage. The inner layer of the external capsule consists of fibres arising in cell-processes of the corpus striatum, but it is detached with great facility, offering therefore little resistance to extravasation of blood. The Sylvian fissure again affords room for the expansion of the island of Reil, which lies immediately upon the capsule—a fact which diminishes the pressure, and not only permits the hæmorrhage, but prevents compression of brain-substance by the effused blood, thus obviating early coma, and explaining the ingravescent mode of attack. In its further course the extravasated blood must tear fibres, and it is remarkable that it does not burst through into the fissure of Sylvius, from which it is separated only by a thin plane of fibres, or enter the temporo-sphenoidal lobe. The fibres torn are those of the corona radiata as they enter from the central ganglia to pass to the hemisphere; and it is probable that the intersection of the fibres of the external capsule with these, and the passage of minute arteries and larger and more numerous veins, afford minute openings by which the blood makes its way. Ultimately the blood may penetrate the ventricles or split up convolutions.

On the Causation of the Water-Hammer Pulse, and its Transformation in different Arteries, as illustrated by the Graphic Method.

Dr. Galabin contributed a paper on this subject, in which he stated that the explanation of the characteristic pulse of aortic regurgitation now generally received differed but slightly from that given by Sir Dominic Corrigan in his first paper on the subject, published in 1832. This explanation was that the aorta and adjoining arteries were rapidly emptied during diastole, in consequence of the pouring back of the blood into the heart, while, at the same time, a large wave was thrown into them by the dilated and hypertrophied left ventricle. The peculiar quality of the pulse was, therefore, regarded as being simply the effect of an ample wave being thrown into an empty artery; and the reason why it was developed by raising the arm was considered to be merely that the radial artery is thus rendered more empty during diastole, because the reflux of the blood is then assisted by gravity. The most diagnostic quality of the aortic pulse, however, was that from which its expressive title of water-hammer pulse had been derived—namely, the extreme suddenness in commencement of the wave. By this character it might be recognised, even when not very ample, as in cases in which mitral was combined with aortic regurgitation. It was, moreover, solely this quality of suddenness which was increased on elevating the arm; since the sphygmograph showed that the height of the up-stroke was generally not increased, but diminished, by this means. The hypertrophy of the heart would not account in any degree for the suddenness of the wave, for an hypertrophied muscle commenced its contraction more gradually than one which was weak, and the cardiograph showed that this was true in the case of the heart. Thus, among the characters of the aortic pulse which were manifest to the finger, that which was most diagnostic received no explanation whatever from the common theory of its causation. Sphygmographic tracings of an aortic pulse showed a flatness in the diastolic portion of the trace, implying a corresponding emptiness of the artery when regurgitation was great. In slighter cases, however, this flatness might be absent, even when the pulse appeared characteristic to the finger, and then the only special quality in the trace was the suddenness of the up-stroke. The dicrotic wave, again, was relatively smaller when regurgitation was free,

but its magnitude depended on many other things besides the integrity of the aortic valves, and it might be quite as large as usual in a pulse which, to the finger, had a distinct aortic quality. Tracings were shown, illustrating this, and also the effect on the aortic pulse of fever, under the influence of which the pulse might become hyperdicrotic, while the magnitude of the dicrotic wave was still relatively small. The sphygmograph showed also another peculiar quality about the pulse-wave of aortic regurgitation—namely, that it varied greatly in shape in the different arteries. Tracings were exhibited from several arteries of the same patient, showing that in the carotid the wave was broad, square, and not sudden, while in the dorsalis pedis it was extremely lofty and sudden. Generally, the quality of suddenness was developed nearer to the heart, and was manifest in the radial artery, but it was never marked in arteries close to the heart. Of this several other instances were shown. Thus, the water-hammer quality of the aortic pulse did not exist in the pulse-wave as it was thrown into the aorta, but was gradually developed as the wave receded from the heart. In seeking the mechanical explanation of this change in the pulse-wave, by which its front became progressively steeper, some analogy might be found in the similar change in waves on the surface of water as they approached the shore, and in the tidal waves on certain rivers, by which it acquired a steep and broken front, known as the "bore." In these instances the explanation was the same—namely, that the velocity of the wave was greater, the greater the depth of water. By a well-known mechanical principle, each portion of a wave might be regarded as moving, to some extent, like a separate wave. Hence, as the water became shallow, and the depths at the crest of the wave, therefore, perceptibly greater than the depths at its base, the summit of the wave moved faster than its front, and tended to overtake it, so that the front of the wave grew steeper and steeper, till it curled over and broke. In the case of pulse-waves in elastic tubes, it was shown, both by calculation and experiment, that the velocity was greater the greater the tension. Since, therefore, tension was greatest at the summit of the wave, there would be a tendency for the summit to travel fastest, and for the front of the wave to become progressively steeper. This tendency would be proportional to the difference between the maximum and minimum tension. This must hold true, to some extent, in the normal pulse; and accordingly it was found that normally, as the wave proceeded, its up-stroke retained its steepness much longer than its down-stroke, and more and more of the volume was piled up at the front of the wave. Tracings were shown to illustrate this. When aortic regurgitation existed, tension was very high at the systolic part of the wave, and very low during the diastolic portion; the change in shape was, therefore, much greater than in the normal pulse, and the front of the wave grew actually steeper as it proceeded. The water-hammer quality of the aortic pulse was, therefore, produced by the occurrence in an exaggerated degree of a change in shape of the wave, which happened to some extent even in the normal pulse. Since the suddenness of the wave often reached its maximum at a point not far from the smallest arteries, the motion of the blood was probably unequal even in the capillaries, and hence the great failure of nutrition which accompanied aortic regurgitation might be accounted for.

Dr. Broadbent could not see the analogy between the wave of tidal rivers and that of the pulse. In rivers there was an up-and-down motion; in the pulse the movement was one of propulsion. The size of the radial pulse when the arm was elevated did not bear Dr. Galabin's interpretation. The height of the pulse depended on the column of blood sent to fill the vessel; and when the arm was raised, the whole vessel had to be filled before the sphygmograph was affected.

Dr. Handfield Jones showed a tracing illustrating the conditions when the arm was depressed, horizontal, and vertical.

Dr. Galabin did not dispute the ordinary theory, but only wished to supplement it.

Observations on Box.

An abstract of the following paper was read: —"Observations on Box (*Buxus sempervirens*); with special reference to the True Nature of Tetanus": by Sydney Ringer, M.D., Professor of Therapeutics at University College; and William Murrell, L.R.C.P., Demonstrator of Anatomy at University College. The authors were induced to undertake an investigation of the physiological action of box from the frequency with which it has been recommended in the treatment of hydrophobia. The views expressed as to the nature of box are founded partly on experiments made on frogs under buxus, and partly on the results of an investigation of the properties of gelseminum. The paper is divided into three parts. 1. Introductory: The history of box, especially with reference to its use by the older writers on medicine in the treatment of hydrophobia. 2. Experimental: The action of box on the nervous system of frogs. 3. A consideration of the true nature of tetanus, illustrated by experiments on reflex action. The first part, being purely introductory and historical, requires no detailed notice. In the second part details are given of experiments performed on frogs before or after the injection of box. It is shown that that drug causes paralysis and then tetanus. The conclusions resulting from these observations are—(1) that the initial paralysis is cerebral in its origin: (2) that the drug also produces paralysis and tetanus by its action on the spinal cord; (3) that the sensory and motor nerves and the muscles are unaffected. In the third portion of the paper the authors discuss the nature of tetanus. They were led by their experiments to the conclusion that the theory of tetanus being due to an excited condition of the cord is erroneous and misleading. They, on the contrary, regard tetanus as an expression of depression or paralysis of the cord; they show that if the symptoms induced by the injection of strychnine were due to mere stimulation of the cord, normal reflex action would be not only retained, but would be more vigorously performed. Such, however, is not the case; for in frogs poisoned by this drug irritation of the posterior extremities induces, not a co-ordinated movement resulting in the withdrawal of the leg, but a general contraction of the muscles of the body, causing powerful extension of the limbs. This is regarded as evidence that the impression, instead of being limited in its action to that portion of the cord on which it impinges, is widely diffused through its motor tract, the increased diffusibility being caused by diminished resistance; in other words, by depression or paralysis. It has been stated that box causes, first paralysis of the limbs, and then tetanus. Such a condition, according to existing theories, must be due to a very singular combination of circumstances—viz., depression of the reflex function of the cord, followed by stimulation; the stimulation continuing simultaneously with a rapid impairment of normal reflex action. It would, the authors consider, be more rational to conclude that the drug first depresses the cord so as to diminish reflex action, and then causes tetanus by paralysing its resistive force. In health, when an afferent stimulus is conducted along a nerve, its effects are limited; but tetanising agents, by weakening or destroying the resistive power of the cord, facilitate the diffusion of the impulse, and favour the excessive generation of nervous force. It is obvious that, as box weakens reflex action before producing tetanus, a larger dose is required to lessen the resistance of the cord than to diminish the reflex function, and the absorption of a larger quantity of the drug is necessary for the production of tetanus. In the case of frogs poisoned by box, even when the tetanus is very powerful, the paroxysms after a time grow weaker and weaker, till finally they fade away in a mere quiver of the muscles. If tetanus were due to excitement or stimulation of the cord, it is obvious that, as this condition subsides, the tetanic movements should gradually decline, and at last subside, with the restoration of normal reflex action. But, as a matter of fact, this order is never observed, for the tetanic movements continue to grow weaker and weaker, till at last all movement ceases and general paralysis ensues. In those cases in which, during the tetanic paroxysm, the muscular contraction is not greater, or is even less, than an ordinary reflex act, it must perforce be admitted that the tetanus is not dependent on an excited condition of the cord, but solely on its lessened resistance enabling an impression to diffuse itself through the greater part or the whole of the motor tract. It was found that in box-poisoning a strong irritation often excited tetanus, whilst a feeble stimulus produced only a weakened reflex action. It is contended that the explanation of this is that in these cases the resistive power of the cord is but slightly diminished, so that a strong impulse can diffuse itself whilst a weaker is confined to that part of the cord naturally associated with the stimulated nerve. Moreover, soon after the injection the tetanus is limited to the irritated limb, because, the resistive power being but sligtly weakened, the diffusion of the impression through the cord is correspondingly limited; but as absorption continues the resistive power grows weaker and weaker, and the impressions diffuse themselves more readily and widely, until at last the whole or a greater part of the body

becomes tetanised. In the course of some observations made with the view of determining the duration of reflex action in frogs after division of the medulla, the authors obtained some curious and unexpected results, which strikingly confirmed their theory of tetanus. They found in unpoisoned frogs, whose brain had been destroyed by pithing, that soon after the commencing decline of reflex action a condition of tetanus was observable. The tetanic symptoms were readily produced by gently lifting the animal and allowing it to fall on its back, or by striking it with the forceps on the cervical region. The tetanus varies considerably in its intensity in different cases. Sometimes the legs, though strongly shot out, were again quickly withdrawn; but in several instances the paroxysms, when at their height, lasted from a quarter of a minute to a minute, the limbs being so rigidly extended that the animal could be taken up by its hind legs and held out horizontally. In each of these paroxysms there was a far greater discharge of nervous force than occurs in a normal vigorous reflex act, and therefore, according to current views, the cord would be said to be excited. That this explanation is inadmissible is shown by the fact that tetanus is at its height at a time when the normal reflex action is much impaired, and immediately before its total abolition. The duration of tetanus varies, being dependent on the persistence of normal reflex action. The details are given of experiments which show that this tetanus is purely spinal in its origin, and an explanation is offered of the mode of production of the phenomena. Soon after systemic death the cord becomes depressed, and, consequently, reflex action is weakened; but with depression of reflex action there is diminution of the resistive power of the cord, whereby impressions cease to be restricted to that portion of the cord on which they impinge, and, spreading widely, cause tetanic movements instead of a normal reflex act. At first, before there is much weakening of the resistance of the cord, a slight stimulation induces a natural reflex action, but as depression of the cord progresses, and the resistive power grows weaker, the tetanic movements become more powerful and are more readily induced. Moreover, it was found in these frogs, at a time when strong irritation was required to excite even slight tetanus, that a very powerful stimulation, such as a succession of blows on the back, would induce tetanus, a condition which was immediately followed by diminished intensity of the ordinary reflex phenomena. The correct interpretation of these facts is that the blows depress or break down the resistive power of the cord so as to weaken normal reflex action, and, by allowing the irritation to diffuse itself more widely, to cause increased tetanus. This view is confirmed by the fact that on striking vigorously and repeatedly a living and perfectly normal frog between the shoulders there is excited at first a simple reflex act, but subsequently the posterior limbs after each blow are shot out in a manner which is distinctly tetanic, although the movements are far less energetic than when these phenomena are observed in pithed frogs on the decline of reflex action. This tetaniform condition occurs only when the shock of the blows has so depressed the cord that all voluntary and reflex action is for the time abolished. The authors, whilst regarding tetanus in all forms simply as an indication of a diminution in the resistive power of the cord, point out that some tetanising agents, such as strychnia, leave the reflex action unimpaired, whilst others depress both the resistive and the reflex power. Some agents—for example, gelseminum—depress the reflex function more than the resistive power, causing considerable paralysis, but slight tetanus. Others—such as box—depress the resistive power early and markedly, and subsequently, and in a minor degree, the reflex function, the result being strong tetanus with slight paralysis. These views on tetanus throw light on the effects of slight chemical modifications of a drug on its physiological action. It is obvious that nerves in their constitution must differ from one another and from the brain and spinal cord, since a given poison may affect one part only, leaving the others *in statu quo*. Strychnia excites powerful tetanus, and in large doses depresses simultaneously the motor nerves; but if converted into an ethyl compound it no longer tetanises, but powerfully paralyses the ends of the motor nerves. By this change in its composition its physiological action is not reversed; for as strychnia it paralyses the constraining or resistive power of the cord, whilst as ethyl-strychnia it paralyses the motor nerves. It is not converted from a stimulant into a depressant, but with the change of its chemical affinities its sphere of action is shifted, and it paralyses the motor nerves instead of the resistive power of the cord.

CLINICAL SOCIETY.

FRIDAY, MAY 26.

R. DOUGLAS POWELL, M.D., F.R.C.P., in the Chair.

(*Concluded from page* 51.)

A CASE OF CEREBRAL TUMOUR IMPLICATING THE CORPORA QUADRIGEMINA.

DR. DUFFIN contributed notes of this case. The subject, a steady, powerful man, aged twenty-five, first evinced symptoms about four months before death. A sense of dragging at the back of the neck was the first sign complained of; the walk became early unsteady, and there were repeated attacks of vertigo. The giddiness was mitigated when the eyes were closed. Headache, at first slight, soon became so intense as to prevent sleep. When first seen, two months before death, the headache was already agonising. The patient could only stagger along with much assistance. When recumbent, he could move his limbs freely at will. As he lay in bed, the head was always thrown back. The muscles of the nucha and the spinal mass were always found tense. There was marked double optic neuritis. Sight, from the first very defective, was soon lost entirely. Hearing was dull, and tinnitus was a marked feature. The man responded, however, to the aërial and skull vibrations of a tuning-fork. The circulation was very slow and irregular. Vomiting was frequent. Intelligence only became obscured about a fortnight before death: drowsiness and nocturnal delirium then set in, and passed gradually into coma. The temperature throughout had been almost normal. On post-mortem examination, the corpora quadrigemina and the pineal gland were found replaced by a glioma. Anteriorly, the tumour sent a nodule into the cavity of the third ventricle; it pushed along the aqueduct of Sylvius, and bulged into the upper part of the fourth ventricle. Absorption of a considerable part of the right optic thalamus had ensued upon pressure. The anterior portion of the right superior peduncle of the cerebellum was also involved. The valve of Vieussens, although much stretched, could be recognised. The tumour could be almost entirely enucleated from surrounding parts. Dr. Ferrier, in a written commentary, confessed the difficulty of distinguishing between the direct and indirect effects of the lesion. From the position of the tumour on the corpora quadrigemina, impairment or abolition of vision might be inferred; but this was often found, independently of the localisation of the disease to that particular region. That vision was affected in some special manner was evident from the vertiginous sensations and disorders of equilibrium, which were more marked when the eyes were open. The vertigo, the disturbance of equilibration, and the tendency to retraction of the head, were special and distinctive features usually found with tumours of the middle lobe of the cerebellum. This case raised the question how far they might be due to pressure on the corpora quadrigemina. Experimental destruction of those bodies annihilated vision and irido-motor action. Dr. Ferrier's own experiments confirmed those of Serres, Goltz, and others, in indicating that very marked disorders of equilibrium, but without absolute motor paralysis, also occurred. Irritation of these ganglia showed itself in dilatation of the pupils, retraction of the head, and tendency to trismus; general opisthotonos and rigidity of the limbs when the irritation was painful. It was difficult in this case to determine how far irritative or destructive effects predominated, but the symptoms were quite in harmony with the results of physiological investigation.

A CASE OF DIPHTHERITIC PARALYSIS SIMULATING EXTENSIVE LUNG-DISEASE.

Dr. P. IRVINE read notes of this case. The patient, a girl aged six, was first seen at Charing-cross Hospital, as an out-patient, on May 22, 1875. She had suffered occasionally from bronchitis, which prevailed in the family. One child died of it when six months old. About five weeks before the above date, scarlet fever was said to have carried off another child, the death being certified as such by the medical man. The other children of the family, the patient amongst them, had sore throats, but recovered rapidly; and fourteen days prior to the first visit to the hospital, the girl was quite strong—in better health than she had been for some time. Somewhat suddenly she began to exhibit decided symptoms of bronchitis, bringing up sputa, at times streaked with blood, was taken off her legs, and, after being febrile for a few days, lost flesh very

rapidly. She was restless at nights, and quite altered in manner. On May 22, when first seen, the patient was thin, but did not seem to be severely ill. There was a green look in the eyes, and she did not carry herself erect. The pulse and temperature were all but normal, the respirations fourteen. Breathing was shallow, and there was an all but constant cough, without expectoration. Tracheal mucous rattle was audible without the stethoscope, but there was no appearance of asphyxia. There was dulness under both the clavicles, with deficient expansion there, excessive action of the diaphragm, and strong rhonchal fremitus over the whole chest. Complete dulness existed around the cardiac area for a considerable extent, simulating greatly that of a pericardial effusion. There was also almost absolute dulness in the supraspinous fossæ. With the stethoscope were heard all forms of bronchitic râle; no part of the chest being free from one or the other. Tubular breathing, with whispering pectoriloquy, was observed under both clavicles. The heart's apex was beating just below the nipple. The sound was unusually distinct and free from murmur. On May 26 the above symptoms still existed. The child meanwhile had been very ill, restless, and semi-delirious at nights. A double strabismus now existed. Further inquiry into the history of the scarlatinal attack led to the suspicion that this must have been diphtheritic. The child who died was ill only twenty-five hours, and the end was like that of "croup." In no case was there any rash on the body; and further examination of the patient revealed an extensive, though not very decided, range of paralysis. The drooping of the head was due to loss of power in the extensors; these was lumbar hollowing, and thus a double curvature of spine. The child walked clumsily; the limbs had been noticed to twitch; speech was thick, swallowing imperfect, and attended by pharyngeal gurgling. The uvula and palate were relaxed and filled up the throat, which was anæsthetic. The left submaxillary gland was enlarged. Prior to her present illness the patient had been very full-chested. A week later (June 2) the voice was nasal, and the patient could not pronounce her own name distinctly. The face was drawn to the right when the patient laughed. On June 5 the paralysis had much diminished. There remained a little indistinctness in speech. The patient was now quite cheerful. The chest was entirely free from râles; there was increased resonance in previously dull parts. The recovery was noticed after a bad night. During the next month she made a complete recovery; the upper parts of the chest, at the end of that time, expanded freely, nothing remaining but slight dulness under the right clavicle. The cardiac area of dulness was all but normal. The supra-clavicular muscles did not act as well as in natural or forced breathing. She was treated with cod-liver oil and perchloride of iron. The most efficient remedy was, however, friction of the chest and cervical regions with cod-liver oil. Dr. Irvine remarked that all the symptoms in this case, or nearly all, were probably due to paralysis succeeding diphtheria, which had at the time been diagnosed as scarlet fever. They had the greatest resemblance to those of extensive lung-disease, as was clear from the account given. The temperature was always normal, however; but some observers asserted that considerable changes, such as above, did occur without much elevation, whilst little value was derived from the negative results of a few observations made in out-patient practice. With regard to the chest, there must have been a paralysis of the muscles at the upper part of the thorax, and, in consequence, a partial collapse of the lungs, an expiratory condition, and one allowing accumulation of secretion. Symptoms of extensive bronchitis arose from a paralysis of the muscles of the tubes, and a loss of their deobstruent action, which, though denied to exist by many physiologists, Reisseisen, their discoverer, maintained that they possessed. There was no excessive general accumulation of sputa, for the simple reason that there was no excessive secretion—no true bronchitis, in fact; had such arisen, death must have occurred rapidly. Recovery was not like that of a severe bronchitis. Expansion of the upper part of the chest set in with the cessation of paralysis in some other parts, and all dulness disappeared, except to a slight extent at one apex, where possibly there existed an old consolidation.

We understand that the Home Office has again given permission for street collections by ladies for the next Hospital Saturday Fund in London.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 10th inst., and when eligible will be admitted to the pass examination:—

Allard, Joseph H., student of the Glasgow School.
Bourke, William, of the Edinburgh School.
Cheetham, Walter H., of the Leeds School.
Dales, William, of the Sheffield School.
Denson, Joseph L., of the Liverpool School.
Evans, Henry, of the Dublin School.
French, Francis N., of the Manchester School.
Harding, Arthur, of King's College.
Holmes, Isaac, of the Liverpool School.
Kavanagh, Arthur M., of the Dublin School.
Millar, Thomas, of the Glasgow School.
Muir, Walter, of the Manchester School.
Wheeler, William H., of the Bristol School.
White, Howel H., of the Edinburgh School.
Young, Alfred N., of the Liverpool School.

The following gentlemen passed on the 11th inst., viz.:—

Barron, Herbert, student of the Liverpool School.
Beard, Spencer F., of the Sheffield School.
Beckitt, Walter O., of the Liverpool School.
Brown, Walter H., of the Leeds School.
Bushby, Thomas, of the Liverpool School.
Canavan, Patrick, of the Liverpool School.
Clegg, Walter T., of the Liverpool School.
Faulkner, Alexander, of the Liverpool School.
Hawks, Robert, S., of St. Bartholomew's Hospital.
Lory, William J., of University College.
Mitchell, Charles P., of the Manchester School.
Pegge, William J., of the Manchester School.
Pughe, T. W. Owen, of the Liverpool School.
Rowe, George H., of the Leeds School.
Smith, George M., of the Bristol School.
Spurgin, Thomas, of Guy's Hospital.
Storry, Frederick W., of the Leeds School.
Sutcliffe, John, of the Manchester School.
Thompson, John H., of the Manchester School.
Thomson, Herbert W., of the Charing-cross Hospital.
Waldo, Frederick J., B.A. Cantab., of the Cambridge School.

The following gentlemen passed on the 12th inst., viz.:—

Baldwin, Frederick B. J., student of Guy's Hospital.
Bertolacci, John H., of St. George's Hospital.
Bowen, Arthur E. R., of St. Thomas's Hospital.
Colt, Thomas A., of the Bristol and Charing-cross Hospitals.
Davies, Rees T. E., of University College.
Dixon, William E., of the Middlesex Hospital.
Fallow, Joseph S., of the Westminster Hospital.
Hill, Charles B., of University College.
Lathbury, Charles J., of St. Bartholomew's Hospital.
Munyard, Thomas E., of the Westminster Hospital.
Nicholson, James E., of St. Bartholomew's Hospital.
Phillips, William A., of Guy's Hospital.
Thomson, George J. C., of St. Thomas's Hospital.
Vachell, Edward S., of the Bristol and London Hospitals.
Walker, John S., of St. Bartholomew's Hospital.
Whitney, Neville S., of University College.

Twenty-four candidates out of the seventy-six examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months. The examinations will be resumed this day (Friday), and be continued through the following week, when the pass examinations will take place.

At the written examination on Friday last, the following were the questions submitted to the 147 candidates, who were required to answer four, including one of the first two, out of the six questions, viz.:—1. Describe the structure of a lobule of the liver. What are the essential constituents of bile, and the tests by which its presence can be recognised? 2. Give the average temperature of the human body. By what means is it maintained and regulated? 3. Describe the hyoid bone; give its relation to the surrounding parts, and the precise attachment of muscles to it. 4. Describe the course, relations, and distribution of the internal pudic artery. 5. Give the relations and connexions of the spleen, and the course and relations of its artery and vein. 6. Describe the course and distribution of the superior maxillary nerve.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 6:—

Anderson, Charles Morton, Moville, co. Donegal.
Giles, Peter Broome, Staunton-on-Wye.
Johnston, John, Ampton-place, W.C.
Pane, Reginald, Langport, Somerset.
Robertson, Geo. Scott, Dover-street, Piccadilly.
Stacpoole, Chas. Aitken, Stafford-place, W.

The following gentlemen also on the same day passed their primary professional examination:—

Hearnden, Wm. Frank, Guy's Hospital.
Rawson, Ernest, St. Bartholomew's Hospital.
Scriven, John Swair, St. Mary's Hospital.
Vlieland, Charles James, St. Bartholomew's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—William George Hill has been promoted to the rank of Fleet-Surgeon in her Majesty's Fleet, with seniority of June 14, 1876.

BIRTHS.

FRANCIS.—On June 11, the wife of William Francis, M.D., F.L.S., of the Manor House, Richmond, Surrey, and Red Lion-court, Fleet-street, of a daughter.

HOSTON.—On May 13, at Palm House, Cape Coast, the wife of Surgeon-Major J. A. B. Horton, M.D., of a daughter.

LOAD.—On July 3, at Woodford House, Armagh, the wife of R. G. Lord, M.D., Deputy Surgeon-General Indian Medical Department, of a son.

SHAW.—On June 3, at St. Thomas's Mount, Madras, the wife of C. E. Martin Shaw, Surgeon R.A., of a son.

SIMPSON.—On July 3, at Dunbarton House, Victoria-park-road, South Hackney, the wife of Thornton G. Simpson, L.R.C.P., of a son.

WATSON.—On July 6, at Tottenham, London, N., the wife of W. Tyndale Watson, M.D., of a son.

MARRIAGES.

ATKINS—NORTON.—On July 8, at St. Mark's, Tollington-park, London, Edward Ianson, son of the late Edward Ianson Atkins, of Gawcombe, to Mary Susanna, daughter of Robert Norton, M.D., of Bayswater.

BONNYMAN—JENKINS.—On July 8, at the Pro-Cathedral, Kensington, James Bonnyman, Surgeon-Major 64th Regiment, to Frances Caroline, youngest daughter of Mr. Jenkins, of Pembroke-gardens, Kensington.

DUNNE—BRADSHAW.—On July 8, at St. Stephen's Church, Twickenham, Francis M. Bradney Dunne, LL.B., barrister-at-law, to Henrietta, third surviving daughter of the late Henry Bradshaw, M.R.C.S.

PARKER—COATES.—On June 6, at the parish church, St. Mary, Newington, John Would Parker, Esq., of the Manor House, Ludbrough, Lincolnshire, to Jane Maria, elder daughter of W. S. Cortis, M.D., of Kennington-park-road, London.

RUCKER—HEATON.—On July 5, at St. George's, Leeds, Arthur William Rücker, M.A., Fellow of Brasenose College, Oxford, eldest son of D. H. Rücker, Esq., of Clapham-park, Surrey, to Marian, second daughter of J. D. Heaton, J.P., M.D., F.R.C.P., of Claremont, Leeds.

STEWART—WATERS.—On June 6, at the parish church, Kensington, Robert William Percy Stewart, Esq., of Great Russell-street and the Stock Exchange, to Helena Gertrude Madeline Waters, youngest daughter of John Waters, M.D., of 15, Bedford-square, W.C.

STURROCK—SHAW.—On July 8, David Ramsay Sturrock, M.D., late of the Madras Cavalry, to Charlotte Stewart Stuart Shaw, daughter of the late A. N. Shaw, Esq., of the Bombay Civil Service.

TREVES—WARWICK.—On July 4, at All Saint's, Croxley-green, Edward Treves, M.R.C.S., to Mary, daughter of the late T. Warwick, Esq., of Highfield House, Rickmansworth.

WILKINSON—TOWNSHEND.—On July 8, at the parish church of St. Marylebone, R. S. Wilkinson, of Corby Berkholme, Grantham, J.P., D.L., Lincolnshire, to Mrs. M. A. Townshend, of Park-place, Regent's-park, relict of L. Townshend, M.D.

DEATHS.

BARDSLEY, Sir JAMES LOMAX, M.D., Knt., at The Orchard, Greenheys, Manchester, on July 10, aged 75 years.

DOWNES, EZRA THOMAS, late Surgeon-Major of the Bengal Army and Assay Master at the Mint, Calcutta, at St. Leonard's, of chronic bronchitis, on July 2.

EPPS, ELLEN, widow of the late John Epps, M.D., at 89, Great Russell-street, London, on July 7, aged 67.

EYRE, STRATFORD ALFRED, formerly Surgeon of the 13th Light Infantry, at the College, Epsom, on July 1, aged 81.

GRIFFITH, THOMAS TAYLOR, F.R.C.S., at Chester-street, Wrexham, on July 6, aged 81.

LORIMER, ROBERT HENDERSON, youngest son of Alex. Lorimer, M.D., late Deputy Inspector-General of Hospitals, H.E.I.C.S., Madras, at Madras, on May 31, aged 27.

MASON, GEORGE, younger son of the late George Mason, M.R.C.S., of Deal, at Deal, on July 8, aged 27.

SKIERS, ROSA, widow of the late Edmund Skiers, M.D., at 103, Rue de Morny, Paris, on July 4.

WILLIAMS, CHARLES KELBURNE FOSTER, second son of Llewellyn Williams, M.D., of Kensington, at Hull, on June 29, in the 25th year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

AMERSHAM UNION.—Medical Officer. Candidates must possess the qualifications required by the Consolidated Orders of the Local Government Board, a certificate of qualification to vaccinate, and a certificate of being duly registered pursuant to 21 and 22 Vic., chap. 9, sec. 34. Applications, with testimonials, to Henry Bedford, Clerk, not later than July 17.

BIRMINGHAM FRIENDLY SOCIETIES' MEDICAL INSTITUTION. — Surgeon. Applications, with testimonials and certificates of registration, to H. W. Yarwood, Secretary, 197, Camden-street, on or before July 18.

FESTINIOG UNION.—Medical Officer. Candidates must be fully qualified by law to practise both medicine and surgery, as specified in the Orders of the Local Government Board. Applications, with testimonials, to G. S. Jones, Clerk to the Guardians, on or before July 24.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—House-Physician. Candidates must have a recognised medical or surgical qualification. Applications, with testimonials as to character and professional ability, to David Cannon, Secretary.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE.—Visiting Physician. Applications, with testimonials, to Francis Baily, Secretary, before July 20.

KEIGHLEY LOCAL BOARD OF HEALTH.—Medical Officer of Health. Candidates must be legally qualified medical practitioners. Applications, not later than July 25, to the Chairman of the Sanitary Committee, Town's Office, Keighley, endorsed "Medical Officer of Health."

MANCHESTER ROYAL EYE HOSPITAL.—House-Surgeon and Secretary. Applications (by legally qualified practitioners) and testimonials to the Chairman of the Board of Management on or before August 1.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Physician (Out-Department). Candidates must be graduates of a university in the United Kingdom, or if holding a foreign degree only, must be members of the London College of Physicians. Applications, with testimonials, to George Scudamore, Secretary, Lower Seymour-street, Portman-square, W.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—House-Physician (who will also be required to act as Chloroformist, Medical Registrar, and Medical Pathologist). Candidates must be graduates of a British university, or be possessed of such medical qualifications as are satisfactory to the Medical Committee and the Weekly Board. Testimonials to the "Chairman of the Medical Committee," not later than July 24.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

APPOINTMENTS.

Auckland Union.—Edmund F. Butler, L.K. & Q.C.P. Ire., L.R.C.S. Ire., L.A.H. Dub., to the Whitworth District.

Bury Union.—Francis Davison, L.R.C.S. Edin., L.A.H. Dub., to the First Tottington District.

Fylde Union.—Robt. H. Bowness, M.R.C.S. Eng., L.S.A., L.R.C.P., M.D. St. And., to the Poulton District.

Weobley Union.—Edward A. Applebe, L.R.C.P. Edin., L.F.P. & S. Glasg., to the Weobley District and Workhouse.

Wolverhampton Union.—Arthur Hands, L.R.C.P., M.R.C.S., to the Wednesfield District; John T. Hartill, L.R.C.P., M.R.C.S., to the Willenhall District.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Rusticus.— "He 'scapes the best, who, nature to repair,
Draws *physick* from the fields."—*Dryden.*

Authorship.—Cowper remarks—"There are very few things of my own composition that I can endure to read when they have been written a month, though at first they seem to me to be all perfection."

Neptune.—Scurvy is mentioned by Pliny as having occurred in the Roman army commanded by Germanicus after a long encampment in Germany beyond the Rhine. It prevailed also in the army of Louis IX., in 1260; but it was not till navigation was improved and long voyages undertaken that the disease became well known.

Thorough.—A member of the Town Council of Salford, at a meeting of the Council last week, in speaking of the desirability of purchasing, or leasing some baths, said, "The people at present had compulsory education, compulsory vaccination, and he did not see why they should not have compulsory 'bathation,' followed up with compulsory cremation."

C.B.—Dr. John Armstrong, the poet, and author of the "Art of Preserving Health," lived a full generation before Dr. John Armstrong, the physician, of Newcastle, who migrated to London about 1818. The former was born in 1709, and became army doctor, poet, and traveller; the latter was born in 1784, graduated at Edinburgh, joined Mr. Grainger in the Webb-street School of Medicine, delivered lectures which were honoured with a place in the *Lancet*, and died in 1829. His theory of "typhus" was that it depended on a specific bronchitis, with glutinous exudation, which hindered access of air to the blood.

ANONYMOUS ARTICLES BY THE LATE DR. FERGUSON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The authorship of conspicuous articles in the quarterlies and other periodicals of eminence is often a matter of great interest to scientific and literary men. It seems worth while, therefore, to record the following list in your columns of articles contributed to the *Quarterly Review* by the late Dr. Robert Ferguson, some time Professor of Midwifery in King's College, London:—No. 81 of *Review*, "Gooch on Insanity"; 91, "Directions in case of Pestilence"; 97, "Sir H. Halford's Essays"; 113, "Latham on Diseases of the Chest"; 131, "Public Health"; 139, "Colliers and Collieries"; 143, "Sir Charles Bell"; 163, "Pentonville Prisoners"; 184, "Pentonville"; 191, "Brodie's Psychological Inquiries," etc.

These articles are spread over more than twenty years, and each was *felt* at the time of publication. I am, &c., AMICUS.

London, July.

COMMUNICATIONS have been received from—

Mr. F. W. Lowndes, Liverpool; Dr. A. M. Buchanan, Glasgow; The Secretary of the British Medical Association; Mr. R. J. Godlee, London; Dr. C. Bell Taylor, Nottingham; Dr. E. S. Kino, Ilfracombe; Dr. J. W. Moore, Dublin; Mr. W. A. Bebridge, London; Dr. C. S. Roy, London; Mr. Kershaw, London Hospital; Bedell, Apothecaries' Hall, London; Dr. Cater, London; Dr. Carter, Liverpool; Mr. Warrington Haward, London; Mr. George Meadows, Hastings; Mr. J. M. Stone, London; Dr. Heine, Sheffield; Mr. S. Buckley, Birkenhead; Dr. Anningson, Cambridge; The Secretary of the Sanitary Institute of Great Britain; The Registrar-General, Edinburgh; The Secretary of the Naval Medical Supplemental Fund; Dr. Smith, Reigate, Surrey; Mr. Henry Morris, London; Mr. J. Chatto, London; Dr. Druitt, London.

BOOKS AND PAMPHLETS RECEIVED—

Reports of the Medical Officer of the Privy Council and Local Government Board, New Series, No. 7—William A. Hammond, M.D., Spiritualism and Allied Causes and Conditions of Nervous Derangement—Laurence Turnbull, Ph.G., M.D., Tinnitus Aurium, or Noises in the Ears—British Homœopathic Pharmacopœia—William Roberts, M.D., A Practical Treatise on Urinary and Renal Diseases, including Urinary Deposits—Henry G. Piffard, A.M., M.D., An Elementary Treatise on Diseases of the Skin—C. Macnamara, F.C.W., A History of Asiatic Cholera—William A. Tilden, D.Sc. Lond., F.C.S., Introduction to the Study of Chemical Philosophy—Christian Bäumler, M.D., Syphilis—Edward B. Aveling, B.Sc., Botanical Tables for the Use of Students—Frederick Goodchild, M.D., Epilepsy, its Medical and Moral Treatment and Cure—Proceedings of the North-Western Association of Medical Officers of Health for the Year 1875—Report on the Sanitary Condition of the several Parishes comprised in the Wandsworth District—E. C. Nowell, On the Vital Statistics of Tasmania, with especial reference to the Mortality of Children—B. Anningson, M.A., M.B., Report on the Sanitary Condition of the Cambridge Improvement Act District—Victoria Patents and Patentees, vol. viii—Thomas Rain, By the Truth: A Catechism of Theology and Anthropology for Men—Dr. Otto W. Madelung, The Causes and Operative Treatment of Dupuytren's Finger Contraction—Dr. Wickham Legg, A Guide to the Examination of the Urine—Sydney Ringer, M.D., A Handbook of Therapeutics—Ernest Wagner, M.D., A Manual of General Pathology.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—The Shield—Nature—Archives Générales de Médicine—St. Leonard's and Hastings Gazette—Blackpool Gazette—Calne Chronicle—Whitehall Review—Yorkshire Post and Leeds Intelligencer—Philadelphia Medical Times—American Supplement to the Obstetrical Journal, June—Melbourne Argus—Dublin Journal of Medical Science, July—Canada Medical and Surgical Journal, July—Manchester Courier.

APPOINTMENTS FOR THE WEEK.

July 15. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

17. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

18. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

19. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

21. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

EXPECTED OPERATIONS.

London Hospital.—The following Operations will be performed on Saturday (this day), July 15:—

By Mr. Maunder.—Two Cases of Subcutaneous Osteotomy of Femur, with chisel.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 8, 1876.

BIRTHS.

Births of Boys, 1184; Girls, 1098; Total, 2282.
Average of 10 corresponding years 1866-75, 2079·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	677	645	1322
Average of the ten years 1866-75	674·0	625·8	1299·8
Average corrected to increased population ...	...	...	1391
Deaths of people aged 80 and upwards ...	...	...	25

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	8	5	2	4	1	2	...	13
North	751729	....	4	8	1	7	3	1	...	18
Central ...	334369	1	1	2	...	3	...	1	...	15
East	639111	...	8	6	1	5	...	4	2	46
South	967692	11	4	15	5	7	1	3	2	24
Total	3254260	13	25	36	9	26	5	11	4	116

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·794 in.
Mean temperature	65·5°
Highest point of thermometer	82·2°
Lowest point of thermometer	56·9°
Mean dew-point temperature	58·6°
General direction of wind	S.W.
Whole amount of rain in the week	0·18 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 8, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending July 8.	Deaths Registered during the week ending July 8.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2282	1322	82·2	56·9	65·5	18·61	0·18	0·46
Brighton	100632	42·7	54	35	74·2	56·2	63·1	17·28	0·24	0·61
Portsmouth ...	124867	27·8	88	49	...	...	...	...	...	...
Norwich	83430	11·2	33	26	77·5	55·0	64·8	18·23	0·76	1·93
Plymouth	72230	51·8	32	23	69·7	54·0	60·2	15·67	1·04	2·64
Bristol	199539	44·8	139	72	75·1	49·1	63·1	17·28	0·72	1·83
Wolverhampton ...	72549	21·4	46	32	77·8	50·0	62·8	17·12	0·67	1·70
Birmingham ...	371839	44·3	280	132	...	...	...	...	...	...
Leicester	118581	35·5	103	39	80·0	49·8	65·0	18·33	0·27	0·69
Nottingham ...	93627	46·9	61	24	79·3	42·6	64 0	17·78	0·42	1·07
Liverpool	521544	100·1	357	218	69·8	50·3	59·5	15·28	0·63	1·60
Manchester ...	357917	83·4	264	177	81·0	45·0	63·9	17·72	0·75	1·90
Salford	138425	26·8	146	79	77·2	41·9	60·1	15·62	0·72	1·83
Oldham	88609	19·0	75	51	...	...	...	...	...	...
Bradford	173723	24·1	141	70	72·3	49·0	61·1	16·17	0·46	1·17
Leeds	291580	13·5	210	121	76·0	46·0	63·5	17·50	0·51	1·30
Sheffield	274914	14·0	209	86	77·0	45·0	62·9	17·17	0·52	1·32
Hull	136933	37·7	109	42	...	...	...	...	...	...
Sunderland ...	108343	32·8	98	46	80·0	51·0	62·0	16·67	0·49	1·24
Newcastle-on-Tyne	139929	26·1	116	59	...	43·0	...	...	0·46	1·17
Edinburgh	215146	51·3	138	64	74·0	44·0	59·3	15·17	...	...
Glasgow	545144	90·4	420	218	68·4	44·5	57·5	14·17	0·67	1·70
Dublin	314666	31·3	148	115	75·5	43·0	60·5	15·81	0·28	0·71
Total of 23 Towns in United Kingdm	8028595	37·7	5549	3100	82·2	41·9	62·2	16·78	0·54	1·37

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·79 in. The highest was 29·79 in. on Monday morning, and the lowest 29·58 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON CANCER OF THE ŒSOPHAGUS: BASED ON 100 FATAL CASES.

DELIVERED AT THE LONDON HOSPITAL MEDICAL COLLEGE, MAY 10 AND 17, 1876.

By MORELL MACKENZIE, M.D. Lond.

[Reported by Dr. GORDON HOLMES.]

(*Continued from page 651 of last volume.*)

Course and Termination.—The course of the disease tends steadily towards a fatal issue. In my 100 cases, the average duration of life after undoubted symptoms were developed was only eight months—the maximum being sixteen months, and the minimum five weeks. Patients *in extremis*, almost unable to swallow liquids, may suddenly regain their power of taking thin, semi-solid food for a short time previous to death. Such improvement is illusory, and is probably explained by the sloughing away of a portion of the growth, or by the diminished amount of spasm, the result of increasing muscular debility. Death usually takes place from inanition, unless perforation of the œsophagus occur. In my 100 cases, perforation of the air-passages took place thirty-six times, the trachea being perforated twenty times, the right bronchus in seven, and the left bronchus in four cases, the base of the lungs in two instances, the pleural cavity once, and twice the tissues of the neck were eaten into, fistula resulting.

When perforation occurs, it most frequently takes place into the air-passages, and so induces quite a distinctive train of symptoms. The most common point at which a communication is established between the œsophagus and air-passages is just above the bifurcation of the trachea. A sudden attack of dyspnœa and coughing, aggravated when the patient swallows, sometimes indicates the occurrence of rupture, but more commonly the exact time of the establishment of the intercommunication cannot be determined. According to Lébert,(a) perforation of the air-passages does not always give rise to symptoms commensurate with the gravity of the occurrence, and thus is not ordinarily recognised until the autopsy.

Bronchitis is often set up in consequence of the leakage of fluids into the air-passages. Soon afterwards pneumonia generally supervenes; and, if death does not soon take place, gangrene usually follows. Sometimes, but more rarely, the perforation occurs into one or other of the pleural cavities; into the right usually when the growth is near the middle of the œsophagus, and into the left when it is situated low down near the cardia.

Perforation of a large vessel is a rare termination of the disease, and did not occur in one out of my 100 cases. Although there are several instances recorded in the *Pathological Society's Transactions*, and in medical literature generally, it must not be forgotten that these represent selected—not average—cases, and illustrate the exception, not the rule. "Perforation of bloodvessels," says Lebert,(b) "is more a singular than a general occurrence; the arterial trunks resist for a very long time an ambient mass of cancerous degeneration." Rokitansky(c) expresses a somewhat similar opinion, and thinks that the aorta and right pulmonary artery are the vessels which most frequently succumb in cancerous disease of the œsophagus. If a large vessel be ruptured, death may be extremely rapid from hæmorrhage. The aorta,(d) carotid,(e) subclavian,(f) vertebral, œsophageal,(g) and superior intercostal(h) arteries may be referred to as having been thus perforated.

Lastly, the perforation may take place through the peri-œsophageal connective tissue, and lead to abscess and sloughing there. This occurrence may be indicated by a rigor. In my 100 cases, death resulted from exhaustion and inanition in seventy-eight cases, from pneumonia in seven cases, from acute pleurisy three times, and from gangrene of lungs twice.

Diagnosis.—Although, under ordinary circumstances, the recognition of cancer of the œsophagus is easy, cases of doubtful nature occasionally present themselves. In the first place we must determine whether the obstruction and its accompanying dysphagia be due to extrinsic or intrinsic disease. As Betz(i) observes, the pain which accompanies diseases of the œsophagus has its seat more often at the anterior than at the posterior parts of the neck and chest, whilst the absence of external redness, tumefaction, or tenderness on pressure, at once directs the attention to some deep-seated lesion of the neighbouring viscera. The bougie can almost always be passed in extrinsic disease—though the instrument must be carefully used—except in such cases as cancer or fibrous tumour of the thyroid gland, or malignant tumour in the mediastinum, where the nature of the disease, or at least the cause of the dysphagia, is generally quite apparent. In aneurism of the aorta, and in other affections of the circulatory system, not only can the œsophageal bougie be passed, but the physical signs of such affections are present. Having determined that the disease is not caused by extrinsic pressure, it has to be decided whether the dysphagia be organic or functional. Under the latter term are included both spasm and paralysis of the gullet. In functional affections there is seldom much emaciation, or at any rate the emaciation bears no relation to the duration of the disease; often, indeed, the patient is very well nourished. Should there be any doubt as to the loss of flesh, it is well to weigh the patient at intervals of a week or fortnight, when the scales will soon set the question at rest. In functional dysphagia a bougie can always be passed, though sometimes, in cases of spasmodic stricture, the patient must first be placed under the influence of an anæsthetic. Should it be impossible to use a bougie without anæsthesia, and should the patient object to being rendered insensible, the absence of emaciation in a case of dysphagia of any duration will establish its functional character. In discriminating between these various affections, auscultation of the œsophagus is of the greatest value, as by this method alone it is often easy to judge of the character of the disease.

If the œthoscope be placed successively at different points over the œsophagus, the seat of the stricture will be easily discerned. Instead of the impression of a small fluid body rapidly passing beneath the stethoscope, a prolonged and confused gurgling sound is heard above and at the diseased spot. Below this the act of deglutition is scarcely audible. In the early stages of the disease the "bolus" may be merely delayed or irregularly forced down, but temporary arrest in its descent can generally be observed even before the more decidedly objective symptoms are at all marked.

The minute diagnosis of the functional forms of dysphagia will presently be considered after discussing the varieties of organic stricture. These are—syphilitic stricture and traumatic stricture. In *syphilitic disease* there may be the history of the affection or the acknowledgment of former symptoms, such as a skin eruption, falling of the hair, or nocturnal pains in the shin-bones, or the scars of former ulceration either on the skin or mucous membrane; or co-existent disease of an undoubtedly syphilitic character may remove all doubt as to whether the system has been infected. Of course, cancer may, and, indeed, often does, occur in syphilitic individuals; but the curative effects of iodide of potassium in truly syphilitic cases, and the fact of its being inoperative when cancer has been engrafted on syphilitic ulceration, will eliminate this source of difficulty. In *traumatic stricture* the history of the case explains its origin. A traumatic stricture is often very tight, but it seldom extends over a large tract, and never involves the recurrent nerves.

Spasmodic stricture is far more common in women than in men, and usually occurs under the age of forty. The symptoms are suddenly, not progressively, developed, as in cancer. There is no pain, nor regurgitation of frothy fluid, though the mouthful of solid or liquid food may be immediately and forcibly ejected. Evidence such as an emotional disposition, or a history of some mental peculiarity in the family of the patient, may assist in the diagnosis. *Paralysis of the œsophagus* generally occurs in the old or feeble—that is, in people whose muscular system is weak. The dysphagia is seldom extreme; a bougie at once shows the absence of true stricture. *In chronic œsophagitis* the dysphagia is also much less marked than it is in carcinoma. The food can, indeed, generally be swallowed, though it causes much subsequent uneasiness. On the other hand, the odynphagia is much more marked;

(a) "Traité Pratique des Maladies Cancereuses," p. 445. Paris, 1851.
(b) *Op. cit.*, p. 444.
(c) "Pathol. Anat.," vol. ii., p. 11. Syd. Soc., London, 1854.
(d) *Lancet*, Feb. 14, 1860.
(e) *Transactions of the Pathological Society*, vol. xxii., p. 134.
(f) *Ibid.*, vol. ix., p. 194.; vol. xii., p. 103. (g) *Ibid.*, vol. xiv., p. 167.
(h) *Ibid.*, vol. viii., p. 210.

(i) Frederic Betz (Heilbronn), *Gazette Médicale de Paris*, 1855, p. 648.

and a bougie usually causes so much pain and spasm in these cases, that it can only be passed under the influence of ether. *In simple dilatation* there is no odynphagia, but regurgitation of food after each meal is a marked symptom; although there may be difficulty in passing a bougie, the operation can generally be effected with perseverance.

Lastly, the diagnosis may be assisted by a careful consideration of the symptoms—which, taken together, are characteristic of cancer of the œsophagus; these are dysphagia, regurgitation of food, abundant expectoration of a frothy fluid (sometimes tinged with blood), obstruction to the passage of a bougie, paralysis of the abductors of one or both vocal cords, progressive emaciation and great debility, occurring in a person over forty years of age.

Pathology and Morbid Anatomy.—The œsophageal canal is sometimes found after death to be completely blocked up; but, on the other hand, it occasionally happens that where there was total obstruction during life there is an easy passage after death. The dysphagia in these cases may have been due to spasm of the œsophagus, or to a fold of mucous membrane above the stricture projecting into the contracted passage. The latter condition was present in the case of the late Dr. Marshall Hall, a kind of valve having "prevented the passage of food, though there was space enough, as found after death, to pass the finger through the stricture from below upwards."

There is considerable difference of opinion, both as regards the exact situation most commonly attacked and the variety of cancer most frequently present in the œsophagus. The following table shows the relative frequency of situation of the disease in the aggregate, as well as of each form of cancer in my 100 cases:—

	Upper Third.	Middle Third.	Lower Third.	Lower Half.	Totals.
Epithelioma .	37	21	8	2	68
Scirrhus . .	3	3	10	2	18
Encephaloid .	4	4	4	2	14
	44	28	22	6	100

The broad facts which this table illustrates are—that cancer of the œsophagus is nearly as frequent in the upper third as in the lower two thirds together; that nearly three-fourths of all cases of cancer of the œsophagus are epithelioma; that this variety is extremely common in the upper third, common, but less frequent, in the middle third, and comparatively rare in the lower third; that scirrhus is seldom met with in the upper and middle thirds, but is the most common form of disease in the lower third; that encephaloid is the rarest variety of cancer occurring in the œsophagus, and that it is nearly equally distributed in all portions of the canal, showing, however, a slight preference for the lower part.

It will be seen that my experience is quite in accordance with that of Förster,(k) who found one-third of all cases in the upper third and one-quarter in the middle third; and at variance with that of Petri,(l) who, in forty-four cases occurring in the Pathologico-Anatomical Institute in Berlin, found the upper end affected only twice, and one-third of all the cases in the middle third—or, including eight cases which were really between the middle and lower third as if they were in the middle third, nearly half the cases in the middle third.

On the other hand, Niemeyer and Köhler(m) both deny that the middle third of the œsophagus is ever affected. The great discrepancy between my cases and those of Petri may perhaps be explained by Petri having excluded cases of cancer of the upper part of the œsophagus in which the pharynx was also implicated. The line of demarcation between the pharynx and œsophagus is arbitrary, some anatomists fixing the *lower border of the cricoid* as the point of separation, whilst others take the cricoid generally as the boundary line. As cancer of the œsophagus is very common on a level with the cricoid cartilage, it makes a great difference whether this situation is included in the pharynx or œsophagus.

Epithelial cancer is met with as an annular growth, often almost encircling the gullet, and extending for about an inch or so in the long axis of the tube. Its surface is more or less irregular, and is generally extensively, though not deeply, ulcerated; the ulcer has usually a dirty sanious base, and a raised and infiltrated edge; when cut through it is of a greyish-white colour, and when pressed yields a sebaceous-looking matter, which, being mixed with a drop of water on a slide (forming a milky fluid), is found to be composed of aggregated and distinct epithelial cells. Sometimes the destructive process keeps such even pace with the growth that to the naked eye all that is discoverable is a sloughy ulcer. The microscope, however, will reveal the epithelial elements making their way into the tissues around the ulcer, and beyond these again will be found an infiltration of small round corpuscles—indifferent cells. Sections of the growth will also show the epithelial protrusions and pearly nodules (laminated capsules or nested cells) so characteristic of epithelioma. The growth in most cases would appear to originate from the deeper layers of the epithelial lining of the mucosa, but in some cases possibly from the epithelia of the mucous glands. The almost invariable association of ulceration with epithelial proliferation explains the frequency with which perforation of the œsophagus takes place in these cases. It has been suggested that the cause of the common occurrence of epithelial cancer at the bifurcation of the trachea, and where the left bronchus crosses the gullet, is that in deglutitory efforts the œsophagus has its anterior wall compressed against the comparatively unyielding trachea and bronchus. Epithelial cancer of the œsophagus generally occurs alone, or at least does not extend beyond the neighbouring lymphatic glands. In sixty-eight cases of epithelioma of which I have notes, it is only recorded that the glands were affected in ten cases. This is no doubt partly to be explained by an accidental omission in the reports, owing, in many cases, to the autopsy having been limited to the removal of the œsophagus. But that this circumstance does not altogether explain the infrequency of glandular involvement is shown by the fact that in half my cases of encephaloid disease the glands were reported to have been affected. In only one of my sixty-eight cases was there any secondary formation, and in that instance the tongue was the seat of the disease. The enlargement of these glands, and the infiltration of the areolar tissue surrounding them, often cause pressure on one of the recurrent nerves, and if the disease be at the upper part of the œsophagus both nerves may be involved. Sometimes the growth invades the lungs and other parts, but, as already remarked, it rarely gives rise to secondary deposits.

Medullary cancer is generally found as a fungous, ulcerated mass, extending over a much larger area than epithelioma. When cut into, it is seen to have a brain-like appearance, or to be of a brownish-red colour from interstitial hæmorrhages, and when squeezed it yields an abundant juice. Sometimes the cut surface has at parts an alveolar structure, the alveoli containing a tenacious, glistening, greyish, mucilage-like matter, which is, in fact, colloid *débris*. It has a much greater tendency than epithelioma to invade neighbouring structures and to lead to secondary deposits in other organs. In my fourteen cases there were four in which the neighbouring glands were affected, two in which the bronchial glands were involved, and one in which the lumbar glands were diseased. The lungs were affected in two cases, the liver twice, the kidneys once, and the stomach once. The disease probably originates in all cases from the epithelial lining of the mucous glands.

Scirrhous cancer appears as a fibrous ring encircling and compressing the gullet, and its most common site is just above the cardia. It is not so prone to ulcerate as the other forms of cancer. It cuts with considerable resistance, appears of a puce-grey tint, and has dense white lines running in various directions. Like medullary cancer, it probably originates from the glandular apparatus of the part, but the connective-tissue growth so predominates as in a great measure to shut out of view the cellular hyperplasia.

According to Dr. Walshe,(n) the scirrhous infiltration is deposited in a stratiform manner, and commences by far most commonly in the sub-mucous tunic. The glands in the neighbourhood are seldom involved, and secondary deposits are even more rare. Out of my eighteen cases the thyroid body was affected once, and the stomach once. In both cases the spread of the disease was probably due to continuity of texture. It is especially in this form of cancer that the amount of constriction after death is often not found to correspond with that observed during life. In many cases in which it has been impossible during life to pass even a small bougie, and in which deglutition has been limited to fluids,

(k) "Lehrbuch der Pathol. Anatom." Jena, 1856.
(l) *Op. cit.*
(m) "Handbuch der Allgemeinen und speciellen Chirurgie." Erlangen, 1872.

(n) *Op. cit.*, p. 272.

and these only swallowed with difficulty, the tube is not unfrequently found sufficiently patent to admit the passage of one of the fingers.

Thus, in a case related by Dr. E. Motta,(o) of Portugal, although the autopsy showed the cervical portion of the gullet to be extensively diseased, the cancerous deposit was "eccentric rather than concentric," the calibre of the canal being but very slightly diminished. Yet the patient, a woman aged forty-nine, died from inanition after the short period of about eight months.

Prognosis.—When once it is certain that the disease is cancer, the prognosis is most unfavourable. As Boerhaave(p) remarks, "*Tandemque, post Tantali pœnas diu toleratas, lento marasmo contabescunt.*" In the early stages, however, the possibility of the affection being syphilitic should be borne in mind.

(To be continued.)

CLINICAL LECTURE ON A CASE OF GLAUCOMA.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

ALICE C., the patient you have just seen, is a needlewoman, and in her fiftieth year.

Six months ago she applied to the Eye Infirmary, complaining of failing vision, which she had in vain attempted to remedy by increasing the strength of her spectacles. We ascertained at that time that the upper and inner portion of the field of vision was the most affected; that sight was worse at times; and that she suffered from occasional attacks of coloured vision. For the rest, the eye was bright and clear; the pupil, although sluggish, presented nothing otherwise remarkable; and there was but slight congestion of the episclerotic veins. The eyeball was, however, certainly harder than natural; and the ophthalmoscope revealed slight though decided cupping of the optic disc. Both eyes were affected, but the left was clearly the worse. I did not think the case very urgent, and she strongly objected to operation, so that at first we decided to treat her with small doses of iodide of potassium, and wait for the advent of more serious symptoms. For three months she continued much in the same condition; but during the fourth month there were several slight exacerbations; and progressive contraction of the field of vision, with continual hardening of the globes, compelled us at the end of that time to perform iridectomy, first upon the left eye, and then upon the right. The iridectomy was made directly upwards; and, as you see, the symmetrical slit in the two irides is almost concealed by the upper lids. All the symptoms were at once and completely relieved by the operation; and the patient expresses herself as most grateful for the benefit she has received.

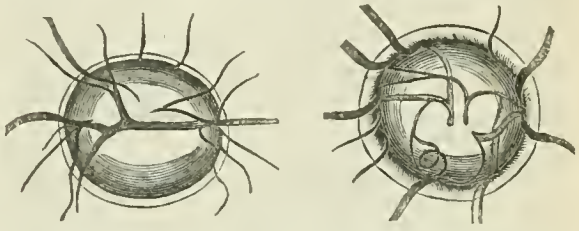
There are two principal varieties of glaucoma—the simple and the inflammatory. The simple is also known as the chronic; and I have found it convenient to designate the sub-varieties of the inflammatory form of the disease by their principal distinguishing characteristics—namely, the remittent, persistent, and fulminating. They all essentially consist in intra-ocular hypersecretion, and consequent increased tension of the tissues or coats of the eyeball.

If the globe is put upon the stretch very slowly, as in simple glaucoma, it shows great tolerance of the process, and it is only on careful examination that we can discover what is going on. If, on the contrary, the pressure takes place suddenly, reaction is provoked, and we have the phenomena of inflammatory glaucoma, which is more or less severe according to the amount and suddenness of the augmented tension.

As a result of this loss of balance between secretion and absorption, the eyeball becomes perceptibly hard to the touch; the increased vitreous humour presses forward the lens and iris at the expense of the anterior chamber; and the sclerotic, as evidenced by cupping of the optic disc, gives way posteriorly. Hence we find, on ophthalmoscopic examination, either a saucer, or an abrupt excavation, such as I have roughly indicated in the accompanying diagrams.

Like cataract, and many other constitutional affections, the disease is symmetrical; but one eye is usually affected some time before the other. Simple (or chronic) glaucoma may last years before destroying sight, and in its early stages but slight change from the normal aspect of the eye is to be noticed. Such patients—usually past middle life, and presbyopic—are, however, addicted to a frequent change of spectacles; and as time passes on, the effect of increased pressure is shown by a sluggish or dilated pupil, from partial paralysis of the ciliary nerves, and there is also more or less engorgement of the episclerotic veins. Mrs. C. complained of pain; but frequently there is no pain, and the only fact likely to be noticed by a casual observer is that the patient's sight is failing. Central vision suffers, no doubt, to some extent; but the grave defects are first and chiefly manifest in the excentric portions of the field: the patient sees as though looking through a tube which is gradually diminishing in calibre; and if a map of the field of vision is made, some encroachment from without inwards may be noted every few weeks, until at last central vision shares in the general deterioration, and total darkness closes the scene.

During the progress of the case there are often slight exacerbations, periodical obscurations, and coloured vision.



Remittent (or subacute) glaucoma is marked by exacerbations and remissions. Each exacerbation represents something gained in the direction of total blindness; and each remission is less and less complete. At the onset the eyeball is inflamed, hard, and very painful; the pupil dilated, and the cornea dull and insensitive; while the humours are so clouded that the nerve can only be seen, if at all, with the ophthalmoscope—like the sun in a fog. For the same reason the patient fancies the room is filled with smoke, and notices a coloured halo round the flame of the gas or candle. When the attack passes off, sight is restored, and the sufferer may congratulate himself on recovery; but vision is not exactly what it was before: tension is still in excess of the normal amount, and ophthalmoscopic examination reveals a certain amount of cupping of the disc and atrophy of nerve-tissue. The attacks in very exceptional cases separated by long intervals, usually recur at shorter and shorter periods, until at last, generally in a few months' time, there is no further remission, and sight is destroyed with the symptoms common to the succeeding varieties of the disease.

In the acute—or, as I have called it, persistent—form of inflammatory glaucoma, the symptoms at the outset are the same as in remittent glaucoma, but usually more severe, and are speedily aggravated from bad to worse without any interval. Vision is lost in a few weeks' time, and, in addition to other deteriorative changes, the cornea gradually becomes opaque. After a time, pain ceases; all chance of restoration of sight is gone; and we ultimately find secondary cataract, with an eyeball almost as hard, and well-nigh as insensible, as a stone.

In the fulminating variety there is no warning and no remission; the patient is struck down, as it were, by a thunderbolt. All the preceding symptoms are aggravated to the last degree; the pain is agonising, frequently accompanied by distressing vomiting, and sight is abolished in a few hours.

Thus we see that the etiology and pathology of all forms of glaucoma are the same; the essential feature being hardening of the globe from increased intra-ocular secretion, and more or less rapid destruction of the tissues involved. Simple glaucoma is consummated in a few years; subacute or remittent, as a rule, in a few months; acute or persistent, in a few weeks; and fulminating, in a few hours.

The varieties thus briefly described shade off into each other, crop up during the progress of other ocular diseases, and are provoked in a secondary or traumatic form by accident or injury. They all end in total darkness, and are all curable by a timely and well-performed iridectomy.

The great trouble is that patients in the early and remediable stages are very constantly under the care of practitioners who are neither familiar with the disease, nor accustomed to

(o) *Gazette Médicale de Paris*, 1873.
(p) "Aphorismi," tom. ii., p. 589.

treat it by the only remedy—operation. Thus we find that simple glaucoma is very commonly mistaken for cataract; the acute and remittent forms for iritis, sclerotitis, rheumatic, syphilitic, or other inflammatory affection of the eyeball; while fulminating glaucoma is either diagnosed as "a most extraordinary case of neuralgia," or the symptoms are attributed to inflammation of the brain or its meninges. As a consequence of this false diagnosis, we have the most disastrous results: patients suffering from simple glaucoma are told, under the impression that cataracts ought to be mature, that they will best consult their own interests by waiting until blindness is complete. The inflammatory forms are, with a view of preventing adhesions of the iris, most seriously, even hopelessly, aggravated by the instillation of atropine; while in fulminating glaucoma both the patient's blindness and the real *fons et origo mali* are swallowed up in the magnitude of the constitutional symptoms, and the ocular disease overlooked until the period for beneficial treatment is gone by.

Let me illustrate these remarks.

Some years ago I was told by a surgeon of great experience, whom I met accidentally, that I should shortly be required to operate upon a lady patient of his for cataract, but that, although her sight was already very dim, the case was not as yet sufficiently advanced to warrant extraction. Subsequently one of the patient's friends applied to me in a casual way with a similar history, and I was told that two surgeons and two physicians, resident elsewhere, had in the meantime been consulted; that these gentlemen concurred in the diagnosis, and recommended delay. Two years from the date of my first interview with the family attendant I was called in to operate, and for the first time saw the patient, when I found the pupils widely dilated, the eyeballs stony-hard, the media clear, the optic disc deeply cupped in both eyes, and sight reduced to bare perception of light. To the naked eye there was a deceptive appearance of opacity in the fundus oculi, but the lens was quite transparent, although I had difficulty in persuading the patient's medical advisers that it would be useless to perform extraction. Here was a typical case of simple glaucoma mistaken for cataract, and sacrificed from neglect of early operative interference. Scarcely a week passes without the admission of similar cases to one or other of our special institutions, both in the metropolis and elsewhere. Here is a poor woman, whom I now introduce for illustration, who was sent to me last week from Hull, quite blind—*i.e.*, without the slightest perception of light—from simple glaucoma, the disease having been diagnosed as cataract complicated with cerebral affection. Indeed, I am not exaggerating when I say that similar incidents are distressingly common. Such cases, I must confess, are often difficult of diagnosis unless we use the ophthalmoscope; and without that instrument we should often be at a loss—a fact well illustrated by a case quoted by Mr. Jonathan Hutchinson, which occurred in the pre-ophthalmoscopic period, and regarding which the following eminent ophthalmic surgeons expressed doubtful opinions:—Mr. Guthrie said: "Your disease exists in the brain or its membranes; there is no cataract." Mr. Lawrence: "There is a loss of transparency, which may be in the lens." Mr. Alexander: "I see no cataract or want of transparency in the tissues of the eye." Mr. Travers: "I fear it is not cataract, though it may be so." This case was probably one of simple glaucoma in an early stage, similar to the one which has formed the text of these remarks; and it is not to be wondered at, when men like these were obliged to hesitate and conjecture, simply because the ophthalmoscope was not then discovered, that doubt and uncertainty should prevail among practitioners of the present day who are not familiar with that instrument.

We thus see that the differential diagnosis of a case of simple glaucoma from one of cataract is not quite so simple a matter as one would, *à priori*, suppose. It is still less surprising to find cases of remittent or acute glaucoma mistaken for iritis or other inflammatory affection of the eyeball. Indeed, the practitioner is here placed in an awkward dilemma. If the patient is suffering from iritis, and the attendant neglects atropine, he is responsible for an occluded pupil; if the case is one of glaucoma, and he employs atropine, the disease is sure to be intensely aggravated—an observation which, I may remark *en passant*, applies with equal force to cases of simple glaucoma. Inflammatory affections of the eyeball in which the destructive element of increased tension is overlooked are almost as numerous as the cases themselves. Of eighty-four cases of inflammatory glaucoma of which I have notes, extending over some years, upwards of sixty had suffered irreparable damage from delay, and in very few of these had there been the least suspicion of the nature of the disease.

Only last week I was called to see a lady who had lost both eyes from acute or persistent inflammatory glaucoma. She had been under treatment for three months, and had suffered intense pain, sufficient at times to elicit moans and cries; while the intolerance of light was so great that she habitually rested on her hands and knees, with her faced buried in the pillow. Two surgeons of repute had attended her; all sorts of drugs and expedients, including the abstraction of several teeth, had been adopted to relieve "the neuralgia," as it was called; and the friends were assured that "when she was able to bear the light, and get stronger, her sight would be restored." The suggestion of further advice was deprecated as unnecessary, and the patient allowed to go blind with the very best intentions.

Last year two similar cases of the fulminating variety came under my notice. In both the ocular affection was either overlooked, or regarded as secondary to disease of the brain or its membranes, by the physicians and surgeons who had been called in; and in both the time for beneficial treatment had been allowed to go by.

Such cases are bad in every aspect: the patient is simply sacrificed; the family attendant loses the confidence of his patients; and the unpleasant feeling constantly provoked by the actual presence of the blind person never dies out; the ophthalmic surgeon is intensely chagrined to find that the opportunity for the most brilliant exercise of his art has passed away, though he may still relieve pain by sclerotomy or iridectomy; and the friends are called upon to pay heavy fees for a prolonged attendance, which, as they shrewdly suspect, has been worse than nothing!

It is now nearly twenty years since Von Graefe's brilliant discovery of a remedy for this terrible disease. Ever since the date of the first announcement of that discovery, ophthalmic surgeons have been calling attention to these sadly maltreated cases; and, to say the least, it is now high time that the opprobrium of their constant recurrence was swept away from the records of our noble profession.

ORIGINAL COMMUNICATIONS.

IS LEPROSY CONTAGIOUS?

By GAVIN MILROY, M.D., F.R.C.P.

No. V.

In my last paper (No. IV.), in this journal for January 29, was adduced the strong testimony of several most experienced medical observers in different regions of the eastern hemisphere—Australia, Ceylon, India, and Egypt—upon the above question, whose practical bearings are of such great moment in a professional and in a social point of view. I then stated that additional evidence of a like nature might soon be expected from the West Indies, in consequence of the expected report of a special inquiry recently instituted, by order of the Government, to examine anew this point in Demerara since my investigation of it there in 1871.

In the summer of 1874 an official report was made to the Governor of that colony by Dr. Cameron, the then acting Surgeon-General, wherein he stated that the history of certain (two) cases in the asylums showed grounds for believing, contrary to the conclusions of the Report of the College of Physicians, that the disease had been communicated to the patients by direct contact with the sick, or otherwise; and also that this opinion was shared in by several other resident medical men besides himself. When a copy of this document was submitted to me by the Colonial Office, these statements struck me as resting on a very insufficient foundation; and I therefore suggested that a thorough examination of the evidence respecting them should be made by a small medical committee on the spot. This was done; and the inquiry by the three Commissioners appointed for the purpose by the Governor, Mr. (now Sir James) Longden, occupied between eight and nine months; as not only was the history of the above two cases minutely investigated, but the testimony of most of the medical practitioners resident in the colony, as to the results of their experience upon the general question, was likewise sought for and obtained. The Report of the Commissioners to the Governor was made in August last, and was

then immediately transmitted to the Colonial Office, to be printed in this country. Towards the end of January it was sent by the Office to the College of Physicians, with a request from the Secretary of State for their consideration, and their opinion upon its contents. The Report is signed by Dr. Manget, Colonial Surgeon-General, and by Dr. Watt, Medical Officer of the Immigration Department in British Guiana; the third Commissioner, Staff Surgeon of the Army, Dr. Edge, having left Demerara shortly before the Report was issued.

(*a*.) The conclusions of the Commissioners in regard of the two cases referred to by Dr. Cameron are these:—Of the *first* it is said: "We do not consider this case as a conclusive one; but there are, we think, grounds for suspicion." And of the *second*: "We cannot altogether admit this (bad food, etc.) as a cause of the disease; we rather incline to the belief of its being contracted through his intercourse with the woman who proved herself to be leprous."

In respect of all the other inmates in the two colonial asylums, the total number of whom is nearly 200, the Commissioners add: "From none could we elucidate any information which could guide us to a conclusion."

(*b*.) The testimony of the great majority of the resident professional men, including several of the most experienced practitioners, who are medical officers of hospitals, was decidedly opposed to the belief that the spread of leprosy in the colony was attributable to the contagiousness of the disease.(a)

(*c*.) Notwithstanding these not very favourable or encouraging results of the investigation of the evidence in respect of the two propositions submitted by the local government for special examination by the Commissioners, the final conclusion in their Report appears to be not quite consistent with what might have been fairly anticipated. It runs thus:—

"Although the malady is not thought to be contagious by the majority of the medical men, the people entertain a dread of it, and firmly believe in its contagion. . . . We must again express our regret at not being able to adduce more information than what we have done. Taking into consideration the cases here offered, and weighing carefully the opinions entertained by recent authorities, we think we cannot be considered wrong when we give it as our opinion that leprosy in many cases is propagated by immediate contact; the term 'contact' not being accepted in the ordinary sense of the word, but as meaning a protracted intercourse of the healthy and the unhealthy, by which contact is produced by the inhalation by the healthy of the exhalations of the unclean, as well as the immediate juxtaposition of the parties, by which diseased fluids may be inoculated from one to the other."

The above allusion to "the opinions entertained by recent authorities" refers in a special manner to the late writings of Dr. Hanson, of Bergen, Norway, and of Dr. Vandyke Carter, of Bombay, which I examined at considerable length in my former papers in this journal for June 19 and July 17 of last year, and which therefore need not be further adverted to at the present time.

Special emphasis is also laid by the Commissioners on the history of the alleged importation and subsequent rapid spread of leprosy in the Sandwich Islands, as recorded by Dr. Hillebrand of Honolulu in 1866, and published soon afterwards by Dr. Macnamara, of Calcutta, in his pamphlet on the disease. The narrative was submitted in 1872 by the Colonial Office to the College of Physicians, with a request from Lord Kimberley to be favoured with their opinion thereon. From the following brief extract from the letter of the College in reply, after a careful scrutiny of the data, the reader can judge of the quality of the evidence that had been relied on by the original investigator:—

"Supposing the statements made by Dr. Hillebrand could be established as true, they might lend a seeming support to the idea of the contagiousness of leprosy. But the College has to observe that many of these statements are so lacking in precision as well as so deficient in details, while others are based on mere hearsay evidence, that the College is compelled to receive them with very great reserve. As regards the introduction of the disease into Honolulu, it is only surmised by Dr. Hillebrand that it might have been introduced by the Chinese about 1848; and it is not proved that leprosy, although not seen by him before 1853 (he had then been only two years in the place), did not exist, even extensively, in the island before 1848. The apparent rapid increase of leprosy began to be noticed, too, coincidently in point of time with the establishment of the Queen's Hospital and Dispensary, the number of lepers who applied for relief at the Hospital increasing year by year. The truth may be that the presence of the leprous amongst the population at large was only more clearly perceived on account of their seeking relief in greater number at the Hospital as this became better known."(b)

It is much to be regretted that neither Dr. Macnamara, nor any other writer that has accepted Dr. Hillebrand's account, has succeeded in obtaining any subsequent trustworthy evidence, either from him or from any resident medical man in the Sandwich Islands, bearing on the statements in his first communication. Unhappily, as is too apt to be the case in regard of unauthenticated statements about the existence or prevalence of disease in remote countries, some writers hastily grasp at unverified data which seem to favour their theoretical views, and thus unconsciously mislead the general public, and even the profession, for a time; and this seems to have been the case notably in the present instance.

The scepticism of the College was soon found to be strengthened by the experience of Dr. Anderson, Colonial Surgeon, Singapore, recorded in the explanatory letterpress to his "Photographs (coloured) of Leprosy as met with in the Straits Settlements, 1872,"(c) where we read:—

"Many lepers in every stage of the disease have for so many years been in the habit of mixing to a certain extent with the rest of the population in these Settlements—consisting, as it does, of nearly all the races met with in the East—and yet comparatively few are affected. . . . . The idea, therefore, of the disease being contagious is certainly one concerning which we require much better information than we now possess.

"In Singapore and Penang lepers go about begging, and become a perfect nuisance. It is impossible to prevent this with the present means at our disposal; they can come and go as they please; and until some regulations are in force, to attempt any systematic course of treatment would be useless. . . . . The segregation of lepers, though not demanded for the purpose of preventing infection, would, at all events, be of immense benefit to themselves (as far as comfort was concerned), and to the public convenience, at the same time affording the only plan which will give us a chance of at least greatly alleviating their sufferings, if not of curing them."

As to the apparent *causes*, predisponent and exciting, of leprosy, Dr. Anderson mentions, as the result of his observations, "the influence of marshy effluvia; bad and insufficient diet; sleeping in close, damp, and badly-ventilated houses; an hereditary taint; and in some cases direct inoculation.(d) These in certain constitutions would appear to be the prime causes of *true* leprosy."

On the subject of treatment he remarks:—"We must have control over the parties, otherwise our attempt will be abortive. As regards diet, the Chinese are exceedingly obstinate; they will have salt fish and pork, with salted vegetables in a state of putridity. The other native races are more amenable to reason in this matter; and I may observe here that in the treatment of leprosy *diet is of the greatest importance*. . . . The leprosy, identical with the disease under consideration, prevalent in Europe during the middle ages, and common then in our own country, has almost disappeared, no doubt owing to an improved sanitary condition and better diet; and I see no reason to doubt that in time we shall find it as rare in the East as it is now in Great Britain."

Had there remained any room for reasonable doubt as to the untrustworthiness of Dr. Hillebrand's statements, the following letter from the British Consul-General at Honolulu

(a) In a letter which Dr. Manget was so good as to write to me last summer, before the issuing of the Report, he says:—"Although to a certain degree holding the opinion that leprosy is contagious, I have not, I must confess, lately met with a single case which could prove the contagious nature of the malady." This candid declaration, from a man of such large experience and eminent professional ability as the Surgeon-General is universally known in the colony to possess, is regarded by me as of the highest value upon the point under consideration, and it ought to carry great weight among the educated classes of the community in Demerara.

(b) *Medico-Chirurgical Review* for January, 1874, pp. 206-7.

(c) These admirable pictorial illustrations of leprosy are truly lifelike. Readers who have not had the opportunity of actually witnessing bad cases of the disease will be better able to form an idea of its outward manifestations in the advanced stage of the malady than from any other drawings which I have seen. The work is published by Messrs. Churchill.

(d) Dr. Anderson does not narrate any instances in proof. He had previously merely said, "That it may be propagated by inoculation I can well conceive."

to Earl Derby, and recently sent to the College of Physicians, seems to nearly determine the point:—

"H.B.M. Consulate-General, Honolulu,
November 9, 1875.

"My Lord,—With respect to my despatch, No. 43, of November 12, in which I informed your lordship that I intended by the mail following to forward a copy of a report on the Leper Asylum at Molokai, prepared at my request by the staff surgeon of H.M.S. *Petrel*, I have the honour to transmit it, in the hope that the valuable information therein contained will be received with interest by the Royal College of Physicians, and more especially at the present time, when considerable alarm is felt in England from the appearance of leprosy there, and from its being supposed to be communicable.

"Your lordship will observe that we found a singular condition of things at the leper settlement. Among the lepers, and mixing freely with them without any restraint, were 150 natives, settlers at Kalawao, who, when the leper settlement was formed, were allowed to remain there. Mr. Pagsdale, governor of the asylum, and who has been there three years, informed Dr. Bett that assuredly the disease did not spread by infection from the lepers to the non-lepers, and that the percentage of leprosy among these latter is not greater than it is on the other islands—which, if true, is (Dr. Bett observes) a proof of the non-infectiousness of the disease.

"Dr. Bett remarks that this fusion of lepers and non-lepers at Kalawao is worthy of the closest scientific observation, especially as no such opportunity of conclusively settling this question is likely to occur again.

"It is the opinion of Dr. Bett, that the disease of leprosy, as he saw it at Molokai, was quite separate and distinct from secondary syphilis, and yet there was an unusual amount of syphilis among it, aggravating it, and, as he supposes, predisposing to it. Of the forty-three cases of which the Dr. had time to take any written notes, twenty-three admitted having had syphilis, or bore such evident traces of it that there was no need to ask any questions; in nine there was no evidence of any kind of syphilis. Careless vaccination, according to the medical men of Honolulu with whom Dr. Bett conversed on the subject, has been a means of promulgating leprosy.

"With regard to the evidence that the disease can be spread by sexual intercourse, Dr. Bett remarks that to this mode of extension he has seen some very curious exceptions. One woman had been successively the wife or concubine of four different lepers during the last nine years, who had all died. She is now living with the fifth, who is unmistakably a leper. During this time she has been impregnated seven times, miscarrying each time; yet there was no visible sign of leprosy upon her.

"Two other women whom the doctor saw had been living over four years as the wives of lepers, and yet he could detect no trace of the disease upon either of them.

"Dr. Bett remarks that the greatest cruelty in the leper asylum arises from the fact that there is no medical man to treat their various ailments; for although leprosy is held to be incurable, the lepers seem more subject to general diseases than ordinary people. Not only was there no medical man there, but there was no one who knew anything about the treatment of the simplest diseases.

"There is at present only one British subject in the asylum on the island of Molokai, a native of India, upon whose case it will be my duty to make a special report to your lordship, with the view of asking permission either to take charge of him, should it be necessary for him to remain at the asylum, or to send him back to Mauritius, where he had been living for some years.

"As I am well acquainted with the principal member of the Board of Health in this kingdom, I hope to be able to induce him to carry out the suggestion made by Dr. Bett with regard to the instruction of the devoted Catholic priest for a short time in the administration of simple medicines, and in the dressing of sores, and thus alleviate in some measure the sad condition of these people. I think that in so doing I shall meet with the approval of your lordship. I have, &c.,

"Jas. H. Woodhouse."

Reverting for a moment to the Report from Demerara, it is scarcely necessary to say that the College of Physicians, to which the Earl of Carnarvon referred it, after carefully examining the evidence, declined to alter or modify in any respect the terms of the conclusion adopted in the Report of the College, which stands thus:—"The all but unanimous conviction of the most experienced observers in different parts of the world is quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the diseased. The evidence derived from the experience of the attendants in leper asylums is especially conclusive upon this point." This opinion is shared in, it will be remembered, by the majority of the medical practitioners in Demerara. The same is the case with almost all the professional men in the other West Indian colonies. The evidence on this point from Barbadoes, in the Report of the College, was very decided and strong. Dr. Hulson, the present physician to the leper asylum there, recently wrote to me: "Certainly I have not noticed the slighest trace of infection or contagion in connexion with the disease. All our servants and attendants are healthy, nor can I discover any case of an attendant being in any way affected after attendance on the lepers."

And within the last week I have received the following letter from Dr. Bowerbank, of Jamaica, one of the most experienced and able physicians in the West Indies, and whose opinions on tropical diseases have long been highly esteemed by the profession in this country:—

"You wish me to state whether since I answered the questions propounded by the Royal College of Physicians on the subject of leprosy—and to which questions the answers were published in their Report in 1867—any circumstances have occurred to induce me to alter my then expressed opinion as to the non-contagiousness of leprosy (at page 13 of the Report). In reply, I would state that I have seen nothing, and, after due inquiry into certain allegations, I have heard nothing, calculated to alter or modify my already expressed opinion of the non-communicability of the disease from person to person. As I mentioned in my previous communication, any specks or marks upon the surface of the body, however trivial, together with all cutaneous diseases, however extreme and severe, are popularly (in Jamaica) all classed under the head of 'leprosy' or 'king's evil,' and each and all are looked upon as contagious or communicable. Under these circumstances, I fear it will be a very long time before this deep-rooted belief in contagiousness will be eradicated from the public mind. I fear that the result of the inquiry ten years ago as to the non-contagiousness of the disease has not tended to ameliorate the condition of these unfortunates—in Jamaica, at any rate."

Richmond, S.W.

A NOTE ON

THE USE OF MERCURY IN TRAUMATIC INFLAMMATIONS OF THE EYE.

By W. SPENCER WATSON, F.R.C.S. Eng.

There is much difficulty in deciding in a given case of injury of the eye as to the advisability or the non-advisability of giving mercury. As this point is of great importance in practice, it may be well to inquire what indications for or against the use of this drug are most reliable. In cases of injury of the cornea, as a rule, everyday experience tells us that, so long as the pupil is kept dilated by atropine, from the first there is no need of inducing any specific mercurial action on the system, and that merely local applications are sufficient to effect a cure. But it sometimes happens that after an abrasion of the cornea, and especially after lime accidents, the iris becomes rapidly affected, hypopyum forms, the margins of the pupil become tied down by adhesions, and atropine fails to expand it. Now, it is very important in such a case to distinguish between the hypopyum due to escape of pus from between the corneal layers into the anterior chamber, and the condition of iritis with effusion of plastic lymph into the anterior chamber from the anterior surface of the iris. The appearances are nearly similar, so far as the colour and position of the effused lymph or pus are concerned: in either case there is a yellowish deposit, with a distinct upper straight limitary surface, lying in the lower part of the anterior chamber; but in the case of purulent keratitis there is also a very distinct effusion of pus in the substance of the cornea, generally occupying a considerable proportion of its area, perhaps as much as one-quarter or one-third of the whole corneal surface, and very much obscuring the view of the pupil. On the other hand, when a wound or abrasion of the cornea is followed by iritis with effusion of lymph or pus in the form of hypopyum, but without suppura-

tive keratitis, the greater part of the cornea remains clear, the site of the wound itself being the only nebulous or opaque portion, and this being free from the peculiar yellowish aspect of purulent effusion. It is in these latter cases only that mercury should be given, and it should be so given as to affect the gums as rapidly as possible, atropine being used simultaneously, and applied frequently and steadily. Mercurial inunction, and calomel and opium in the form of pills, will be the best form of giving the mercury as a rule, but the oleate of mercury is perhaps a still more efficient and rapid means of affecting the system. There is no object in producing salivation. If the gums are just rendered spongy, the iritic adhesions will always give way under atropine properly applied, and it is then time to substitute iodide of potassium for the mercurials.

In very aged or very debilitated persons this plan of treatment will not succeed; but I have almost invariably found that the form of hypopyum *without* suppurative keratitis only occurs in the comparatively vigorous, whereas in the debilitated and ill-fed suppurative keratitis is the most common form, and the hypopyum is a later symptom, due to escape of pus from the corneal layers into the anterior chamber. In these cases, good nourishment, tonics, and soothing local applications are the most important remedies, and mercurials are contra-indicated.

As a general rule, therefore, hypopyum appearing early after injuries to the cornea as a concomitant of acute iritis is an indication for giving mercury in such a way as to affect the gums rapidly; but when hypopyum occurs subsequently to, or as an associated symptom with suppurative keratitis, mercury should be withheld, and tonics and good nourishment relied upon as the chief remedial agents. In other words, when iritis is the prominent feature, give mercury; when keratitis, tonics. Atropine is equally appropriate in either, and if used early after the receipt of an injury, prevents the question of mercurial treatment arising, by securing an early dilatation of the pupil and keeping the muscular tissue of the iris in a state of rest little favourable to that of inflammatory action. It is very remarkable that, after injuries caused by lime or other corrosive substances being thrown into the eye, there is a much greater tendency to iritis with effusion of plastic lymph in the form of hypopyum than after any other kind of injury—except, perhaps, those penetrating the cornea. Hence a knowledge of the history of the case will often be some guide as to the propriety of giving mercury; for where from the local symptoms we might derive only doubtful indications, the history of a lime accident would decide the point in most cases.

In the following case the results of treatment were so satisfactory and so characteristic that a short account of it may serve well to illustrate the remarks above given:—

Robt. H., aged thirty-six years, was sent up to me from Wimbledon on March 13, having while at work had some plaster splashed into his left eye about ten days before. He presented a corneal ulcer near the centre, with great pain and photophobia, a turbid aqueous, discoloured iris, pupil nearly closed by synechiæ and unaffected by atropine, and a small deposit of a yellow colour at the lower part of the anterior chamber. The cornea had no yellow or opaque deposit, and was only nebulous at the ulcer, the remaining area being comparatively clear. Atropine was used repeatedly at short intervals, with a view to breaking down adhesions and dilating the pupil. This utterly failed, and he was accordingly put upon the following treatment:—A pill containing two grains of calomel and half a grain of opium was given twice a day, and extract of belladonna and mercurial ointment in equal parts rubbed into the temple three times daily; atropine being used every two or three hours.

In three days from the commencement of this plan the pupil became partially dilated, the hypopyum disappeared, and the pain and photophobia ceased. Vision soon improved, and at the end of a week, the gums having become spongy and tender, iodide of potassium was substituted for the mercury. He was discharged with good vision (reading J. 10) at the end of sixteen days, and on April 18 could read J. 1. Nothing would have saved the sight of this eye if the plastic lymph deposit had extended upwards towards the pupil and ultmately filled the anterior chamber—a result not unusual after lime accidents, when mercury is withheld or given too late in the case. This patient's age was favourable to his recovery, but his health was not very good, and when he first presented himself at the hospital he had been so much reduced by want of sleep, pain, and anxiety, that he fainted away in the waiting-room.

In regard to the administration of mercury in another class of injuries—viz., those of the interior and deeper structures, without breach of continuity of the outer tunics—the indications are not so clear. A sudden loss of sight after a blow on the eye generally indicates intraocular hæmorrhage, and if the ophthalmoscope can be employed we may sometimes discover the actual seat of the lesion. But the hæmorrhage may occupy the whole vitreous chamber, and extend through the pupil into the anterior chamber, and in this case the probability is that some of the deeper choroidal vessels have given way, and have ruptured the retina, and poured out their blood into the vitreous. How are we to distinguish such a case from one of simple hæmorrhage from the iris or the ciliary processes? If the hæmorrhage be from the iris, the anterior chamber may be nearly or entirely full of blood, but the vision will not be so completely obscured as in the case of deep-seated hæmorrhage, and unless the pupil is quite overlapped, some dull reflex will be perceptible by the use of the mirror of the ophthalmoscope. If the pupil is quite unobstructed, full details of the fundus will be obtainable. On the other hand, hæmorrhage into the vitreous chamber causes a much more complete loss of vision—so that the movements of the hand between the eye and the light are barely perceptible—and the ophthalmoscope gives us no reflex from the fundus. In my humble judgment, mercury should always be given rapidly, with a view to affecting the gums, whenever, after an injury, there is evidence of hæmorrhage into the vitreous, and in some cases when there is hæmorrhage of a more limited kind into the retina. When the bleeding comes from the iris or ciliary processes, absorption may, and often does, take place without mercurials; but it is not always easy to distinguish clearly between a case of copious hæmorrhage from the iris or ciliary processes, and occupying the whole anterior chamber, from a case of hæmorrhage into the posterior chamber, originating in rupture of the choroidal vessels. In either case vision is very seriously impaired, and the view of the fundus absolutely cut off. Perhaps the severity of the pain in the case of hæmorrhage of choroidal origin, and, in some cases, the increased tension of the eyeball, may enable us to make a diagnosis. I am inclined to think, however, that these two symptoms are not absolutely pathognomonic, though when present they will have a certain value in doubtful cases.

The following case is a good instance of the success of the treatment by mercury when the symptoms are at first sight very unpromising in their aspect:—

J., a gentleman's groom, aged about twenty-five years, was kicked in the right eye by a horse a few hours before he was seen by me. He told me that the force of the blow was so great that he fell backwards, but was not stunned. His right eye had been very painful ever since. Blood occupied the anterior chamber, so that the pupil was scarcely visible. The tension of the eye was normal. Vision amounted to a mere perception of light.

Judging that the deeper tissues were more or less involved, he was ordered to take ten grains of iodide of potassium twice a day, and keep ice-balls continuously applied, at the same time using atropine drops every three hours. He was strictly forbidden to touch beer or spirits.

On the following day the pupil was rather more visible, but a thick vertical clot was seen to be occupying the centre of the anterior chamber. No reflex of the fundus could be obtained by the ophthalmoscope, and sight remained as before. He finds relief of pain from the ice-balls. The bowels being confined, a saline purge was ordered. On the third day a pill—containing two grains and a half each of calomel and Dover's powder—was given, and repeated each night till the ninth day. On the fifth day the pupil could be seen to be round and well dilated, and the central clot was evidently shrinking; vision had slightly improved. At the end of the ninth day he could tell the time by a watch held a few inches from him, and could read No. 50 Snellen's type at ten feet. The clot now rapidly disappeared, the iris became clear and natural in colour and texture, and the pupil round and fully dilated. At the end of a fortnight vision was nearly as good, and at the end of three weeks (when the dilatation of the pupil had gone off) was quite as good as ever. After a few days' use of the atropine drops there had been some amount of irritability of the conjunctiva, with œdema of the eyelids, and the atropised oil was therefore used to the brow and temple, in lieu of the instillation of the drops. The gums became slightly touched

by the calomel, and this was discontinued after the ninth day.

The perfect restoration of sight in so short a time from the accident will probably be regarded by some as a proof that the effusion could have been only in the anterior chamber; and instances are very common after operations of the rapid absorption of blood effused into this part of the eye. But in the case of operations there is the obvious injury of the iris leading to effusion in the chamber, whereas in the case above related there was no penetrating wound and no visible injury of the iris.

The second case illustrates the treatment of traumatic hypopyum by mercury.

Henry P., aged sixty-two, a plasterer, was chopping some Portland cement, when a piece was projected violently into his left eye. On the following day he came to the Hospital with an ulcer on the centre of the cornea and a large quantity of yellowish pus at the lower part of the anterior chamber. The tension was normal, but pain was nevertheless severe, and he had considerable intolerance of light. The eyeball was much congested. He was at once put on a course of mercury —viz., two grains of calomel and half a grain of opium in a pill twice daily, and to rub belladonna and mercurial ointment into the brow and temple. He used belladonna lotion freely, and applied a pad of lint saturated with warm belladonna lotion to the eyelids and orbit. After four days of this treatment the ulcer had quite healed, and all the puro-lymph had disappeared from the anterior chamber. His gums having become sore, and the bowels being relaxed, the mercury was discontinued, and iodide of potassium commenced. A fortnight after the commencement of treatment the pupil was perfectly sound and the iris of good colour, and vision improved so far that he could read No. 20 Jäger.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

LEUCOCYTHÆMIA (SPLENIC AND LYMPHATIC)—DEATH.

(Under the care of Dr. SILVER.)

JOHN W., aged fifty-two, an engineer, was admitted into the Hospital on November 25, 1875.

Family History.—Mother died of phthisis. One maternal uncle died of phthisis. All rest of family healthy.

Past History.—Quite healthy till about ten months ago. Has lived temperately. Has never lived out of England. Has never lived in a marshy district. Never had ague. Has always been subject to epistaxis for last thirty years.

Present Attack began ten months ago with shortness of breath. The latter has been increasing from this date. At same time has been getting weaker and losing flesh (has lost a stone and a half) since August. About a fortnight ago went to Royal Free, and was told that he had an enlarged spleen. All his symptoms have increased the last fourteen days. Had never noticed any swelling himself in the left side. During the last ten months the epistaxis has not been present to a greater extent than usual. It has always occurred only from left nostril. Has had no œdema of his feet. Has been subject to deafness on and off as long as he can recollect. Has not had scarlet fever, nor any discharge from the ear. Has had no loss of power anywhere.

Present Condition.—November 26.—Is evidently becoming thinner. Used to be a stout man. Complains chiefly of great shortness of breath, which comes on after the least exertion. Has been getting paler during the last six months, but there is no marked pallor at present. Gums rather pallid. The right side of the cheek acts more powerfully than the left. The right pupil also is more dilated than the left. There is no palsy, however, of the left cheek. There is a large tumour occupying the left hypochondrium, lumbar, and part of the epigastric region. There is only slight tenderness on deep pressure over this, which is most evident at the lower part. The area of splenic dulness begins as follows:—Upper limit, axillary line, eighth rib; nipple line, sixth rib—falls into tumour; lower limit—one inch below ribs; two inches and a quarter below ribs. Anteriorly the tumour reaches the median line in the epigastrium. Between the epigastrium and the xiphoid a notch can be felt. Posteriorly the dulness extend back to spine. The tumour is hard and resistant. Superficial veins over tumour visible. Liver dulness normal. Heart and lung sounds normal. No moist sounds bar left lung. The cervical lymphatic glands are considerably enlarged on both sides. Urine: No albumen. Temperature 101° Fahr. on 25th; 99·6° this morning. Has never had any shivering fits.

November 25.—℞. Sp. chlorof. ℥v., ferri. ammon. cit. gr. viij., m. quin. ad. ʒj., t. d. s.

30th.—Since admission there has been no improvement as regards the shortness of breath. Bowels open frequently, but motions have been very scanty. Has had thirty grains of compound rhubarb pill. Blood, examined this morning, shows a decided excess of white blood-corpuscles. Temperature ranges, as a rule, between 100° in the morning, and 101° in the evening.

December 9.—Bowels have been opened less frequently lately. Complains that the shortness of breath is greater than it was. Cough rather more troublesome; ordered some linctus. Temperature continues about the same. Ordered some castor oil.

13th.—After taking the castor oil the bowels became very relaxed, so much so that the patient was ordered chalk and opium mixture. On the morning of the 10th the temperature fell to 97°; on the 11th it rose again to 99°; but the range has since been one degree lower than formerly, viz., 99° to 100°. The appearances of the blood are unchanged.

22nd.—The diarrhœa has continued on and off; has had sulphuric acid and opium. Temperature-range rather irregular, but still about 99° to 100°.

29th.—Is thinner than he was on admission. The splenic tumour has increased in size. In the axillary line it reaches two inches and a half below the ribs, and in the nipple line three inches and a half. There is no tenderness on pressure over it. The glandular enlargements in the neck and elsewhere are rapidly increasing. The apex of the heart can be felt beating about one inch internal to the nipple line, and under the fifth rib. Subcrepitant râles audible at both bases, but especially at the left. There is no diarrhœa now, but a considerable amount of tympanites is present. Since the morning of the 22nd the temperature has had a higher range; it now averages just above or below 101°. Has had no rigors. The cough still continues, but has not increased. Has been taking since the 24th—℞. M. acid. ter. ʒj., tinct. zinzib. ℥x., t. d. s.

January 3.—No improvement. To-day was ordered the following mixture:—℞. Phosphori gr. 1-30th, æth. sulph. rect. ℥viij., bis die, in water. The temperature fell two degrees on the 2nd inst., and since that has continued lower; for the last five days has been sub-normal. Cough about the same. Has occasional attacks of diarrhœa for twenty-four hours, which are checked by astringents. For the last week has passed his motions in bed. The urine contains no albumen.

8th.—His chief symptom now is rapidly increasing debility. He cannot turn himself in the bed. Is very despondent as to his condition.

9th.—Diarrhœa severe. ℞. Acidi sulph. dil. ℥xxv., sp. chlorof. ℥xx., tinct. opii. ℥v., tinct. catechu ℥xxv., 4tis horis. The prostration increases daily.

11th.—The colourless corpuscles are now less abundant than before.

13th.—Since last note the weakness increased rapidly.

The patient died rather suddenly to-day at 8.30 p.m.

Post-mortem Examination in eighteen hours.—Considerable œdema of the legs. Enlargement of the palpable lymphatic glands generally. Effusion into the peritoneal, pleural, and pericardial cavities. A huge mass of enlarged glands occupied the front of the lumbar spine, involving the pancreas, displacing the stomach and bowels, and joining smaller glandular growths on the gastric wall and in the mesentery, as well as tracts of new growth in the diaphragm. The mediastinum contained a similar mass, continuous with enlarged glands around the bronchi and in the neck. The spleen was enormously enlarged, superficially firm, with a compact greyish-yellow section; internally of normal consistence and aspect. The stomach, and alimentary canal as far as the anus, contained blood variously altered. Every portion of the alimentary mucous membrane, from the base of the tongue to the anus, presented elevated masses of new growth in great abundance, corresponding chiefly in situation with the normal lymphatic structures. Several of the masses on the gastric wall were large, and some ulcerated; and near the pylorus was a single well-defined oval ulcer, one square inch in area, with com-

pact floor and swollen but firm edges. The liver was not enlarged; it was pervaded with spots of greyish-white new growth of all sizes, none larger than a bean. The kidneys contained no growth visible to the naked eye. The heart was soft, with thin walls; all the cavities contained blood, and both ventricles contained clots partly decolorised, extending into the corresponding artery. The lungs were not peculiar; a few spots of new growth occupied a small portion of the base of the left, where it was adherent to the diaphragm. The primary bronchi were somewhat compressed by enlarged glands, but their wall was not invaded. The costal pleura was healthy. On the anterior part of the right vocal cord was a pendulous growth as large as a pea, perfectly black from hæmorrhage into its substance. Aorta normal. The brain was not specially diseased; the subarachnoid fluid was unusually abundant. The enlarged glands, from any situation, proved on section to be quite white, almost diffluent in consistence, and perfectly uniform. A specimen of blood taken from the splenic vein presented no excess of colourless corpuscles or other peculiarity.

HOSPITAL FOR WOMEN, SHEFFIELD.

OVARIOTOMY—RECOVERY—POST-MORTEM EXAMINATION AFTER SEVEN YEARS.

(Under the care of Dr. HIME.)

As it is not often that opportunities offer of examining post-mortem cases which have been successfully operated on for ovarian dropsy, I believe the following may prove of interest:—

H. P., of Owston, near Doncaster, was sent to me as a patient seven years ago (August, 1868), suffering from "a tumour." She was forty-eight, married, and had six children. Her appearance was that of a healthy, robust, rosy-cheeked peasant. Her general health had been good, and her confinements normal (the last occurred in 1862). She had a vague impression that she did not diminish in size after the last confinement as she ought. In 1864 she had a bad flooding, and a miscarriage was suspected. From this time her menstruation commenced to be irregular, at intervals of two to three months. After two years of this irregularity she noticed a distinct enlargement of the abdomen, and—a further sign of uterine disorder—she began to pass at her periods pieces of skin, "like the lining of an egg-shell." However, she is certain that there was no dysmenorrhœa; and as her general health continued good, no notice was taken of the swelling. Subsequently she was treated for "wind and water" and other complaints, but was never tapped. On admission to the Women's Hospital I found her abdomen enlarged, acuminated, skin dry and glistening (she said she never perspired), and traversed by large veins. The following measurements were taken:—Circumference, forty-nine inches; ensiform cartilage to symphysis pubis, twenty-five inches; right anterior superior spine of ilium to umbilicus, fifteen inches; left anterior superior spine of ilium to umbilicus, fourteen inches. The tumour was very tense, and projected a good deal from the abdominal cavity, the lower portion of the abdominal wall facing the thighs. This latter fact proved, as is often the case, a correct hint of a longish pedicle. The heart was enlarged, with a systolic bruit at the apex, and a double first-sound.

Operation.—I operated on August 20, 1868, the operation lasting one hour and twenty minutes. The patient had a good meat breakfast at 7 a.m.—a practice which I strongly recommend, if there is time for its digestion before operation. Patients are often put on the operating-table who have taken no food since the previous evening, except, perhaps, a cup of tea and a piece of dry toast. In case sickness should follow the operation, it may be another twenty-four hours before they can absorb any quantity of nourishment. Such a plan must seriously affect the patient, especially in all important operations which last a long time and tax the patient's endurance. Besides, a good breakfast will not be found to provoke sickness. After five hours not much of a light meat breakfast will be ejected. She took chloroform admirably, in spite of the state of the heart. I made the usual incision in the median line, about four inches long, partially emptied the sac, and then tied the orifice, and explored the relations of the parts. The sac was throughout adherent to the anterior abdominal wall, but was readily detached. The pedicle was thin, about two inches long by one inch wide, growing from the uterine margin of the right lateral ligament. I then drew off the whole of the fluid (thirty-seven pints, clear, straw-coloured) from the single sac. The intestinal adhesions were numerous and strong, and their separation took a very long time; the knife was not used. Very strong adhesions also bound the sac in the neighbourhood of the liver. The pedicle was tied with whipcord and returned to the abdomen. The wound was closed by three deep and three superficial silver-wire sutures. She recovered without a bad symptom. Temperature on second day was 105° Fahr., pulse 104. She was troubled on the fourth day with flatulence and diarrhœa, passing hard scybala, and was relieved by the enema assafœtidæ, B.P. On the twenty-third day after the operation she was up.

After-History.—She menstruated regularly for about a year, during which time she increased considerably in weight. Her menstruation then became very profuse. The cardiac affection began gradually to grow worse, and subsequently her breathing became very bad on the least exertion, and her legs and feet became very œdematous. She returned to hospital on July 12, 1875. She was very stout (ascitie), her lower extremities being much swollen and œdematous. Her breathing was excessively bad; she was unable to lie down, and could make no exertion. Her urine was scanty and highly albuminous. The heart's sounds were displaced by a blowing murmur, so loud and extended that it was impossible to distinguish its nature or situation exactly. She improved greatly on iron and digitalis. The urine ceased to be albuminous, except after some unusual exertion; the swelling of the legs and feet disappeared; her breathing improved, and she could lie down with comfort. After a sojourn of seven weeks in the hospital she was about to leave on August 30. She went to bed cheerful and happy. During the night a patient in the same ward hearing her breathe heavily, called the nurse, and she was found to be at the last gasp.

The following day I made a post-mortem examination. The body was covered with a thick layer of fat. On passing my hand through an incision in the abdominal wall it was met by a compact, firm mass, filling the whole abdominal cavity. This consisted of the whole of the intestines, omentum, etc., matted together by quantities of lymph. It was impossible to remove even a short piece of intestine separately. On cutting through it the appearance was that of a solid body perforated by large canals (the intestines) in various directions. Yet she never suffered any intestinal inconvenience. The omentum was inseparably connected with the peritoneum above, as well as with the intestines below. No trace whatever remained of the strong whipcord ligature which tied the pedicle, not could I even find a cicatrix or mark of where the pedicle had been. The left ovary was in its place and healthy. The kidneys were large and completely disorganised; all trace of cortical structure had disappeared, and the capsules readily peeled off. The liver, too, on section was found diseased throughout, and so soft that the fingers readily penetrated it; fat could be distinguished in it with the naked eye, in patches as large as a pea. The lungs and pleuræ contained a considerable quantity of serum, which escaped on section. The pericardium contained over a pint of bloody serum. The heart was greatly enlarged, its walls fatty; and a rupture existed in the wall of the right auricle, which was not thicker than a leather glove. The mitral and aortic valves were both much thickened, and on the latter were situated several nodules, one as large as a grain of wheat. Still it held water, though this by no means proves, as is often supposed, that it could withstand the blood-pressure brought to bear on it during life.

SPINA BIFIDA.—In the *Annali Universali di Medicina* for April, Dr. Parona narrates a case of cervical spina bifida which he successfully treated by Prof. Rizzoli's method of applying a constrictive forceps at the base of the tumour. It makes the fourth successful case recorded. Dr. Parona gives full particulars of the other three cases.

POISONED BY A HAT.—A man having bought a felt hat at Stettin, after wearing it for two days found himself suffering from headache, which was followed by swelling of the forehead and the appearance of an eruption, which terminated in some small suppurating ulcers. His eyes became also inflamed and swollen, the rest of the face more or less participating in the inflammation. On submitting the hat to a juridical chemist it was found that its brown "sweat-leather" (an expressive, if not a very elegant designation) had been coloured with poisonous aniline dye. The matter was then put into the hands of the police.—*Deutsche Woch.*, July 1.

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Medical Times and Gazette.

SATURDAY, JULY 22, 1876.

MR. GLADSTONE AT KING'S COLLEGE, AND AT THE LONDON HOSPITAL.

Mr. Gladstone has within the last fortnight presided on two occasions at the annual distribution of prizes at educational institutions, and has on each occasion delivered a speech of great interest and instructiveness. On July 5 he distributed the prizes to the students of the departments of General Literature and Applied Sciences at King's College, and his speech on that occasion was one that no doubt has been, and well deserved to be, generally studied. He then spoke, as most men who have a similar opportunity are inclined to—but as very few indeed can, with such felicitous command of language—speak, of the benefits and the dangers of being prizemen in our schools. He pointed out that the gaining of prizes "is a benefit so far uncertain in its character that it is in the power of the winners themselves to turn their prizes into a misfortune and a mischief"; as, should the distinctions already gained lead the winners to "rely on what they had done, instead of springing forward to what they had to do, their honours would not then be advantageous, but seductive and tempting influences to lead them away from the path of honour." While, on the other hand, he showed the advantage that ought to accrue to the losers in competitions for prizes. For "the principal benefit did not lie in the reward, but in the exertion, in the effect of that exertion on the mind in forming habits and expanding powers, and in the results obtained in confirming that resolution and manliness of character upon which the future career would depend."

All the first part of the address was an eloquent exhortation to the students to exert themselves, to "leave no stone unturned, to refuse the ignoble invitations of sloth and lassitude, to do their very best in all things, and to be satisfied with nothing else," remembering that "every one has the power of working out a richer result from the original store, great or small, with which Providence has endowed him." But perhaps the most interesting, as being the most uncommon part of Mr. Gladstone's speech on this occasion, was that in which he addressed himself to the task of warning his hearers against the intellectual temptations that they would have to encounter. "The rapid extension of knowledge," he said, "especially in certain departments, the continual and lightning-like circulation of intelligence, tended, as it were, to raise the moral and intellectual temperature of the minds of men. And with that raised temperature there came a liability to excitement, and with that, infallibly, unless we are on our guard against it, instability of mind, and less of those solid qualities upon which the essence of human character depends." When the students went abroad into the world they would find that there are many who suppose that, in proclaiming their allegiance to truth, they at the same time proclaim their resistance to authority. "If the present is a day in which knowledge is abundant, it is a day in which he might say almost that sciolism yet more abounds. There are many who think that authority, as an auxiliary principle in the guidance of the human mind, is nothing but a mischief, and that when you say you are attached to truth, and a votary of reason, you are bound to deny all claims of authority and tradition." While, in truth, there could not be a more gross superstition: "he did not know anything in which superstition was more largely shown or more grossly than in the inconsiderate embracing of novelty because it is new." Authority in its genuine sense, he said, represented the total of teaching, and was derived from the anterior labours of mankind. The extension of knowledge is a regulated, and not a revolutionary extension, though in many cases, no doubt, it involved correction of what was supposed to be knowledge previously. But while his hearers "should never forget a firm allegiance to truth," he exhorted them not to suppose "that such an allegiance required them to cast off all the valuable aids that may be derived from the assistance of former generations, who, like ourselves, lived and moved upon the earth, and probably did their duty according to their means as well as most of us would. They should never consider it could be anything but the greatest folly to overlook their judgments. On the contrary, they should cherish the disposition to turn their discoveries to account, respecting what they had done to add authority to those judgments, but not renouncing the essential prerogative of judging for themselves as responsible beings."

This speech was addressed, and is of value, to *all* students; but when Mr. Gladstone, on the 13th inst., presided at the distribution of prizes at the Medical College of the London Hospital, he spoke to medical students, and through them to the whole medical profession, and his address was strikingly interesting, and very encouraging. He observed that though the profession of medicine was a subject which at all times, and particularly at the present time, commanded the deepest interest, yet, "though of such vital importance, and so ancient in its use, it was only in comparatively recent times that the medical profession had made its way into general confidence." It had not made its way into confidence from having mastered the secrets of disease,—he did not believe that would ever be done,—but "the profession had reached a position of immense importance, because, though all their efforts and attainments were limited within what was possible to beings of imperfect faculties, yet the world was well aware that human abilities of the highest character were addressed in ample quantity to the business of the profession with all the zeal and judgment that human capacity could devote to any of the pursuits of life." And the influence and importance of the profession would, he believed, increase more and more. "He was impressed with the belief that as the organisation of society and the structure of life had in modern times become far more complex than before, so the process of evolution would be continued, and from generation to generation life would, in all probability, become

still more complex; its griefs and its enjoyments would be still more multiplied, and the power and control of man over luxuries and pleasures would be increased. Man's subserviency to luxuries and pleasures would increase, and bring with it attendant difficulties. In proportion as man's enjoyment increased, so would his sufferings, and the necessity for help to relieve those sufferings. It was thirty years since he delivered an address at the Middlesex Hospital, and at that time he was impressed with the altering structure of society, the constant development that it seemed to undergo, and the effect of all this upon the physical and material, as well as upon the mental life. Even then he ventured to say that the importance of the medical profession, which at that time had grown so largely, would still grow in increasing proportion. Looking back across the intervening years, he could say that his anticipations had been fully realised. The public began to comprehend that the medical profession laid no claim to what he might call cabalistic methods—that was to say, it did not depend upon formulæ, but relied upon experience, endeavoured to track the truth, and followed the laws of common sense. That profession presented a future of the highest interest." And, he believed, it would most probably in that future gain increased influence, in greater proportion than other professions would. The legal profession, for example, possessed now no larger social influence than they enjoyed fifty or one hundred years ago. But with the medical profession, as pointed out above, the development of disease and the physical habits of life tended to widen its sphere and increase its influence. But, he went on to say, "there was another topic connected with the medical profession, and that was the activity of speculative thought, which had undoubtedly reached a point in this age unknown to former times. In this activity of thought, with all the hopes and all the efforts it excited, he could not help seeing that opportunity was given for the medical profession to exercise an increasing influence, and to assume the leadership of thought at large." And for this he gave his reasons: "If he were asked what was the besetting danger of this age in the region of thought, he would venture to answer it was thought which was known professionally by the name of 'specialism,' generally called in the world of industrial production 'division of labour.' These were excellent things, and we would not get rid of them if we could: but, at the same time, few of the goods which came to us in this world came unmixed with some drawback or besetting hazard; and the besetting hazard in the division of labour in the industrial world, and in the description of thought he had mentioned, was that they might tend to disproportionate development in the faculties of the mind, and, in consequence, a diminution, and not an increase, of its aggregate power. With regard to division of labour, there was no doubt of this whatever. Unless there was a counterpoise and a diligent use of general means of improvement,—unless a man pursued more than a special branch of labour,—he was in danger of becoming a stunted and deformed human being. So, also, the mind required that its faculties should be thrown into all attitudes and exercised in all its capabilities. Limited contemplation tended to diminish the general aptitude, the ability, and the command of resource which were so valuable in all stations of life." Now, the students of the medical profession had an immense advantage in the extent and the comprehensiveness of their studies. They began, mainly at least, with physical inquiry; but all their physiology, and all the different branches of their profession which contemplated Nature on her material side, would not give them a complete apparatus. To gain this they would be obliged to become students of the mind as well as of the body. "In the cases they had to deal with they would find that patients were affected by causes that had their roots not only in the material structure, but in human hopes and fears, through human appetites, and passions, and affections, and the strength of the human will, human fancies, and human caprices." The very nature of the profession demanded and afforded the opportunities of acquiring general and comprehensive knowledge, and this was a great security and advantage. They would not merely look to the operations of those forces which belonged to the medical world, but they would see the yet more marvellous and certainly more subtle workings of the human spirit in all its forms and relations at those critical times of life when they were called on to stand beside the bed of sickness and of death. The whole of man's nature would be open before them—sometimes in its strength and nobleness, sometimes in its feebleness and depravity. They would have large and varied experience, and he earnestly hoped they would have energy and wisdom to avail themselves of its advantages."

We have indulged largely in quotation, but it is most desirable that all medical men as well as medical students should study and lay to heart the utterances of such a man as Mr. Gladstone on education, and, still more, on the capacities and the possible future of their noble profession; and it would be the height of folly and presumption to attempt to clothe Mr. Gladstone's thoughts in other words than his own.

THE VIVISECTION BILL.

The Vivisection Bill still stands on the order-book of the House of Commons, and until it is removed the activity of the profession should be unceasing. It is on the action which must be taken within the next few days that the future of the Bill will depend. The deputation to the Home Secretary has evidently shaken the minds of the public, and the correspondence which has since been going on in the *Times* on the subject clearly shows this. As is usually the case, it is not, perhaps, the men best qualified to speak on a subject who rush to the public prints, but the letters published have served the useful purpose of directing action to the main points at issue. On our side the basis of argument rests on the facts put before the Commission, and contained in their Blue-book. Would that our opponents would draw their arguments from the same source! We cannot too frequently repeat the fact that the professional Secretary of the Royal Society for the Prevention of Cruelty to Animals admitted, in his evidence, that no single instance of unnecessary cruelty had been proved against British physiologists. That being so, why insult them by enforcing regulations and restrictions on their conduct, so annoying and so vexatious that each one of them should have to walk about stamped with a worse brand than that of Cain—as licensed to inflict cruelty on animals?

The latest document on the subject we have seen is a memorandum signed by some English, Scottish, and Irish teachers of physiology, but why it has not been signed by all we really do not know. We should like to be informed if any effort has been made to obtain a united protest on the part of all English teachers of physiology; if there has not, we must say we think it a great pity. A document signed by such a body could not fail to have some weight, but the fragmentary document we have seen is not likely to have so much. It is by the prompt response of the general body of the profession to the summons of the British Medical Association that so much has been already effected. There are members of our profession to whom this body is distasteful, but we would urge upon them not to let such feelings have too much influence in the present instance. It may be said that the same or similar steps might have been taken by any other body, but the fact remains that there was no similar organisation in existence fully equipped and ready to set in action what of necessity must be done promptly. In our opinion the thanks of the profession are due to the British Medical Association for the

promptitude with which they took up a question which interested us all.

There are one or two points in the memorandum mentioned above to which we might refer. It gives a very good summary of maladies or general conditions where experiments on living animals have been of the highest service; and it also upholds the principle that, whereas all teaching laboratories should be registered, it is quite enough as regards research that the investigators themselves should be certificated, leaving to their judgment where, when, and how to conduct experiments they may deem necessary. In the same document we find the best series of arguments against the absurdly sentimental cat and dog clause that we have seen. With it we shall conclude.

"The exemption of cats and dogs from experiment (even when rendered absolutely insensible to pain) would entirely prevent some of the most important investigations in physiology and in medicine. The considerations on which this statement is founded are as follows:—Cats and dogs are the only flesh-eating, warm-blooded animals which are available for observation in England. Agreeing in these respects with man, these animals (and especially the dog) resemble him in their digestion, assimilation, secretion, nutrition, and the chemical processes of life generally. As regards the general structure and arrangement of the nervous system, the carnivora also resemble man more closely than rabbits, guineapigs, or other smaller animals. For the comparative study of the diseases to which the lower animals are subject in common with man, it is necessary to have recourse to animals of various species. Thus, while rodents are prone to tuberculosis, cancer (which is rare in many animals) is common in dogs. It is on them, therefore, that observations must be made as to the nature and origin of this disease. The process of fever, as it occurs in dogs, closely resembles in its frequency, its relation to bodily temperature and circulation, and in other respects, the same process in man. Rabbits are so extremely liable to accidental infection after wounds, that their very susceptibility renders them unfit for experiments on surgical fever and the allied diseases; so that researches on this subject could not be made unless other animals were available. Rabies must be studied in dogs and cats, with a view to preventing its spread in these animals, and so removing hydrophobia from the list of human maladies. The same remark applies to various internal and external parasitic diseases, which are transmitted from dogs or cats to other domestic animals, and even to man himself. In the experiments by which the relation between tape-worms and bladder-worms was established, and so the means of preventing these diseases in man ascertained, dogs were necessarily used. The same considerations which apply to the study of disease in the lower animals may be extended to the investigation of the action of remedies and of poisons; for here, also, the susceptibility of different animals is so various, that a careful selection must be made according to the special purpose in view. But, in the majority of instances, the carnivora, from their approaching man more closely in their general organisation, are to be preferred. In several lines of investigation relating to the action of medicines they alone can be fitly employed. These animals can be rendered completely and continuously insensible to pain by the use of suitable anæsthetics."

We earnestly urge everyone to continue his efforts a little longer; a very short time will suffice to cause the postponement of a Bill which is untenable, because unsupported by fact or argument.

SUBCUTANEOUS OSTEOTOMY.

On Saturday last, July 15, we were attracted to the London Hospital by a notice that Mr. Maunder would perform subcutaneous section of the femur with the chisel and mallet, to correct angular deformity resulting from anchylosis after hip-joint disease. Like many of our readers, we had made ourselves acquainted with what had passed at a recent meeting of the Clinical Society (May 12, 1876), when Mr. Maunder read a paper on this subject, and exhibited patients who had been operated upon in this way; but we wished to see the operation done, and the instruments employed for the purpose. These we will now describe as we witnessed them, for the information of those surgeons who are interested in the subject. Two patients were submitted to this treatment on Saturday—one was a young girl who for about seven years had been unable to put her foot to the ground. Disease of the hip-joint had ended in fibrous anchylosis, with the thigh fixed at an angle of 118° with the trunk. Thomas's splint had been tried for several weeks with the view of gradually straightening the limb, but no improvement whatever had resulted. The other patient was a young man of fine proportions and well nourished, who had been sent up from Plymouth with the express object of undergoing the operation. Disease of the left hip-joint had supervened upon fever, and had ended in fibrous anchylosis with the leg at right angles with the trunk. Before commencing the operation, an assistant standing in front of the patient drew forwards the soft parts. Mr. Maunder then measured the distance from the top of the trochanter major to the shaft at a level immediately below the small trochanter—this spot being selected because it is the highest beyond the attachment of the numerous muscles which are inserted into the upper end of the femur. At this spot (and while the soft tissues are well drawn forwards) he inserts a double-edged knife down to and at right angles with the bone on the outer side of the limb, cuts through the periosteum, and then, before removing the knife, introduces the chisel, which is also kept at right angles to the axis of the shaft of the femur. With a light wooden mallet the chisel is driven well into the bone then partially withdrawn, to be again driven onwards, inclined somewhat obliquely forwards, and then backwards, so as to divide the bone in the rest of its thickness. While doing this the hand of another assistant is pressed upwards against the inner surface of the thigh, so as to make counter-force to the direction of the penetrating chisel. Finally, the limb is gradually and carefully extended, any small portion of bone which may happen to have escaped the chisel being at the same time broken down; lastly, a straight interrupted outside splint is applied.

The chisel—a separate one for each case—used by Mr. Maunder is three-eighths of an inch in width at the cutting edge, where it is wider than elsewhere; and three inches and a half long in the shaft. The operation is attended with next to no hæmorrhage, and the small wound in the soft tissues through which the chisel has been worked, becomes valvular and air-tight as soon as the tissues themselves are allowed to fall backwards into their natural position. A minute or two was the time required to complete the division of the bone in the case of the girl; in that of the man the process was longer, owing to the greater thickness and toughness of the bone. We are happy to state that up to the present time both patients are doing perfectly well.

Mr. Maunder showed to several visitors who had assembled to see the operation three cases in which it had been performed some weeks previously. All these three patients walked into the theatre—one man without the aid of stick or crutch—with limbs in nearly perpendicular positions, and with little or no lordosis. There necessarily, however, remains some deformity about and around the hip-joint. This is easily understood when it is remembered that there is anchylosis at an angle, and in some cases it has followed so-called dislocation from disease; while, as the division of the femur is made below the small trochanter, there is no attempt to correct the abnormal position of the upper extremity of the bone.

Mr. Maunder stated that in most of his cases there has been no suppuration whatever after the operation, and that it was very limited indeed in the case in which it occurred. This entirely coincides with the experience of Professor Volkmann, who also has employed the chisel instead of the saw. Professor Volkmann, however, used three chisels of different thicknesses to prevent the jamming and sticking fast in the deeper parts of the incision into the bone. The superficial part was divided with the stoutest, the deeper with a thinner, and the deepest with the thinnest instrument of all, so that the cleft was slightly wedge-shaped. Mr. Maunder, by a modification of the form of the chisel, finds it unnecessary to use more than one instrument.

THE WEEK.

TOPICS OF THE DAY.

Last week the first annual general meeting of the Metropolitan and National Nursing Association for Providing Trained Nurses for the Sick Poor was held at the Central Home in Bloomsbury-square, the Duke of Westminster presiding. The Secretary read the report, which stated that the objects of the Association were to train and provide a body of skilled nurses to attend on the sick poor at their own homes; to establish in the metropolis, and to assist in establishing in the country, district organisations for the purpose; to establish a training-school for district nurses in connexion with one of the London hospitals; and to raise the standard of nursing and the social position of nurses. The report also referred to the steps taken during the year to carry out these objects. The chairman, in moving the adoption of the report, said the Committee had not been able at present to make arrangements with any London hospital for training nurses, but he hoped it would eventually be able to do so. What they did must be done gradually. They could not at once cover the whole of London with their establishments, even if they had the means. He believed, however, the money difficulty was not so great as that of the supply of nurses. Mr. R. Wigram, of the Executive Committee, seconded the motion, observing that the total receipts had been £9571, and the expenditure £6400. The report having been unanimously adopted, Mr. Bonham Carter moved a resolution appointing the Council for the ensuing year. After briefly referring to the difficulties attending the formation of a good training-school for nurses, he spoke of the dearth of nurses, attributing the fact to the circumstance that our largest hospitals had done nothing towards providing efficient means for their training. On the motion of Colonel Weston, a resolution was passed cordially approving the work already done, and pledging the meeting to aid its future efforts.

Lord Hervey's recent motion in Parliament—"That further legislation is desirable with regard to the qualification and appointment of coroners and the mode of holding inquests"—deserves more than passing notice. It is worthy of observation that the majority of members who spoke to the motion were in favour of electing lawyers to this office, and it was reserved for Dr. Lush to maintain that some medical knowledge ought to be insisted upon as part of the qualification of a coroner. Ignoring any particular instance which may present itself to notice at this time of writing, we cordially agree with Dr. Lush's protest. The particular inquiry which is presented to the coroner's court for investigation is strictly medical, and to determine the weight of evidence adduced as to cause of death requires, strictly speaking, more medical than legal knowledge. In cases of foul play, the coroner's inquiry simply records a verdict of "wilful murder," but the punishment of the criminal is left to judicial hands. We trust that the Home Secretary, who admits that the subject is one to which he has given a great deal of attention, will weigh well the question before he decides that medical men are not the best qualified persons to conduct these preliminary inquiries as to the cause of death. We trust, further, that he will not allow isolated cases of indiscretion to detract from the acknowledged utility of medical education in deciding upon subtle causes of death, which in many cases would be entirely beyond the scope of mere legal science.

If any further proof were wanting that the Holborn Improvement Scheme should be adopted in its entirety, it might be found in the evidence recently given at an inquest held at the St. Andrew's Board-room upon the bodies of two children, one living at 12, Little Gray's-inn-lane, and the other at 29, Lacy's-buildings, Holborn. Mr. Birch, the relieving officer, said he wished to call the attention of the jury to the state of these houses; they were worse than pigstyes—in fact, pigs would not be put in such places. He thought it was a shame such places should be allowed to exist. The law compelled him to go into any house where he was called; and during the nine years he had been officer in this parish he had carried home small-pox twice and fever three times. The jury appended to their verdict a remark that the houses were unfit for human habitations. Surely this circumstance ought to be sufficient to stimulate the too tardy legislation which would remedy such a disgraceful state of affairs.

The Port Sanitary Authorities of Liverpool would appear to have every necessity for being vigilant. During the past week two vessels—the *Themis* from Demerara, and the *Ann Mary* from San Domingo—arrived in the Mersey with yellow fever cases existing amongst the crews on board. One death is reported to have occurred on board the *Themis* during the voyage. Both vessels were immediately placed in quarantine.

A public meeting was held last week in St. James's Hall for the purpose of forming a society to be called the Sanitary Institute of Great Britain. The Duke of Northumberland presided, and there was a numerous attendance of gentlemen from various parts of the country. In opening the proceedings the chairman remarked that everybody was aware that the conditions of existence in this country had of late become very different from what they were in former times. The springing up of new communities in various districts, and the enormous development of manufactories, had produced a state of things unknown since the creation of the world. In many of the great manufacturing towns there was an absence of drainage, a want of paving, and a total carelessness as to the provision of a pure water supply; and even where greater care had been shown in those matters, much still required to be done. In London we lived under a dense canopy of smoke, the water came from sources none too pure, while impurities were cast into the river, which must necessarily be prejudicial to the public health. There seemed little chance of the Pollution of Rivers Bill being passed this session, but he hoped it would be pressed forward next year; and this Institute was calculated to do much good in arousing public opinion on such an important matter. A resolution embodying the views of the meeting was proposed and adopted, and a large committee appointed for carrying out the formation of the Institute. We wish the new Sanitary Institute every success, and no one can doubt that there is an ample field for their exertions. Almost at the same time that their meeting was being held, a deputation from the Papermakers' Association was remonstrating with the Home Secretary on certain clauses which affected their trade in the Pollution of Rivers Bill. If this important piece of legislation is to be altered to meet the requirements of everyone affected by it, the public will be but trifling gainers in the end.

At a meeting of the Sanitary Board of St. Pancras, Dr. Stevenson, the Medical Officer of Health, reported a circum-

stance which had come under his notice in reference to the London milk-supply, arising out of three cases of enteric fever which it had been stated had occurred in well-appointed houses in the Regent's-park. The milk-supply of these houses was obtained from the same source, and the mother of one of the patients had complained that the milk was "dirty." He at once communicated with the milk vendor, who declared that he had taken every care with his utensils, and otherwise, to prevent such a thing happening. Having stated that he had the milk direct from a country farm, Dr. Stevenson wrote to the medical officer of the district in which the farm is situated, and received a reply to the effect that a more likely place for mischief to proceed from it would be difficult to imagine. Until the last few days the cows on the farm had had access to a pond containing crude sewage; a culvert opened directly into it. The house of the farm was skirted by a sewage pit. There was also a shallow fifteen-feet surface-well, containing only a few inches of filthy water, and from either of these sources the water-supply was drawn. The dairy of the farm was simply an offset from the scullery of the house, badly ventilated. The farmer admitted that he not only supplied the vendor in the Regent's-park, but also one of the largest refreshment contractors in London. The members of the Sanitary Board thanked Dr. Stevenson for his valuable report, which they considered of the highest importance. It was resolved to ask the Medical Officer of Health to continue his investigations, and report further at the next meeting.

The Corporation of Kingston and the Surbiton Commissioners have recently entered into a provisional agreement to make an application to the Local Government Board for permission to form a united district for the disposal of the sewage of the two districts on the aits below Kingston Town. At a meeting of the Surbiton Commissioners, held last week, the correspondence on the matter was read. The Kingston Corporation requires to have a majority on the joint board to be formed; this the Surbiton authorities decided not to agree to, as the greater proportion of the expense would have to be borne by Surbiton. Failing an arrangement, it is expected that the Thames Conservators will apply for penalties against both bodies, as the notice to abate the flow of sewage into the river expired on the 1st inst.

A testimonial to John Simon, Esq., C.B., late Medical Officer of Health to the Privy Council and Local Government Board, in recognition of his eminent services in sanitary science, is now being promoted by a committee of medical officers and others formed for that purpose. The co-operation of persons interested in the organisation and administration of the sanitary laws are invited. It is proposed the testimonial should take the form of a scholarship and medal, but suggestions on this point are invited of subscribers. Mr. Alfred Haviland, Medical Officer for Northampton, has undertaken to act as honorary secretary.

Sir H. Johnstone's Bill for repealing the Contagious Diseases Acts was before the House of Commons on the afternoon of the 19th, and after full discussion was, we are happy to say, rejected by a majority of 122. Some time was spent over a preliminary attempt to exclude ladies from listening to the debate; but those of the fair sex who could wish to be present had so much support from members of the House that ladies were left free to exercise a choice in the matter.

It will be seen from our advertising columns that a meeting of the Metropolitan Counties Branch of the British Medical Association is to be held at the rooms of the Medical Society of London, on the evening of Wednesday, the 26th inst., to consider some resolutions condemning Lord Carnarvon's Bill. All registered medical practitioners are invited to attend, and we trust this invitation will be freely responded to, and a very influential meeting be the result.

A NEW METHOD OF TREATING EXTERNAL ANEURISM.

Dr. Walter Reid, Staff Surgeon of the Royal Naval Hospital, Plymouth, has just published in a pamphlet form some short remarks on a case of popliteal aneurism which he cured by the application of Esmarch's bandage for fifty minutes. The patient was a sailor, aged thirty-seven, with a sacculated aneurism of the size of a hen's egg in the left popliteal space. For nine days he was kept in bed, on a light non-stimulating dietary, and then an unsuccessful attempt was made at cure by genuflexion, which was continued for four days. Afterwards, rapid compression by means of one of Carte's compressors was tried, but the pain and distress being so severe as almost to lead to syncope, the instruments were removed at the end of four hours. The pulsation was found to have ceased, but it shortly afterwards returned. A number of other attempts at cure by digital and instrumental compression were made, but owing to the freedom of the collateral circulation, no improvement whatever of the aneurism took place. On this account it was resolved to arrest the entire circulation in the limb by Esmarch's plan for performing bloodless operations. The elastic bandage was applied from the toes upwards, as far as the aneurism; it was then run very lightly over the popliteal space, and carried on as high as the apex of Scarpa's triangle. After the application of the constricting tubing, the bandage was removed. Before the tubing was loosened—at the end of fifty minutes—a Carte's compressor was applied at the pelvic brim, and allowed to remain for a few minutes; when this was loosened, no pulsation could be detected in the aneurism. The patient himself continued to apply intermitting compression until the evening of the following day, when Carte's apparatus was finally removed. Pulsation never returned.

This case cannot be regarded, perhaps, as one of aneurism cured purely and simply by Esmarch's bandage, as no doubt the previous treatment had worked some good effect towards a cure. It does, however, illustrate a further means at the surgeon's command for curing external aneurism, after failure by digital pressure or by rapid compression of the main artery by such well and accurately adjusted force as can be exercised by Carte's pads. It must not, however, in our opinion, be supposed that Esmarch's bandage is a substitute for either of these other means of cure. It is a more severe, and will prove probably in most cases a more painful process. It should only be resorted to, therefore, after it has been shown that stopping the circulation through the main channel alone is insufficient for the particular case.

THE CAMPBELL DE MORGAN MEMORIAL.

In our obituary notice of this well-known and scientific surgeon we stated that a memorial was about to be raised in his honour. For this purpose a large general committee was formed, consisting of his colleagues on the staff of the Middlesex Hospital, members of the Weekly Board of the Hospital, and other friends of Mr. De Morgan, professional and non-professional. At a meeting of this committee it was decided that the memorial should take the form of some addition to the building of the Hospital with which Mr. De Morgan had been connected, and in which he had done such excellent work for a period of over forty years. An executive committee was at the same meeting also formed, and Mr. Lawson, Dr. King, and Mr. Chichester were appointed secretaries. Subsequently a circular was sent to the personal and professional friends of the late Mr. De Morgan, stating that a memorial was to be raised, having for its object the erection of a Male Cancer Ward in connexion with the Middlesex Hospital, and to this memorial subscriptions were requested. This appeal has been responded to very warmly, and already close upon £600 has been contributed; but it is felt that there are many, as yet quite unacquainted with the move-

ment, who would be very glad to take part in it. Some, at least, of these we hope we may be the means of informing. It is quite needless for us to say one word in admiration of a man who was universally acknowledged by all who knew him to be well worthy of the highest honour his friends and professional brethren can confer. It appears to us that the subject of the memorial—a male cancer ward in connexion with the Middlesex Hospital—is peculiarly appropriate to commemorate a surgeon who himself did very much to enlarge our knowledge and advance our views of cancer, by his assiduous observation and work in that very institution which, in the late discussion on cancer at the Pathological Society, was described by one of the speakers as "that home of observation in reference to cancer—the Middlesex Hospital." We cordially hope that such a good object in memory of such a worthy man will meet with the support it so well deserves.

DR. BROWN-SÉQUARD'S LECTURES ON PARALYSIS.

THE eminent physiologist Dr. Brown-Séquard is delivering a short course of lectures at the Royal College of Physicians, in which he proposes an entirely new theory of the mechanism of paralysis from brain disease, and a new basis of treatment. He repudiates the old doctrine of the causation of paralysis. According to the old doctrine, paralysis depends on disease or injury (usually hæmorrhage) affecting some part which is a generator of will-force, or a conductor of it. He repudiates, also, the doctrine that recent observers have tried to establish—to wit, that there are centres of force in the brain which preside over the movements of specific parts of the body. By a large series of experiments and clinical evidence he proves that any muscle may be paralysed by disease or injury of any part of the brain; and conversely, that at times any part of the brain may be injured or diseased without any special paralysis. Thus he disposes of the old idea that paralysis is essentially caused by disease of a special part that generates or conducts will-force. The theory he would substitute is that disease or injury of the brain has a diffusive inhibitory action radiating from, or passing in definite channels down, certain columns of the spinal cord. This reminds us of a theory of paralysis propounded at an evening meeting of the College of Physicians nearly forty years ago by Mr. Herbert Mayo, and which is thus expressed in his "Pathology":—"Palsy from cerebral disease is not caused by the interruption of an accustomed stimulus, but by a new and withering influence transmitted to the origins of the nerves." It will be seen that, on this theory, paralysis is not an interception of force, nor a suppression of it at a supposed centre, but a kind of blight or an inhibition sent from an injured brain to the nervous cells generally. Clearly, if this be true, treatment must have a new basis. It is of no use to treat the cause, for that is spent; the brain lesion is unalterable. But the parts which conduct will-force to the paralysed muscles, and which are secondarily affected, must be restored to their functions as energetically as possible. The effect must be combated. Such is a nutshell view of these highly interesting and practically important lectures.

OUR CANAL POPULATION.

THE Annual Report on the Health of the Borough of Sheffield for the year 1875, by Dr. F. Griffiths, the Medical Officer of Health, shows no abatement in the care and vigilance with which the sanitary condition of the district is watched over. One point which is brought strongly to notice in it is the necessity of supervision of canal-boats and their inhabitants. The number of persons occupied upon the wharves of Sheffield varies, Dr. Griffiths says, according to emergencies; and it is not to be concealed that the floating population may, wherever it passes, carry with it elements of danger, more or less serious to health. Some of the cabins are tolerably clean and relatively comfortable, but a large proportion of them are wretched and filthy. The average size of those inspected was found to be about 201 cubic feet of space, usually lighted only from above by an opening barely sufficient to permit the body of an adult to pass through it; and this constitutes the only means of ingress and egress. This "cuddy" hatchway, as it is termed, is fortunately mostly uncovered; when it is not open there are seldom any other means by which air can find admittance to the cabins, which in size contain considerably less breathing-space than is insisted upon by law for each pauper or prisoner. The air is bad, often contaminated with dust from a cooking-stove, or if there is no "reek," there is the unpleasant smell which is always noticeable when iron (of which the chimney is made) is heated, or from bilge-water; thus the atmosphere breathed by the occupants is a mixture which can be tasted, and which no refinement of chemistry could analyse, but which a healthy human being would recoil from, as from the vapour of a known poison. Here mothers and fathers, brothers and sisters, and other persons, live or exist together. The sleeping-place is a shelf, averaging six feet by four feet; and here, not unfrequently, women become mothers, and the offspring are early accustomed to the vices of adults, who are too frequently addicted to drunkenness and brutality. Legislation is urgently needed, to prevent this overcrowding, to require that information be sent to the sanitary authority whenever there be sickness on board, and to prohibit unmarried girls and women from working or living on canal-boats.

THE ASYLUM FOR IMBECILE CHILDREN AT CLAPTON.

THE first annual report of the Committee for Clapton and Darenth Asylums for Imbecile Children, to December 31, 1875, has been forwarded for our inspection. So far, the desirability of separating the imbecile children from adult imbeciles appears to be perfectly established. Until such time as the projected asylum at Darenth can be built, the children are located at Clapton, in a building formerly used as the London Orphan Asylum, under the medical superintendence of Mr. Fletcher Beach, M.B. From the report of this gentleman there seems to be no doubt that great good is likely to result from the experiment. The children, where capable, are instructed in useful employments, the great principle sought to be established being that every child who is equal to it shall be continuously employed from the time he or she gets up in the morning till the time of going to bed; and that this principle is a good one is shown by the fact that the children as a whole have considerably improved both mentally and physically, the listless manner at first so notable having to a great extent disappeared. Many of the children who on admission could not speak, have learned to do so; many of the helpless have learned to walk; while the number of the fits occurring in the epileptics has been considerably reduced. There is, in fact, every reason for supposing that the more perfect asylum at Darenth will, when completed, be a most useful establishment.

A NEW CURE FOR RICKETS.

WE give the following nearly *verbatim* from the *Centralblatt für Chirurgie*, June 17; it is taken from the *Gazette Hebd.*, 1876, No. II. The idea suggests a well-known circumstance that is said to have occurred some time ago at the Zoological Gardens. A lioness was in the habit of throwing litter after litter of cubs with cleft palates, until it was found that the substitution of a more bony diet, in the shape of whole rabbits, during gestation, for the more refined food which the Society provides, had the effect of remedying this serious defect. In the same way it appears that the nourishment provided by nature for the lords of creation is not the best suited for some of his inferiors, and that even for him, under some conditions, a coarser diet is beneficial. The notion of feeding children on dog's milk is not a pleasant one: the objection is, of course,

sentimental; but surely an artificial fluid might be made to answer the purpose equally well? It is the custom amongst the women of Monttrun, in Dauphiné, to continue suckling for two years and a half to three years, with the idea of preventing another pregnancy; and if the infant dies, the mother either adopts another, or takes a puppy into her family to carry on the process. All these puppies suffer from rickets, which resembles exactly the rickets of children, except that the deformity is never afterwards remedied. These observations, and the fact that the dogs always recovered under the influence of their own mothers' milk, induced M. Bernard to submit a rickety female child of twenty-six months to the dog's-milk cure. A powerful bitch was provided to act as wet-nurse for the child, and after from two to three months of this new method of imbibing nourishment, the swelling of the epiphyses and the bending of the bones had notably diminished, the muscles were stronger, and at the end of the time the child could stand and take a few steps. The health of the patient was at the end of one hundred days extremely good, a slight curve of the femur and sternum being the only remains of the deformity, and the cure was permanent. He has adopted the treatment successfully in six other cases, and he expresses the belief that it will give encouraging results.

REFLEX MOVEMENTS EXCITED BY THE IRRITATION OF TENDONS.

Attention has recently been called by Professors Erb and Westphal, in Germany, to the muscular contractions which can be excited by a stimulus applied to certain tendons. Thus, if the knee and hip joints are slightly bent, and the patellar tendon (ligamentum patellæ) be gently tapped with the finger or some solid body, the whole quadriceps femoris muscle suddenly contracts so as to throw the leg vigorously upward. In the same way, if the tendo Achillis is suddenly stretched by bending the whole foot forcibly backwards, and is kept fixed in that position for a short time, clonic twitchings occur in the muscles of the calf. It is necessary that the stimulus shall be applied directly to the tendon to produce contraction of the quadriceps femoris muscle, and no similar contraction is produced by an irritation, no matter how strong, applied simply to the surface of the skin over and around the tendon. Professor Erb considers that the muscular contraction produced by tapping on or stretching a tendon is of a reflex nature, the stimulus being conducted to the spinal cord, and through it transferred to the muscle. On the other hand Professor Westphal regards the phenomenon as the expression of a kind of concentrated stimulus, communicated from the tendon to all the muscular bundles which terminate in it. Professor Erb's view, however, appears to be the correct one. The *Centralblatt*, No. 54, December 18, 1875, contains an account of some experiments undertaken by Dr. Schultze and Dr. Fürbringer, of Heidelberg, with a view to decide the difference between the two professors; and they found that in rabbits the contraction excited by striking the ligamentum patellæ ceased when the crural nerve was divided; and, further, that if the rectus, vasti, and crureus were completely separated from the patella, and kept slightly extended by means of a hook, they still contracted visibly when the tendon was percussed, but ceased to do so as soon as the crural nerve was cut through. In the same way the reflex contraction ceased when the rabbit was curarised, and the nerve consequently lost its irritability. Experiment therefore proves that the phenomenon is reflex in its nature; and pathological observation, as far as it goes, points in the same direction. Thus, the muscular contraction caused by forcible tension of the tendo Achillis never occurs in healthy persons, while the patellar phenomenon is much more marked in people with certain spinal diseases than in those with normal cords. The "foot phenomenon," as Westphal terms the contraction originated from the tendo Achillis, occurs in spinal paraplegia, and also in cases wher *one* extremity only is weak, owing to spinal disease. The patellar phenomenon (*Unterschenkel Phänomen* of Westphal) is generally found where the foot phenomenon exists, but the rule is not absolute. Both forms are absent in well-marked locomotor ataxy, as well as in grey degeneration of the posterior columns; but they may occur in cases either of primary myelitis or of myelitis subsequent to vertebral caries, provided the grey substance of the cord is not too much involved, or large portions of its dorsal and lumbar thickness completely broken down. Professor Westphal believes (although it seems difficult to reconcile his belief with his explanation of these phenomena) that there is a connexion between their occurrence and some defect in the conductivity of the lateral columns of the cord. In any case it is quite certain that when both "phenomena" are present there is no grey degeneration of the lower dorsal and the lumbar portion of the posterior columns of the cord.

Both phenomena, it should be remarked, are found present in the most various cerebral diseases. We believe that the so called "patellar phenomenon" is not quite unknown in England, but that it has hitherto been regarded merely in the light of a curiosity, and has not been made the subject of scientific investigation or discussion.

IMPURE ICE.

Dr. John Whitmore, the Medical Officer of Health for the parish of St. Marylebone, in his report for the month of June, calls attention to a probable source of disease which has not up to the present time been sufficiently considered. He says: "The mixing of ice with light wines and drinks has now become so general amongst the better classes of society, that some assurance of its purity seems necessary. What is termed Wenham Lake ice is principally imported from Norway in large blocks, cut out from the frozen fiords or lakes, the water in which is generally very pure; but owing, probably, to the annually increasing demand for this luxury, a large quantity of ice, apparently clear and transparent, is sold, which does not come from any such unobjectionable sources, and which, when melted, might fairly merit the designation of 'dirty water.' Some of this melted ice has been brought under my notice, in which I found a considerable amount of sediment, apparently of vegetable matter. Those who use ice are recommended to test its purity by dissolving a small portion in a wineglass, and if the water is clear and bright, in all probability it is genuine Norway ice, but if otherwise it should be rejected."

HOSPITAL FOR DISEASES OF THE CHEST.

The foundation-stone of a new wing to the Royal Hospital for Diseases of the Chest, City-road, was yesterday laid by her Royal Highness the Princess Louise, in the presence of the Marquis of Lorne, the Earl of Shaftesbury, Lord Charles Bruce, the Right Rev. Bishop Claughton, and a large number of ladies and gentlemen. Her Royal Highness arrived at the Hospital shortly after four o'clock, and, an opening prayer having been offered up by Bishop Claughton, proceeded at once with the ceremony. The new wing thus commenced is only part of a scheme for enlarging the Hospital. Year by year the demands upon the Hospital have been growing—the number of patients admitted last year being 5319, while ten years ago it was only 2384,—and the Building Committee having the necessary funds in hand, have determined to provide at once some additional accommodation. For the larger extension which is contemplated, however, about £8000 is still required.

THE "MAUNSELL MEMORIAL" FUND.

The Committee of this Fund, raised by the many friends of the late lamented Dr. D. Toler T. Maunsell, and intended to be devoted to the education and advancement in life of his

children, brought their labours to a conclusion on Friday, the 14th inst. Dr. Speedy, Treasurer of the Fund, stated that the total amount of subscriptions received, with interest allowed by the Munster Bank, exceeded £500; and that, after deducting all expenses, a balance of nearly £470 was available for the purposes of the Fund. It was resolved that the Fund be now closed, and that the sum at present standing to its credit in the Munster Bank be paid over to, and vested in, Drs. Thomas Wrigley Grimshaw and Albert Ormsby Speedy, who had consented to act as trustees. A draft trust-deed was then read and approved, and, after several votes of thanks had been adopted and responded to, the Committee dissolved.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A QUARTERLY COURT of the directors of the Society was held by the kind permission of the Royal Medical Chirurgical Society in their rooms, Berners-street, on Wednesday, July 12, at 8 p.m. The President, Sir George Burrows, Bart., was in the chair. The sum of £1271 10s. was voted to sixty widows and twelve children, divided according to the exigency of each case. The expenses of the quarter amounted to £44. Two fresh applications for assistance were admitted; two new members elected. The directors, acting under a special by-law, recommended that at the next general meeting in October a grant of £20 should be made to the daughter of a late eminent physician (formerly a member of the Society), in great distress from loss of income, and suffering from incurable diseases.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT a Comitia of the Royal College of Physicians, on the 18th inst., the President reported that the petition agreed on by the College for amendments to Lord Carnarvon's Bill for the Prevention of Cruelty to Animals had been presented to the House of Lords by his Grace the Archbishop of Canterbury, and to the House of Commons by the Right Honourable Robert Lowe. The subject being thus reopened, a fresh discussion took place, and the following resolution was passed:—"That this College, having had again brought before it the subject of legislation regarding cruelty to animals, and the provisions of the Bill now before Parliament, is strongly of opinion that, at this late period of the session, the said Bill should be withdrawn." The resolution is to be presented by the President to the Secretary for the Home Department.

SOCIAL SCIENCE CONGRESS.

THE following are the special questions for discussion in the Health Department of the Social Science Congress, to be held at Liverpool in October next:—"1. What is the best mode of making provision for the supply and storage of water (1) in large towns, such as Liverpool and Manchester; (2) in groups of urban communities of lesser size, such as exist in the manufacturing districts of Lancashire and Yorkshire? 2. What further legal enactments, if any, are required with a view to arrest the spread of infectious fevers? whether national and municipal registration is desirable as a means thereto: and what should be the nature of such registration? 3. What amendments are required in the legislation necessary to prevent the evils arising from noxious vapours and smoke?"

CHARGE OF ATTEMPTING TO PROCURE ABORTION.

A MAN named Smith, who keeps a herbalist's shop at Plymouth, has been committed to take his trial at the Devon County Sessions, on a charge of supplying a young woman named Mary Ann Harvey with a noxious drug, with the intent to procure abortion. The powder supplied by the prisoner contained a large proportion of Socotrine aloes, and it was contended that the quantity administered was very much larger than should be prescribed for a pregnant woman. The prisoner, in defence, stated that he gave the medicine for a cold, and that he had no idea the young woman was pregnant.

THE STATISTICAL SOCIETY.

THE Howard Medal for 1875 has been awarded to a Fellow of the Society (Edward Smith, Esq.), for his essay "On the State of the Dwellings of the Poor in the Rural Districts of England." Mr. Heywood, the President, has liberally added £20 to the medal for the present year (1876), the subject of the essay being "The Mortality of Hospitals," and has also promised to add £20 to the medal for 1877, the subject of the essay for which is "The Condition and Management, Past and Present, of the Workhouses and similar Pauper Institutions in England and Wales, and their Effect on the Health, Intelligence, and Morals of the Inmates."

SIR WILLIAM FERGUSSON AND DR. ARTHUR FARRE.

WE are happy to be able to report that Sir William Fergusson continues to improve and to regain strength. He drives out daily, and at the end of the month he will go to his home in Scotland. We are very glad to say also that Dr. Farre is making very favourable progress towards recovery.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A GENERAL MEETING of this Association will be held at the Century Club, 6, Pall-mall-place, on Monday, July 31, at 3 p.m. precisely, for the purpose of electing the officers and council, and for considering what public course should be adopted for giving effect to the objects of the Association.

THE EXPLOSION ON BOARD THE "THUNDERER."

WE are now in a position to give our readers some account of the fearful explosion on board H.M.S. *Thunderer*. This shocking calamity, the worst of its kind that has ever occurred since the introduction of steam into the Navy, took place on the afternoon of Friday, the 14th inst. This vessel has been recently brought forward for commission, and was, at the time of the accident, making a trial of her engines on the measured mile in Stokes Bay, near Portsmouth. She had a trial of her engines on the Wednesday preceding, of a partial character, and this day (Friday) it was thought would conclude it. It was what is termed the contractor's trial preparatory to handing over the engines to Government officials. Altogether there were a large number of men on board, and numerous representatives of Government, contractors, and others. Everything appeared to be going on well, when, at about ten minutes past one o'clock, the engines were handed over to the contractor, the ship then nearing the measured mile; and soon afterwards one of her boilers blew up, killing several people on the spot, and seriously injuring many others. The cause of this lamentable disaster has yet to be explained; but, whatever it may be, we, as professional journalists, have only to concern ourselves with the results.

As soon as it was known to the authorities on shore that an accident had occurred, and that it was one of no ordinary character, every preparation was made at Haslar Hospital to meet the emergency, by clearing three large wards in the centre of the building for the reception of patients, and holding the surgical staff in readiness for any duties they might be called upon to perform. But the grave nature of the disaster exceeded all calculations, and rendered the preparations made none too large to meet all the demands that were speedily made upon the surgical staff of the Hospital, consisting of Surgeons Kell, Wood, Irvine, and Laslett, acting under the orders of Deputy Inspector-General Loney. Two officers and sixteen men were killed on board, or died during the passage

from the ship to the shore. Fifty-nine were received into Haslar, of whom twenty have already died, and several others are in imminent peril of dying. All the sufferers were scalded in the face and hands, and many extensively over the body likewise. One man sustained a comminuted fracture of the left leg, and a compound fracture of the right ankle-joint, and had a portion of the os calcis torn off; he was also scalded extensively, was in extreme collapse on admission, and died within an hour. The disfigurement in some cases was so great that the nearest relatives of the deceased men could only recognise the remains by some well-known tattoo marks on their bodies or extremities. The constitutional symptoms in many of the cases now under treatment are still most serious, and before the period of collapse will have passed away it is feared that several of them will succumb. It is needless to observe that every possible care is taken of the sufferers in this our largest naval hospital. A medical officer is always in attendance, day and night. Abundant nourishment and comforts are always at hand, and attendants engaged to any extent, or in numbers as great as the principal medical officer may think necessary. The permanent staff of the Hospital would be clearly unequal to a long continuance of such work as they were called upon to perform on this occasion, and they have therefore been strengthened by the appointment of Staff-Surgeons Goodman and Burgess. By a singular coincidence the Medical Director-General of the Navy was paying his official visit to the Haslar Hospital when this disaster occurred, and had therefore an opportunity of judging of the capabilites of that establishment, for a more severe strain upon its resources can hardly be imagined to occur in peace or war.

THE WOUNDED AT HASLAR HOSPITAL.

The following will give a clearer idea of the nature of the injuries sustained by the unfortunate sufferers from the explosion on board the *Thunderer* than any account yet made public. From the various causes at work, one can easily conceive the frightful nature of the injuries received. These were mainly terrible mutilations and scalds from steam raised to an intense heat. The mutilations and other injuries were caused by the bursting of the boiler, carrying away its whole face, and by the smashing of the ironwork in its neighbourhood. The scalding arose from a twofold cause: first, from the flooding of the stokehole by the boiling water escaping from the boiler which exploded, and another adjacent which was injured by the falling front of its neighbour. The steam came not only from the exploded boiler, but from four others whose steam-pipes were in connexion with the exploded boiler, and which were broken by the explosion. Such a complication of horrors, of such magnitude and of such intensity, is not easily conceived, but will readily account for the terrible nature of the injuries sustained both by those who are dead and those who are yet alive.

Of the first class of cases, only one lived to be conveyed ashore. Both his legs had suffered compound fracture, and the whole body was extensively excoriated or vesicated. He was not in the stokehole, but in the engine-room, and it was the second rush of steam from the four boilers which drove him against the machinery and scalded him so frightfully.

The chief and second engineers, who were sadly mutilated, were also in the engine-room, and seem to have been destroyed in the same way as this poor fellow.

Since the time of the explosion twenty have died, and of these eight were dead before the next morning. The surface of their bodies was almost one universal blister, save where the superficial skin had been completely removed. These never rallied from the shock. Of the other twelve since dead the rally was imperfect. The mode of death in these varied: in some there was incoherence, diarrhœa, and vomiting; in others there was difficulty of breathing and duskiness of surface.

Of the thirty-nine still remaining, twenty-five who have been severely scalded in the exposed parts—the face, the hands, and the feet—are getting on very well. Unfortunately, the prospects of the recovery of the others are not so favourable. In their case the scalding has been more severe, especially on the front of the body. Some of them have, too, that pulmonary congestion and dusky hue which have in other cases preceded a fatal result, sometimes by exceedingly sudden collapse.

Since noon on Wednesday, two of the injured have died; eight still lie dangerously, and four seriously ill.

PASS AND PLUCK.

The following is the report from the Court and the Board of Examiners of the Royal College of Surgeons of England of the number of candidates who have presented themselves for the Primary and Pass Examinations for the diploma of Member of the College during the collegiate year 1875-76, showing the number who have passed and have been rejected from each medical school during that period:—

Primary Examinations.

Medical School.	Totals.	Number passed.	Number rejected.	Percentage of rejections.
St. Bartholomew's	98	73	25	1 in 3·96
Guy's	87·50	60	27·50	„ 3·18
University College	78·50	45	33·50	„ 2·34
St. Thomas's	57·50	35·50	22	„ 2·61
London	48·66	20	28·66	„ 1·70
King's College	37·50	26	11·50	„ 3·26
St. George's	33	20	13	„ 2·58
Middlesex	18·50	14	4·50	„ 4·11
St. Mary's	16·50	10	6·50	„ 2·53
Westminster	16·66	8·83	7·50	„ 2·17
Charing-cross	9·50	4	5·50	„ 1·72
Manchester	32·50	23	9·50	„ 3·94
Liverpool	25·66	13·83	11·50	„ 2·20
Birmingham	24	19·50	4·50	„ 5·33
Edinburgh	19·66	13	6·66	„ 3·05
Leeds	19	10	9	„ 2·11
Newcastle-on-Tyne	13·50	9·50	4	„ 3·37
Dublin	11·83	6·66	5·50	„ 2·15
Bristol	9	1	8	„ 1·12
Toronto	8·50	7·50	1	„ 8·50
Cambridge	8	6·50	1·50	„ 5·33
Glasgow	5·50	3·50	2	„ 2·75
Sheffield	4	2	2	„ 2·00
Aberdeen	3·83	2·50	1·66	„ 2·87
Montreal	3	3	—	„ 0·00
Melbourne	2·50	2·50	—	„ 0·00
New York	2·50	—	2·50	„ 1·00
Bombay	2	2	—	„ 0·00
Galway	1	1	—	„ 0·00
Caracca	1	—	1	„ 1·00
Cork	·50	—	·50	„ 1·00
Totals	700	443	257	2·72

Pass Examinations.

University College	78·91	66·58	12·33	1 in 6·39
Guy's	77	59	18	„ 4·37
St. Bartholomew's	63·75	49·75	14	„ 4·55
St. Thomas's	41·41	35·58	5·83	„ 7·10
King's College	34	18	16	„ 2·12

Medical School.	Totals.	Number passed.	Number rejected.	Percentage of rejections.
St. George's	27·50	22	5·50	1 in 5·00
London	21·50	16·50	5	„ 4·30
St. Mary's	18	12·50	5·50	„ 3·27
Middlesex	15	10	5	„ 3·00
Charing-cross	11·50	8·50	3	„ 3·83
Westminster	3·66̇	2	1·66̇	„ 2·20
Edinburgh	17·50	14	3·50	„ 5·00
Manchester	15·50	10·50	5	„ 3·10
Liverpool	13·83̇	9	4·83̇	„ 2·86
Leeds	13	6	7	„ 1·85
Birmingham	11	7	4	„ 2·75
Bristol	7·83̇	6·33̇	1·50	„ 5·22
Newcastle	5·75	3·25	2·50	„ 2·30
Cambridge	5·50	5	·50	„ 11·00
Dublin	5	2	3	„ 1·66̇
Toronto	4·66̇	2·83̇	1·83̇	„ 2·54
Belfast	3	2	1	„ 1·00
Glasgow	3	1	2	„ 1·50
Sheffield	2·83̇	1·33̇	1·50	„ 1·88
Bombay	2	2	·00	„ 0·00
Cork	1	1	·00	„ 0·00
Aberdeen	1	1	·00	„ 0·00
Montreal	1	1	·00	„ 0·00
Montpelier	1	1	·00	„ 0·00
New York	·50	·50	·00	„ 0·00
Paris	·33̇	·33̇	·00	„ 0·00
McGill	·33̇	·33̇	·00	„ 0·00
Galway	·33̇	·33̇	·00	„ 0·00
Totals	498	377	121	„ 4·11

BEN RHYDDING, WHARFEDALE.

Some years ago we published an account of this well-known hydropathic establishment in our columns, detailing the most interesting points relating to the building itself, its surroundings, but more especially as regards the system of treatment pursued in it. The favourable report then made we have had ample opportunity of confirming; but since it was written many and important changes have taken place, and a word as regards the present condition of the institution may not be amiss. Since that time there has occurred the lamented death of Dr. Macleod, better skilled in hydropathy than any man of his day, and a highly accomplished physician in every other respect. His death necessitated important changes. For a time the establishment was carried on by his representatives, but it has now passed into the hands of a company.

The young company have proceeded to effect improvements which speak well for their courage and activity. The grounds, already beautiful, have been improved upon by the opening up of new roads and walks, securing shelter for these from the prevalent winds, by facilitating the access to the house, and so on.

There is no sound system of medicine which does not advance; that which stands still has begun to retrograde. So of hydropathy, as it is commonly called. Many of the appliances at one time used have been thrown aside, and others of a more scientific kind have been brought into vogue. To meet the wants of the period, therefore, the Resident Physician, Dr. Lucey—a worthy successor to Dr. Macleod—has caused the whole system of baths to be renewed and reconstructed. All the newest appliances are to be found in the *repertoire* of the physician. To those seeking health or rest, with fresh air and good plain food—things which for the tired man of business are far better than gadding about over the Continent,—Ben Rhydding will ever present all-powerful attractions.

FROM ABROAD.

Cold Baths in Infantile Cholera.

Dr. Vocke, of Berlin, read a paper upon this subject in the Pædiatric Section of the German Association at Graz, and which he has since published at length in the *Oesterr. Jahrbuch f. Pädiatrik*, 1875, Band 2.

In his preliminary remarks he observes that, although the prevalence of this summer affection of early childhood rises and falls with the temperature, yet this is far from being its only cause, as infants who are brought up at the breast either, for the most part, do not suffer from it, or successfully resist it. The influence of infants being brought up by hand, and the consequent changes which the milk used in feeding them undergoes from the heat, which also enfeebles their digestive power, is seen in the fact that they suffer, while children brought up exactly like them, except as regards their nutrition, do not, or only in a minor degree. To these causes is to be added the impurity of the air of large towns during the prevalence of heat; for a child well supplied with pure air will thrive on a diet and during a temperature that would prove noxious in a town. These three causes, acting conjointly, may give rise to epidemic diarrhœa of infants; and a contributory cause is found in the atrophy seen of children brought up by underpaid nurses, their existence being usually terminated by diarrhœa. To treat such cases by mere pharmaceutical means is a useless procedure, for it is not so much the diarrhœa as the atrophy itself to which these children fall victims, and to remedy which complete social reforms are required.

The present communication, however, does not relate to these cases, but to children who, otherwise healthy, become the subjects of severe summer diarrhœa, that has hitherto resisted treatment. The means of treatment may indeed be educed from a consideration of the effects of the high temperature in producing it; for just as young plants faded by the prevalence of heat may be revived by watering them, so may the infant by repeated cold washing and bathing be enabled to resist the effects of disease so caused. In the summer of last year, Dr. Vocke submitted almost all his cases to the cold bath, with most remarkable success. Some of these—healthy children, the subjects of diarrhœa or cholera, having the cholera aspect, and presenting not the slightest hope of recovery—seemed the next day as if born anew. Sometimes the temperature was raised to 40° C. (104° F), the pulse being scarcely perceptible and the child excessively restless. Any sleep procured by opiates was unrefreshing, and the child got worse and worse. On three or four cold baths being given, good sleep was obtained after each, the child being more lively, changing its fixed dull stare for the seeking glance, taking food, and having fewer and better stools. It is not meant to be asserted that these good effects were exclusively due to the baths, for other remedies were employed conjointly; and when the seat of the disease seemed located low down the rectum, small enemata of nitrate of silver with a few drops of tincture of nux vomica were ordered—a means of well-known efficacy in sporadic diarrhœa at other periods of life. The cold baths operate by relieving the state of exhaustion into which the child has fallen in consequence of the heat, and restore it to a viable condition, similar to that in which grown-up persons and children in winter find themselves if they become accidentally the subjects of diarrhœa—pharmaceutical substances now again becoming of utility as in winter.

In this affection the infant should not be covered up as in winter, but only lightly so, the cradle being placed in an airy part of the dwelling, though out of a draught; and the windows thrown widely open, not only for the purpose of ventilation and cooling, but also to admit a purer air than is found in the sick-chamber. Caution must also be observed with respect to the baths themselves, on account of the fear entertained by most mothers of cold baths—which sometimes have acted mischievously. In some cases, therefore, it will be well to commence by making cold applications first to the head, and then to the belly—a measure which has often prolonged the child's life. The mother, witnessing the effect of these, will then consent to put the child into a bath of 26° (78° Fahr.), and next day of 24° (75° Fahr.); and a temperature lower than 22° (71° Fahr.) is of no advantage, and may prove dangerous. The bath should be repeated three times in twenty-four hours. Dr. Vocke has not kept notes of the cases he has

treated so satisfactorily by this means, but they cannot be less than a hundred, and the cures were durable.

The Transported French Communists.

In the *Gazette Médicale* for June 3, Dr. Vacher furnishes an account of the medical condition of these convicts, derived from the official documents laid before the French Parliament. It had been stated by the opponents of the Government that the convicts existed in New Caledonia under the most deplorable sanitary conditions, being subjected to a most inefficient alimentary regimen. On submitting these accusations, however, to the test derived from the proportionate mortality observed in the penitentiary colony of Nouméa, sanitarians will arrive at a very different conclusion. On January 1, 1875, there were 3388 convicts, 752 of the number being confined in a fortress, 2346 subjected to simple transportation, and 290 allowed certain privileges. This population of 3388 (among whom were nine women) furnished during 1874 a total of forty-four deaths (exclusive of two deaths by accident and four executions), and therefore a mortality of 14·5 per 1000. To attain a precise idea of the proportionate mortality, it must be borne in mind that this penitentiary colony consists only of adults—viz., 375 between fifteen and twenty years of age; 1096 between twenty and thirty; 1516 between thirty and forty-five; 394 from forty-five to sixty-five; and 7 of unknown age—in all 3388 individuals between the ages of fifteen and sixty-five. This mortality will, of course, be much less than that of a population comprising the extremes of life, and must therefore only be compared with other populations of the same ages. In Paris, according to the *Bulletin de Statistique Municipale*, there died in the same year 19,666 individuals between the ages of fifteen and sixty-five; and as, according to the census of 1872, there were then living 1,410,140 individuals of these ages, this gives a mortality of 13·9 per 1000, which differs little from that observed among the convicts of New Caledonia. In the central prisons of France the mortality of the male inmates between the ages of sixteen and sixty is stated by Dr. Bertillon to be 15 per 1000—or a little in excess of that of New Caledonia. During 1872-73, owing to an epidemic of typhoid fever, the mortality in the colony also rose to 15·4 per 1000. Of the total of 108 deaths which took place between October 1, 1872, and January 1, 1875 (exclusive of 21 occurring during the passage out, which was of a mean duration of 125 days), 13 deaths took place from typhoid, 26 from affections of the chest, and 29 from diseases of the alimentary canal, dysentery, diarrhœa, scorbutus, etc. According to the annual returns submitted to the English Parliament, while the mortality is but 10 per 1000 for the troops in garrison in Great Britain, it rises to 22 per 1000 among the English troops in India, and to 22·5 per 1000 in Australia—a great excess over that occurring among the convicts in New Caledonia.

As regards the dietary, M. Vacher furnishes tables of the rations served to the convicts and of those given to the sailors, from which it results that, with the exception of a comparative deprivation of alcoholic drinks (46 grammes only being given to the convict, as compared with 512 grammes given to the sailor), the convict is in a better position than the sailor, receiving 1482 grammes of solid aliments, as compared with 1268 grammes. Indeed, for the climate of New Caledonia, the convict probably receives too large a quantity of animal food (475 grammes of fresh or salt meat as compared with the sailor's 300 grammes), and his well-being would be consulted in substituting vegetables or fruits for some of this.

Pulsation of the Funis felt Externally.

At a meeting of the Petersburg Medical Society (reported in the Petersburg *Méd. Woch.*, May 6), Dr. Bidder related a case in which the pulsation of the funis could be felt through the abdominal parietes. He was called to a woman at the full time of her third pregnancy—the liquor amnii having been dribbling away in consequence of a fall three days before. The night before, strong fœtal movements had occurred, giving the patient the sensation of the child having "turned round." On examination the head was found in the second position, and slightly movable at the entrance of the pelvis. The parietes of the abdomen were somewhat lax, but not very thin. A cord stretched obliquely across, which was at first taken for a fold of the skin. On closer examination it was found to be the funis beneath the walls of the abdomen, capable of being easily pushed upwards and downwards to some distance over the back of the fœtus. On placing the finger over it, the pulsations (152) could be plainly perceived, their coincidence with those of the heart being sometimes easily perceptible. As nothing seemed urgent, the case was left to take its course, care being taken to avoid pressure over the abdomen; and the pains coming on several hours after, a child of medium size was quickly born in a state of deep asphyxia. From this it was restored, but died fourteen hours later. The funis was very short—at most not exceeding thirty centimetres in length. Dr. Bidder believes that the cord assumed this place during the violent movements executed by the child after the discharge of the liquor amnii, and which were favoured by the relaxed condition of the uterine walls.

REVIEWS.

Spiritualism and its Allied Causes and Conditions of Nervous Derangement. By William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System in the Medical Department of the University of the City of New York, etc. Illustrated. New York: Putnam. London: Sampson Low. 1876. Pp. 366.

Whatever Dr. Hammond writes about the nervous system is gladly accepted as the work of a master; and we anticipate a wide circulation and great resulting benefit from the diffusion of this work, marked as it is by the candid admission of whatever is worth credit in the subject discussed. It demonstrates the connexion between faiths and phenomena which at first sight seem to have little or no connexion; as, for instance, visions of spirits, with extraordinary powers of abstinence from food. Since, moreover, a large portion of the phenomena described either constitute new religions (such as Spiritualism, Shakerism, and the faith in Joanna Southcott), or else are manifested in conjunction with emotional disturbances excited in the practice of the older religions, it is as well to quote the passage which marks the writer's attitude with regard to religion in general. He sets up no antagonism between science and religion, for, as he says, the one is truth, the other faith in truth. He has not one disrespectful word for rational religion of any kind, and especially for Christianity, "to which the civilised world owes so much." But as for the faith—whether theological or medical, spiritualistic or mesmeric—whose votaries seek to bolster it up by sham miracles, or by emotional disturbance excited in its disciples, and in which catalepsy, hysteria, and other slighter grades of insanity are described as "outpourings of the Spirit of God," he treats them as blasphemous impostures.

The subjects which pass in succession before the reader are the sensations alleged to be caused by magnetism, including the *od* force of Reichenbach; the different sources of delusion, love of the marvellous, disturbance of the sensorium produced by concentrated attention; the imitative faculty; the suggestive faculty, or rather the belief induced in some people that they see what they are told they see; sleight-of-hand and jugglery. Of the various coherent forms or systems of delusion, we have the spiritualistic, somnambulism (natural and artificial), hysteria, fasting girls, catalepsy, hysterical epilepsy, and stigmatisation. We have a definition of mediums, as persons who, through alleged spiritual agency, do, or pretend to do, mechanical or chemical feats without mechanical or chemical means, or even to do things which, from a human point of view, are regarded as impossible. Of mediums there are many classes. A primary distinction must be made into the honest and dishonest—the latter being charlatans and adventurers, the former being dupes and tools; persons of impressionable nervous systems, credulous, ready to see, hear, and feel and describe whatever they are bid to do by those under whose influence they are. Be they deceivers or deceived, they may be *physical* mediums, such as table-turners, fire-eaters, and levitators; *sensitive* or impressible mediums, who feel the presence of spirits in a vague way; *auditive* mediums, who hear spirit-voices; *speaking* mediums, who utter communications made to them by spirits; *seeing* mediums, who see spirits either when awake or when in a sort of trance; *somnambulic* mediums, who differ in being more under the control of their own spirits than of others; *curing* mediums, endowed with medical and sanative powers; *pneumatographic* mediums, who obtain

writings from spirits; *psychographic* mediums, who write as the spirit moves them; besides *possessed* and *obsessed* mediums, who are haunted by spirits within or without. The achievements of each of these classes are described in order.

Under the head of physical mediums, we have accounts of the power of increasing or diminishing the bodily stature. Thus, Mr. Home asserts that, in presence of certain believers, he increased his height to six feet nine inches, and lowered it to five feet. Mrs. Katie King, a detected American medium, used, according to Mr. Robert Dale Owen, to shrink to eighteen inches, and then rise to her full height. Secondly, there is the alleged power of *levitation*, or of rising and floating in the air —a phenomenon claimed by Mr. Home, but alleged to have happened as an instance of Divine favour to many of the saints, to many witches and sorcerers, to some few pagans, and practised as a trick by some Eastern professors of legerdemain. The opposite to levitation is *gravitation*, or the power of rendering persons or things so preternaturally heavy that they cannot be lifted, which, as well as incombustibility, or the power of resisting heat and chemical agents, are privileges of physical mediums.

Nothing can be fairer and more candid than the mode in which Dr. Hammond analyses these miraculous phenomena, as well as those with which the book is crowded, in the chapter relating to the other forms of delusion. Take, for instance, *levitation*. There is a primary pathological fact to start from. A feeling of vertigo, swimming in the head, of great expansion and rising, as if the bed and floor are going from under one, is one of the commonest symptoms of brain disorder, even of a trivial and passing kind. Let us quote Dr. Hammond:—

"Madame d'Arnim, Goethe's friend, in speaking of the sensation in question, says—'I was certain that I flew and floated. By a simple elastic pressure of the toe I was in the air. I floated silently and deliciously at two or three feet above the earth. I alighted, mounted again, flew from side to side, and then returned. A few days after, I was taken with fever; I went to bed and slept. It happened two weeks after I was confined.'"(a)

Now, if an excitable brain, overwrought with vigils and fastings, gave rise to such an idea in the case of St. Francis or St. Theresa and other saints of whom such things are recorded, we need not accuse them of falsehood, but simply may say that they felt raised, and believed it.

Then, secondly, that which is an honest delusion on the part of the saint gains coherence by the "unintentional exaggeration, misinterpretation, and inaccuracy" of the bystanders or witnesses. The struggles and contortions and liftings of the limbs of hysteric persons, which are resisted by friends, who struggle to keep the patient down, may account for some instances of supposed levitation. In a case of mental disturbance treated by Dr. Hammond, the patient, a very devout lady, passed hours in prayer, during which she believed that she was lifted from the ground—a *fact* attested by her maid, though less enthusiastic friends could not be persuaded of it.

Such are the conditions recorded in the case of honest persons who believed what they said. We need not comment on the share which wilful and interested falsehood and legerdemain may have had in the more suspicious histories.

Somnambulism is fully described, both as occurring naturally or spontaneously, and as induced by various artifices, such as the exhaustion of the attention, as in Mr. Braid's *hypnotic* process, which produces a state of partial somnambulism combined with hysteria, and by the too familiar practice of mesmerism. The hypnotic state may be easily induced in animals, and the author shows how; and shows, further, that mesmeric passes are not necessary to the act of putting an animal to sleep or awakening it. He shows the connexion between the hypnotic state and spiritualism. The patient has part of her nervous system *out of gear*, but not all. There is no correct judgment, and no volition. "Imagination, memory, the emotions, and the *ability to be impressed by suggestions* were present in a high degree" in the case of one female somnambulist described.

Hence questions are answered; and if relating to a subject known beforehand may be answered correctly; if otherwise the answers will be fictitious, and derived from the imagination or from some suggestion. Dr. Hammond quotes a capital case in illustration. A very pious girl, after her first communion, fell into a somnambulic state, and said she saw beautiful visions. When asked what she saw, she answered "God and the angels, the Apostles and Mary." Soon afterwards she fell under the influence of a person whose opinions were freely philosophical. She had another vision; but this time declared that she saw "God accompanied by his apostles Voltaire and Rousseau."

Here we must pause, although we should willingly go on with Dr. Hammond's analysis of the difficult subject of the *stigmata;* and of the modern French miracles, which may be reckoned as a real power in the world, inasmuch as the "miraculous water" of Lourdes is imported into New York. In dealing with the alleged apparitions of the Blessed Virgin to French peasants he is singularly fair, imputes no fraud to the originators, and shows how a gigantic superstructure of myth may have for its basis a very simple pathological fact. He is no disbeliever in exorcism, though he believes that there is no saint in the calendar who has so much power over evil spirits as St. Bromide.

We fully concur with Dr. Hammond in denouncing the spurious and hysterical miracles which certain religionists, spite of the warnings of experience and physiology, foster and quote as instances of Divine power. Such spurious prodigies do but divert attention from the greatest Christian miracle —the subjugation of the will and passions in the Christian's heart. We finish with a passage which Dr. Hammond quotes to this purport from one of the biographies of one of the greatest men who ever lived, Ignatius Loyola, founder of the illustrious and much-abused Society of Jesus:—

"His children never claimed for him a power of working prodigies, and he would certainly have greatly regretted such an attitude. All the remarkable circumstances of the kind that it has been thought right to detail may be set aside. *The true and only miracle* that it is necessary to know and to appreciate is that of a most noble, extraordinary, and original character, and an *admirable life*."(b)

How to Use the Ophthalmoscope. By EDGAR A. BROWNE, Surgeon to the Liverpool Eye and Ear Infirmary. London: Trübner and Co. 1876. Pp. 108.

Mr. BROWNE's little book professes to be "elementary instruction in ophthalmoscopy, arranged for the use of students"; and, we venture to add, it is very nicely adapted and arranged. The book commences with the optics of the subject, and in a series of interesting paragraphs, illustrated by some well-drawn diagrams, the student is introduced to his subject in a manner which is at once engaging and scientific. After treating of the laws of reflection and refraction, he comes to the subject of the formation of images, and thus appropriately leads up to the eye as an optical instrument. The principle of the ophthalmoscope is next considered, and reference made to Helmholtz's first ophthalmoscope. The diagrams illustrating the old difficulties of getting the pupil in the line of the returning ray, before the perforated reflector was invented, are very clear and instructive. Having got so far, the author gives some practical instructions on how to use the instruments: some very precise details are given, both as regards the patient and the observer. He describes and illustrates by some telling—though rather rough—diagrams the method of examining the erect and the inverted images, and the advantages and disadvantages of the two methods. Then, after describing the appearances of the normal media and fundus, and the most usual anomalies of refraction—myopia, hypermetropia, and astigmatism,—he goes on to ophthalmoscopy proper.

Thus far we have had little to criticise and much to admire. In this last section, however, we do not think that the author has been so happy in his illustrations. For instance, in the sections on "Alterations in Surface-Level," we fancy that the drawings will tend rather to lead the student astray than to help him interpret what is certainly a very difficult part of the subject. No doubt the sectional views of these conditions will give a very good idea of the gross condition of the optic nerve, but the student will find nothing in the fundus oculi at all approaching in appearance this "rough sketch." No doubt "rough sketches" are very expressive to anyone who has mastered the subject, but they convey little to a beginner. It is exactly this part of the science which is most difficult for students; and the more nearly a drawing approaches the actual condition of the eye, the more useful will it be: the student

(a) "Correspondence de Goethe et de Bettina," translated by M. Sebart Albin, tome i., page 68.

(b) "Ignatius Loyola and the early Jesuits," page 481. By Stewart Rose. London, 1870.

then has an idea of what he *ought* to see, and how it ought to look, and he looks until he can recognise the drawing as correct. Future editions of this excellent little book can be rendered more complete by the addition of one or two coloured diagrams. The student will then have less necessity for that call on his imagination—without which the present "rough sketches" are utterly valueless—which a student, at this time of his career, is least capable of making.

Surgical Emergencies, together with the Emergencies attendant on Parturition, and the Treatment of Poisoning. By Wm. Paul Swain, F.R.C.S., Surgeon to the Royal Albert Hospital, Devonport, Honorary Fellow of King's College. Second Edition. London: J. and A. Churchill. 1876. Pp. 246.

After two years the second edition of Swain's "Surgical Emergencies" has made its appearance. The volume is slightly enlarged. The chief new features are—an increased number of illustrations; a short account of the acute diseases of the eye; and, in the chapter on the emergencies of parturition, a list of the signs of pregnancy. The chapter on surgical instruments is enlarged. The work maintains the high character for usefulness which has made it already so widely known. Whether or not the necessarily short account of acute diseases is likely to be an addition to its value may perhaps be doubted, but the second edition may on the whole be considered as, if possible, an improvement on its predecessor.

A Manual of Operative Surgery on the Dead Body. By Thomas Smith, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, St. Bartholomew's Hospital, Surgeon to the Hospital for Sick Children; and William J. Walsham, F.R.C.S., Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital, Surgeon to the Metropolitan Free Hospital. London: Longmans and Co.

It is unnecessary to say many words on Smith and Walsham's "Operative Surgery." A correct and comprehensible series of instructions in the approved methods of conducting operations, at a price which is not forbidding, must be felt to be a desideratum at the present time. We are accordingly very glad to welcome a second edition of this work. Though professing only to deal with operations which can be performed on the dead body, it omits very few which the practical surgeon is likely to be called upon to perform. The illustrations, though some are undoubtedly very good, can hardly be considered as the best part of the book.

Foundlings and the Law of Medical Secrecy.—The indiscriminate reception of foundlings at the hospitals by means of the *tours*, or wickets, has been abolished of late years in France; but the *Union Médicale* (July 1) relates a law case recently decided which seems to show that ingenious persons, taking advantage of the law of "medical secrecy," may still foist their offspring upon the public charge. A midwife, availing herself of the law of medical secrecy (which applies also to midwives), registered the birth of a child at Toulon, refusing to give the mother's and father's names, and assigning to it a fancy name of her own choosing. Next day she took it before the committee whose office it is to decide on the reception of foundlings, and one of whose rules is that the name of the mother should be made known. The midwife would not conform to this, and the child was refused. Fortunately for her purposes, the child fell ill, and was received into the civil hospital as an indigent infant. When it was cured, notice was sent to the midwife requiring her to remove it; but she declined having anything to do with it, being neither its parent or guardian. The hospital authorities finding themselves thus in forced possession of the infant, sued the midwife for expenses of its maintenance for more than a twelvemonth. The case was argued at length, and the tribunal decided that the midwife was not obliged to make known the name of the mother, and did not herself incur any responsibility with regard to the infant. The hospital, therefore, has to keep the child and pay the costs of these procedures. This case, which seems to us an impudent perversion of the intentions of the law of secrecy, indicates, according to the *Union Médicale*, the pressing necessity for re-establishing the *tours* "as a measure of high and patriotic humanity"!

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, June 7.

W. O. Priestley, M.D., F.R.C.P., President, in the Chair.

Vaseline.

Dr. Wiltshire showed some specimens of vaseline, a new lubricant, to which various substances had been added, such as boracic and carbolic acids, thymiol, oil of cloves, oxychloride of bismuth, etc.; the substance was not greasy. Some very convenient vulcanite jars were shown in which vaseline could be carried about. It was prepared by Mr. Martindale, of New Cavendish-street.

Dr. Barnes said he had used the material for the last month, and highly approved of it.

The President said he had used it, and could testify to its cleanliness, but he doubted if it lubricated instruments as well as lard or oil.

New Anteversion Pessary.

Dr. Galabin exhibited an instrument which was an attempt to extend to the treatment of anteversion or flexion the action of simple leverage which Hodge's pessary exerts in retroversion. It resembled a Hodge posteriorly, but the anterior arch was formed by a broad transverse arch, convex upwards. This rested behind the pubis in front of the cervix, and pushed the fundus upwards; while, at the same time, it stretched the anterior *cul-de-sac* upwards, and so drew the cervix downwards and forwards. It offered less obstruction than an ordinary Hodge.

The President remarked that he would be grateful to anyone who would suggest anything that would support an anteflexed fundus. He knew of no instrument at present excepting intra-uterine stems.

Fibroid Uterus.

Dr. Chambers exhibited a specimen which he had watched through various phases. The patient from whom it was removed post-mortem was fifty-six years old. She had suffered from severe and frequent losses of blood for seven years. The os and cervix had been divided, with relief to the hæmorrhage. The tumour extended above the umbilicus, the abdominal circumference being over forty inches. A profuse muco-purulent discharge had been a prominent symptom. Dr. Aveling's gynæcometer had been employed to demonstrate the alterations in the bulk of the tumour, which weighed two pounds and a quarter. On examination post-mortem, the broad ligaments were found to be quite free, but the tumour was very closely attached to the pelvic fascia.

The President remarked that the specimen illustrated a portion of the pathological history of hypertrophies of the unimpregnated uterus, which had received but little notice. No doubt some of the hypertrophies were so hard and dense that little variation was remarked at short intervals in their size. But there were also a large number of instances in which enlargements of the womb underwent considerable variation, and the structure seemed so spongy in character that there was a perceptible increase in bulk with the return of each catamenial period. About the climacteric period the uterus was often so considerably increased in size as to give the impression of permanent fibroid growth, and yet the organ slowly and spontaneously returned to its normal size when the "change of life" was completed. To some extent it was probable that this accounted for the success of the treatment by absorbent remedies and by the Kreuznach waters.

Dr. Snow Beck inquired as to the treatment—local and general—that had been employed, and what it was the patient died of.

Dr. Chambers explained that the patient died of uræmia. The treatment extended over six years, and was varied and complicated, the uterus being injected with carbolic acid, nitrate of silver, iodine, etc.

Dr. Routh remarked upon the plan of incising fibroid tumours. It very frequently determined a sort of absorption of the tumour, but again serious symptoms were often set up, and life imperilled (such as pyæmia, pelvic abscess, etc.). The danger depended upon whether the os merely was incised, or the os and a part of the tumour, as in this latter instance partial necrosis of the tumour, with fetid discharges, and poisoning

by absorption, ensued. A plan he had adopted for years was to dilate the os uteri, and then stuff the uterus tightly with lint dipped in iodine, which was kept in for forty-eight hours, and the effect of softening in some cases was marvellous. He now employed nitric acid in this way. He thought the plan of incising large tumours was too dangerous as a rule.

Dr. Heywood Smith inquired whether Dr. Routh referred to division of the cervix uteri or of the capsule, and whether any attempt had been made to enucleate the tumour.

Dr. Wynn Williams referred to a similar case where the patient nearly lost her life from the severe hæmorrhage. He divided the os on either side, and after dilatation made a very free incision into the substance of the tumour. The hæmorrhage entirely ceased, and the patient regained her health. He would like to hear any remarks as to the treatment of fibroid tumours by means of the actual cautery.

Dr. Gervis remarked that though of course it was easy to be wise after the event, he would like to ask what were the contraindications to enucleation. From examination of the tumour it appeared to be a case of intra-uterine fibroid with the capsule adherent, but not to such an extent as to prevent separation of the adhesions and subsequent removal of the tumour by successive sections.

Mr. Scott observed that the tumour was a large ordinary fibroid enclosed in its own capsule. In many cases he believed enucleation might be practised with safety, but not in all.

Dr. Chambers explained that the first division had been very free, part of the capsule being divided. On careful examination of the patient whilst under chloroform, he came to the conclusion that under the circumstances the patient would not be benefited by its removal.

Dr. Murray, Dr. Gervis, and Dr. Hayes were requested to examine and report further upon the tumour.

Thermo-Cautery.

Dr. Oscar Prevôt, of Moscow, exhibited a newly constructed instrument invented by Dr. Paquelin, of Paris. The vapour of petroleum being driven through the handle to the tip of the platina stem, which has first been gently heated, the bulb becomes incandescent, and may be kept so as long as the vapour is supplied by means of an indiarubber ball similar to that used in Dr. Richardson spray-producer. In place of the bulbous extremity others shaped in the form of a bistoury, etc., could be employed. The instrument was both ingenious and valuable, being very portable, easily got ready for use, and producing very little radiation. It could be used in all cases where the actual, or gas, or galvano-cautery would be employed.

The President thought it would be very useful for destroying vascular tumours of the urethra, etc.

Dr. Wiltshire considered it most remarkable that the vapour should keep up the heat even when buried in the tissues. The instrument was very inexpensive, the whole affair costing only 120 fr. (It was constructed by Messrs. Charrière, of Paris.)

Puerperal Septicæmia.

An abstract of Dr. Gervis's paper, which was read at the previous meeting, was then given; after which

Dr. Wiltshire read notes of another case, with abscesses, disorganisation of the left wrist-joint, and phlegmasia dolens, in which recovery took place. The case was seen in consultation with Dr. Hammond. It was that of a primipara, aged thirty, who had a perfectly normal labour, but on the third day vomited and perspired freely. Rigors ensued, and the temperature rose to 105° Fahr. The patient's condition varied very much, sometimes improving considerably, and then she had a sudden relapse, with rapid elevation of temperature and other unfavourable symptoms. Abscesses formed in the right leg, and were opened from time to time. Phlegmasia dolens of the left leg supervened at the end of a month. The left wrist-joint was utterly disorganised, the bones grating audibly on movement. There was profuse sweating and extreme prostration. In spite of relapses she recovered, and was able to be removed to the seaside three months after delivery. A curious feature in the case was the coincidence of the relapses with the emptying of the dust-bin, generally of weekly occurrence; and, in fact, it is a question whether the illness was not originally started by poison derived from the same source. Quinine in this case proved of much service, and seems to be peculiarly valuable where great elevation of temperature with diffuse suppuration exists. It is now some sixteen months since her confinement, and she has regained movement of the wrist-joint to a very gratifying degree.

The President remarked that last session a very exhaustive discussion on this subject took place before the Society. He would suggest, therefore, that it would be well in the present instance to limit the discussion to the symptomatology and treatment.

Dr. Edis referred to a case occurring in a patient in consequence of a miscarriage about the fourth month, where, owing to the uterus being retroflexed, there was considerable difficulty in removing the whole of the ovum; abscesses formed in various parts of the body; contraction of the left hip took place; and the patient was reduced to a mere skeleton. Large doses of quinine, together with the hypodermic injection of morphia, proved of most value as regards treatment. After struggling on for over three months the patient recovered sufficiently to be able to leave the country.

Dr. Braxton Hicks believed there was nothing like large doses of quinine—five to ten grains every four hours for three or four days. He had never tried the injection of carbolic acid. He thought the fact of there having been an offensive discharge in Dr. Gervis's case was not sufficient to account for the septicæmia, as many patients had the former without the latter.

Other cases were also alluded to, arising from various causes, showing that septicæmia might depend upon numberless different exciting agencies.

Dr. Gervis said he wished to correct the impression that the discharge had caused the septicæmia. It was merely one of the factors.

Mr. Redmund alluded to a case where quinine had been given in fifteen-grain doses night and morning. As to puerperal fever following offensive discharges, we seldom found it resulting from severe operations in midwifery.

Dr. Chalmers agreed with Dr. Braxton Hicks, that a wider view must be taken of the causation of puerperal fever than that which was generally adopted. He instanced cases where sore throat in the nurse, a patient suffering from putrefying sores in the same house, infection conveyed by the attendant from other cases, etc., seemed to have been the exciting causes. The great difficulty we had to contend with among the lower orders was the ignorance about the ordinary laws of health, disregard of cleanliness, and gross prejudice in favour of filthy conditions. The wonder was that so few died of puerperal diseases. Where recovery ensued it was chiefly due to good nursing.

Dr. Brunton remarked that though he practised in the same neighbourhood, he had not met with any cases of puerperal fever in his own practice.

Dr. Chalmers stated that he knew of several cases in the practice of other medical men in the neighbourhood.

Dr. Hayes said he would not go so far as to say that puerperal fever, with a healthy lochial discharge, did not occur, but he thought such a thing to be extremely rare. It would not do to accept the nurse's statement as to all being right; we must satisfy ourselves by investigation, and see that no offensive discharges were pent up in the uterus. Cases in point were briefly referred to. Regarding treatment, he saw little to support the notion that quinine, turpentine, carbolic acid, etc., exerted a specific action. He regarded the intra-uterine injection of disinfectants as most important where there was any fetor of the lochia.

Dr. Wynn Williams agreed with Dr. Hayes—in fact, they were the same views he (Dr. Williams) had expressed at the late discussion. As to the source of infection in cases of septicæmia, the putrid discharges from sore throats and abscesses, and the fetid discharges from erysipelas, he believed to be the origin of the septic poison; but cases also occurred from decomposing *débris* in the uterus, a case in point being cited. As to the action of quinine in cases of septicæmia, he could not understand how it could have any specific effect.

Dr. Gervis, in reply, stated that he had brought forward the case not with any wish to introduce any further discussion on puerperal fever generally, but he thought the case a typical one, and worthy of permanent record. He had also wished to elicit the opinion of other Fellows on the treatment by carbolic acid, the exact significance of the enlarged condition of the uterus which existed in the early stages, and the relation of puerperal septicæmia to scarlatina.

Dr. Wiltshire thought that in cases of hyperpyrexia quinine was very valuable when it was due to purulent collections, but useless in ichorrhæmic cases. Therapeutics were too much neglected, to the disadvantage of the patient and the discredit of the profession.

NEW INVENTIONS AND IMPROVEMENTS.

SYRUPUS CINCHONÆ ALCOHOLICUS.

Messrs. Schacht and Towerzey have sent us a sample of an alcoholic syrup of cinchona bark, which they have recently introduced to the notice of the profession. Each drachm of the syrup contains the entire medicinal properties of twenty grains of the finest Peruvian bark. We have administered the preparation in several cases where quinine could not be tolerated, and with very satisfactory results.

OBITUARY.

SIR JAMES L. BARDSLEY, Knt., M.D., F.R.C.P.

Within the last few years the foremost rank of medical practitioners in Manchester has been quickly and terribly thinned. From amongst the six surgeons who constituted the working staff of the Royal Infirmary in 1870, no fewer than four have passed away—Mr. Dumville in 1871, Mr. W. Watson Beever in 1872, Mr. William Smith in 1875, and in the current year Mr. George Southam. Nor does this complete the list; for in the year 1873 two of the consulting surgeons were removed by death—Mr. Jordan and Mr. Thomas Turner,—both of them having been in practice almost to the last, although many years had elapsed since they were actively connected with the Infirmary.

So far, this remarkable fatality has been limited to the leaders of the surgical branch of the profession. To-day it becomes our duty to record the loss of one of Manchester's most distinguished physicians.

At the ripe age of seventy-five, which he had attained just three days previously, Sir James Lomax Bardsley died at his residence, The Orchard, Greenheys, Manchester, on Monday, July 10, 1876.

Born in Nottingham, he finished his preliminary education at the University of Glasgow, and then, after a short time spent at St. Bartholomew's Hospital in London, and at the hospitals of Paris, he went to Edinburgh, and graduated there as M.D. in 1823. He now came to Manchester, where his uncle, Dr. Samuel A. Bardsley, was Physician to the Royal Infirmary, and in the enjoyment of a large and remunerative practice. This gentleman had held the appointment of Physician to the Hospital for the long period of thirty-three years. In 1824, however, he resigned, and his nephew was elected to fill the vacancy, the very year after his graduation. Under such favourable auspices did Dr. Bardsley commence his long and prosperous career. It was quite characteristic of the man that when, in 1843, his private professional engagements became so numerous as to interfere with the due performance of his Hospital duties, he at once resigned his office. In the meantime, he had given evidence of his desire to advance the progress of medicine, and to make the best use of his advantages as a hospital physician, by publishing, in 1830, a work entitled "Hospital Facts and Observations," consisting largely of researches into the action of certain remedies then recently introduced.

The articles on "Diabetes" and "Hydrophobia," in the "Cyclopædia of Practical Medicine" (1833), were also contributed by Dr. James Bardsley. These essays represented very faithfully what was known on those subjects at the time they were written.

In 1822, Mr. Turner, following the example of Mr. Jordan, commenced a course of lectures to medical students; and, two or three years subsequently, gathered around him a number of colleagues, who combined with him to give a complete course of medical instruction. This was the first complete organisation of the kind in the provinces; and in 1825 Dr. James Bardsley's name appears as one of the lecturers. His subjects were—the Principles and Practice of Medicine, Materia Medica, and Botany; and he continued to deliver these lectures until the year in which he resigned his Infirmary appointment.

In the month of May last the Honorary Secretary of the Manchester Medical Society prepared and issued a list of members, with the date of election prefixed to each name, and with an asterisk before the names of those whose membership dated from the foundation of the Society in 1834. Amongst 192 members, an asterisk appeared twice only: the only original members then remaining being Sir J. L. Bardsley, and his friend and medical adviser, Dr. Noble.(a)

(a) One other original member survives—Dr. Radford; he retired, however, from the Society some years ago.

Dr. Bardsley was the second President of that Society, and held office from 1838 to 1842; he again became President from 1845 to 1847. Although of late he did not attend the meetings of the Society, he showed his undiminished interest in its welfare by subscribing money freely whenever he was appealed to, and by presenting, within the last year or two, nearly 500 volumes to its library. He also took a warm and active interest in the Manchester Medico-Ethical Association, of which he became President in 1850—a post he continued to hold for many years.

When Dr. John Forbes was selected in 1853 for the honour of knighthood, the distinguished position which Dr. James Bardsley held amongst provincial physicians led to his receiving a similar mark of distinction.

In the year 1873, Lady Bardsley became seriously ill and died. Very shortly afterwards, the friends who were most intimate with Sir James noticed that his health had begun slowly, but unmistakably, to fail. He had been a most devoted nurse, and the anxiety and loss of rest consequent upon his incessant attention seemed to have told severely upon him. For some years he had been gradually relinquishing the cares of practice, and he now began to talk of closing his consulting-rooms altogether. As, however, he had no absorbing interest apart from his profession, his friends rather dissuaded him from this step, thinking that it would divert his thoughts if he continued to see a few of his old patients. He became more and more nervous about his health, thought he had heart disease, and often asked his friends to examine his chest. At last, his friend Dr. Noble—being pressed more than usual on one occasion—yielded to his wish, and for the first time ascertained that there was a distinct mitral bruit. He did not deem it prudent to tell this to Sir James, but from that day discontinued his opposition when the question of retiring altogether from practice arose. Shortly afterwards, however, and from another source, Sir James became informed of his condition. Henceforth he took the utmost care of himself. For twelve months before his death he had entirely given up practice.

With the exception of slight attacks of dyspnœa and flatulent dyspepsia, each of which, however, seemed to leave him a little weaker than he was before, he did not exhibit any alarming symptoms until ten days before his death. For two days he had been suffering from indigestion and sleeplessness, when there supervened a severe attack of palpitation, the pulse at the wrist numbering 160 in the minute. It was hoped at first that this rapidity of the heart's action might turn out to be only temporary; when, however, it had lasted over twenty-four hours, the pulse meanwhile becoming decidedly weaker, it was only too manifest that the beginning of the end had come. The attacks of dyspnœa became more severe and prolonged; the circulation became weaker day by day; the general strength failed; and fatal exhaustion gradually supervened.

Of no extraordinary literary or scientific attainments, Sir Jas. Bardsley became distinguished mainly on account of his strong common sense and unerring judgment. All who knew him got into the habit of relying upon his opinion with unquestioning confidence. His younger brethren in the profession flew to him in their difficulty, as readily and naturally as did his patients in their bodily need. To a distinguished physique he added a dignified and stately bearing, and most affable and courtly manners. And these external advantages were a faithful index to his real character. At the busiest period of his life, when his reputation was made and his prosperity at its height, he preserved unchanged the amiability of disposition and charm of manner that had distinguished him as a youth; and these characteristics he displayed to the end of his long life: he was dearly loved in his own household. He was well known for his public benevolence and generosity; but the numberless instances in which he privately relieved distress and suffering must remain unchronicled. Frequently his charities were so managed that the recipients themselves never suspected their source. He loved to do acts of kindness; he loved to do them all the more if they could be done in secret; he always did them with the delicacy and consideration of a true English gentleman.

JAMES HENRY, M.D. Dub., F.K.Q.C.P.,

Died at a very advanced age, on Friday, the 14th inst., at his residence, at Dalkey, Co. Dublin. Dr. Henry had retired from practice at least a quarter of a century ago, but his name has been well known even in recent years through his contribu-

tions to both medical and general literature. In 1817 he became a Scholar in Trinity College, Dublin, and in 1819 he graduated in Arts in the University of Dublin. In 1822 he took the further degrees of Master of Arts and Bachelor of Medicine; and in November, 1832, he became Doctor of Medicine. On October 30, 1826, he had been elected a Fellow of the King and Queen's College of Physicians. Dr. Henry was a man of original views and somewhat eccentric habits. At one period of his life he walked across Europe, accompanied by his daughter, who died some years before him. His writings are eminently characteristic. In 1838 he wrote a "Dialogue between a Bilious Patient and a Physician." "The Unripe Windfalls, in prose and verse, of James Henry, M.D.," were published in 1851, and "A Half-Year's Poems" saw the light at Dresden in 1854. One of his most amusing productions, however, was a squib or satire ridiculing the Metropolitan Police of Dublin, when that corps were first organised in room of the old "watchmen." It was published in 1840, and was entitled "An Account of the Proceedings of the Government Metropolitan Police in the City of Canton." We cannot forbear quoting the preface to "A Half-Year's Poems," in illustration of Dr. Henry's style.

"THANKSGIVING.

"I thank thee, Muse, for pleasures three.
'Poet, what pleasures may those be?'
I thank thee first for the delight
I take myself in all I write;
I thank thee next, and thank thee more,
For the delight with which I store
Cellfuls of honeyed poesie
For those who shall come after me;
And last, and most, for the delight
I thank thee, Muse, with which I write
Poems my friends from morn to night,
And night to morn, read with delight."

This effusion is most appropriately dated "*Trompeter*-Schlösschen, Dresden, February 28, 1854."

JOHN RINGLAND, M.D. DUB., FELLOW AND CENSOR K.&Q.C.P., ETC.

AFTER a tedious illness this well-known and highly respected physician died at his residence, 14, Harcourt-street, Dublin, on the 7th inst. At the time of his decease Dr. Ringland was sixty years of age, and for thirty-seven years had been engaged in the active practice of his profession. In 1839 he had graduated in Arts and Medicine in the University of Dublin, and two years later he became a Licentiate of the King and Queen's College of Physicians. He soon adopted midwifery and diseases of women as a speciality, and to within a few months of his death he was engaged in a large practice in this branch of medicine. In 1850 Dr. Ringland was elected a Fellow of the College of Physicians, Ireland, and in 1864 he proceeded to the degree of Doctor of Medicine in his *Alma Mater*. The esteem in which he was held by his brethren was evidenced by his election as President of the Obstetrical Society of Dublin in 1868; and by his selection from time to time to fill important posts in the College of Physicians. Thus he was successively appointed by the College, Censor, Examiner in Midwifery, Examiner in Arts, etc. At the time of his death he was again Censor. Among the many public appointments which he filled may be mentioned the Professorship of Midwifery in the Ledwich School of Medicine. He was also Senior Master of the Coombe Lying-in Hospital, in which institution he had formerly lectured on Midwifery. He was a member of the Royal Irish Academy and of the Royal Dublin Society. Although not a profuse writer, Dr. Ringland made several important contributions to medical literature, chiefly in connexion with his own department. In the *Dublin Journal of Medical Science* for 1839 (the year in which he was qualified) we find a paper on "Labour rendered Tedious by Anomalous Conditions of the Pelvis." Included among his writings also were the following papers:—"Amaurose survenue pendant la Parturition," "A Case of Vicarious Menstruation treated by Creasote," "Accidental Injuries to the Fœtus in Utero," and "Version in Contracted Pelvis." To these should be added a Presidential Address delivered at a meeting of the Dublin Obstetrical Society on November 20, 1869, entitled, "Annals of Midwifery in Ireland."

Dr. Ringland's funeral took place on the morning of Tuesday, July 11. It was very largely attended by members of the profession and the many personal friends of the deceased. The Fellows of the College of Physicians and the Lord Mayor of Dublin (Dr. G. B. Owens) also took part in the mournful procession which bore the remains to their last earthly resting-place in Mount Jerome Cemetery.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates on July 18:—

Batchelor, Henry Thomas, Worcester, Cape of Good Hope.
Bowen, Alfred Longmore, Guy's Hospital, S.E.
Buckell, Leonard Martin, Romsey.
Collenette, Frank de Beauchamp, Guernsey.
Fisher, Stephen Henry, London Hospital, E.
Footner, John Bulkley, Bethlem Hospital, S.E.
Gibbes, Cuthbert Chapman, Surbiton.
Hames, George Henry, St. Bartholomew's Hospital, E.C.
Hancock, John Gatchell, 17, Downshire-hill, N.W.
Harvey, William Yeo, 166, Stanhope-street, N.W.
Hayes, Francis George, 13, Cathcart-road, S.W.
Jackson, Robert Alexander, 53, Notting-hill-square, W.
Kirtikar, Kanoba Ranchoddas, 84, Euston-square, N.W.
Lang, Henry Charles, 41, Berners-street, W.
Makuna, Manikji Dosabhai, Norman House, Prince of Wales-road, N.W.
Morshead, Ernest Garstin Anderson, Salcombe Regis.
Perry, Edward Verdon, St. George's Hospital, S.W.
Pronger, Charles Ernest, Crawley, Sussex.
Rees, David Valentine, London Hospital, E.
Ritchie, John Lichtenstein, St. Thomas's Hospital, S.E.
Sawtell, Tom Henry, 4, River-street, E.C.
Sellon, John William Gore, Budleigh Salterton.
Upton, Alfred, 71, Halton-road, N.
Vernon, Mark Henry Herbert, St. Bartholomew's Hospital, E.C.
Verrall, Thomas Jenner, 2, Dane's-inn, W.C.
Walker, George, jun., Cottenham, Wimbledon, S.W.
Williams, William Henry, 26, Grafton-street, Fitzroy-square, W.
Woodward, Frederick Edward, St. Bartholomew's Hospital, E.C.

The following candidates, having passed in Medicine and Midwifery, will receive the College licence on obtaining a qualification in Surgery recognised by this College:—

Eve, Frederick Samuel, 14, Lady Margaret-road, N.W.
Lithgow, Thomas George, 8, Kensington-park-road, W.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the ordinary monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, July 11, 12, and 13, the following candidates obtained the licence to practise Medicine:—

Callan, Michael.
Charlton, Geo. Robt. Deighton.
Hartigan, William.
Hutchison, Alexander Rankin.
Kinane, Michael Kiely.
Latham, William.
Lawless, Edmund James.
Lynch, Gilbert.
Moorhead, George Alexander.
Sherrard, Cæsar Dudley.
Smallman, Benjamin Franklin.
Wall, Edmund Aloysius.
Webb, Vere George.

The licence to practise Midwifery:—

Callan, Michael.
Carleton, Arthur Wellesley.
Charlton, Geo. Robt. Deighton.
Fairclough, John James Kent.
Hartigan, William.
Hutchison, Alexander Rankin.
Kinane, Michael Kiely.
Latham, William.
Lawless, Edmund James.
Lynch, Gilbert.
Moorhead, George Alexander.
Smallman, Benjamin Franklin.
Wall, Edmund Aloysius.
Webb, Vere George.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 14th inst., and when eligible will be admitted to the pass examination:—

Blair, Archibald, student of University College.
Bothamley, Richard B., of St. Thomas's Hospital.
Cantin, Louis A., of St. Bartholomew's Hospital.
Davies, Hugh E., of University College.
Evereat, Clare A., of Guy's Hospital.
Halliday, Henry D., of St. Bartholomew's Hospital.
Homes, James, of University College.
Jolliffe, Walter J., of St. Bartholomew's Hospital.
Norman, Reginald, of St. George's Hospital.
Oldroyd, Joseph H., of University College.
Prichard, James E., of University College.
Robinson, Adrian A., of University College.
Weakley, Arthur, of St Bartholomew's Hospital..
Williams, Dawson, of University College.

The following gentlemen passed on the 17th inst., viz.:—

Betts, Edward G., student of the Middlesex Hospital.
Bottrell, James F. H., of King's College.
Burnie, William G., of St. Bartholomew's Hospital.
Copley, William H., of University College.
Davies, William E., of University College.
Hepburn, Alfred, of St. Bartholomew's Hospital.
Hoole, Henry, of Charing-cross Hospital.
Maitland, Alfred D., of University College.
Pattison, Edward S., of Charing-cross Hospital.
Robinson, Arthur H., of University College.
Rusher, James B., of St. Bartholomew's Hospital.
Seroggie, William R., of St. Bartholomew's Hospital.
Solomons, Philip F., of the Calcutta and St. Thomas's Hospitals.

The following gentlemen passed on the 18th inst., viz.:—

Allinson, Henry C., student of King's College.
Bisdee, Alfred J., of St. Mary's Hospital.
Briggs, Christopher D., of University College.
Brown, John, of Charing-cross Hospital.
Farrer, George A., of St. Bartholomew's Hospital.
Harrison, Edmund M., of Charing-cross Hospital.
Harvey, George H., of the London Hospital.
Jefferson, Arthur J., of St. Thomas's Hospital.
Ling, Maurice E., of the London Hospital.
Lunn, John R., of St. Thomas's Hospital.
Nickoll, John S., of the London Hospital.
O'Connor, James, of University College.
Rowbotham, Herbert C., of Charing-cross Hospital.
Shaw, George, of the Westminster Hospital.
Theed, Stanley E., of Guy's Hospital.
Verdon, Michael J., of King's College.
Warwick, Percy, of St. George's Hospital.

Fifty-one candidates out of the 147 examined having failed to acquit themselves to the satisfaction of the Board, were referred to their anatomical and physiological studies for three months. With this meeting the *primary* examinations for the diploma of Membership of the College are brought to a close for the present session. The *pass* examination, which commences this day (Friday), will be continued through the next and succeeding weeks in consequence of the great number (202) to be examined.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 13:—

Blackman, Josiah George, Southampton.
Blaikie, John Robert, Oswestry, Salop.
Goodsall, Fredk. Walter Wm., Dryland-road, Canonbury.
Mears, William Pope, Bromley, E.
Phillips, Alfred, The Ferns, Primrose-hill-road.
Roberts, John Thomas, New Romney, Kent.
Tunley, John, Mayfield, Ashbourne, Derby.
White, William Robert, King's College Hospital.

The following gentlemen also on the same day passed their primary professional examination:—

Lockwood, Charles Barrett, St. Bartholomew's Hospital.
Norton, Thomas Chalmers, Bristol Medical School.
Pearse, Thomas Frederick, Middlesex Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE—MEDICAL DEPARTMENT.—Surgeon-Major John Riggs Miller Lewis, M.D., retires upon half-pay; Surgeon-Major Thomas Egerton Hale, M.D., V.C., retires upon temporary half-pay; Surgeon Samuel Baptiste Gamble, M.D., is placed upon temporary half-pay; Surgeon Samuel Drake, M.D., retires upon temporary half-pay; Surgeon Oswald Gillespie Wood, M.D., from half-pay to be Surgeon; Surgeon Robert Henry Robinson retires upon temporary half-pay. The third Christian name of Surgeon-Major Melladew is Lawaetz, and not Lawdetz, as stated in the *Gazette* of May 30, 1876.

BIRTHS.

ADAMS.—On July 16, at Brooke House, Clapton, E., the wife of J. O. Adams, F.R.C.S., of a daughter.

AUSTEN.—On July 12, at Ramsgate, the wife of Josiah Austen, L.R.C.P., M.R.C.S., prematurely, of a daughter.

BELLAMY.—On July 14, the wife of Edward Bellamy, F.R.C.S., of a daughter.

BLYTHMAN.—On July 13, at Swinton, near Rotherham, the wife of Clement S. Blythman, M.B., of a daughter.

CHURCH.—On July 15, at 130, Harley-street, the wife of W. S. Church, M.D., of a daughter.

HARLEY.—On July 15, at Saffron Walden, Essex, the wife of Edward Harley, L.R.C.P., M.R.C.S., of a daughter.

OWEN.—On July 14, at Kent Lodge, Southsea, Hants, the wife of A. Lloyd Owen, M.D., of a son.

SUTCLIFF.—On July 12, at Great Torrington, North Devon, the wife of Edward Sutcliff, M.D., of a daughter.

MARRIAGES.

CLARK—IHLER.—On July 12, at Childwall parish church, John Barclay Clark, M.D., C.M., of Litherland-park, to Eleonora Elizabeth, third daughter of George James Ihler, of Gateacre.

DAVIES—GRIFFITHS.—On July 11, at St. John's, Bishop's Castle, John William, eldest son of John Davies, M.D., M.R.C.S., of Ebbw Vale, to Helen Maria, youngest daughter of Thomas Griffiths, solicitor, of Bishop's Castle.

EDDOWES—DAWSON.—On April 15, at Calcutta, Surgeon-Major Wm. Eddowes, Bengal Military Service, to Grace Agnes Annette, youngest daughter of the late Capt. Dawson, R.N.

GOSSET—CHARLEWOOD.—On July 18, at St. Mary's Church, Northam, North Devon, George Gosset, M.A., M.B. (King's College, Camb., of Abingdon, Berks, to Annie Sophia, third daughter of Rear-Admiral Charlewood, of Porthill, North Devon.

HENDERSON—TAGHANE.—On July 15, at the Congregational Church, Southernhay, Exeter, W. Henderson, M.D., M.R.C.S.E., to Mary, daughter of John Trehane, Esq., J.P., both of Exeter.

MOORE—DOBBS.—On July 13, at St. George's Church, Dublin, Frederick Flood Moore, L.R.C.S.I., L.R.C.P. Edin., second son of the Rev. William Prior Moore, A.M., of Cavan, to Harriet, second daughter of Major-General Dobbs, of 7, Mountjoy-square, Dublin.

STONEY—DROUGHT.—On July 6, at St. Ann's Church, Dublin, Andrew Acres Stoney, J.P., Frankford, of King's County, Deputy Surgeon-General Army Medical Department, late Scots Greys, to Mary Frances, daughter of the late John A. Drought, Esq., J.P., of Whigsborough, King's County.

VINCENT—BULLEN.—On July 12, at St. Mary's Church, Islington, Emile Vincent, son of Martin A. Vincent, of Paris, to Jane Faulkner, second daughter of the late George Bullen, jun., M.R.C.S., L.S.A., of Ipswich.

DEATHS.

BORTHWICK, JANET, widow of the late George Augustus Borthwick, M.D., at 1, Moray-place, Edinburgh, on July 16, in her 79th year.

CHALDECOTT, THOMAS WATTS, M.R.C.S., at Addlestone, Surrey, on July 18, aged 84.

EASTON, JOHN ALEXANDER, M.D., Resident English Physician to the Tharsis Company, Huelva, Spain, only son of the late Dr. John A. Easton, Professor of Materia Medica in the University of Glasgow, accidentally drowned while bathing, on July 9, aged 37.

HENRY, JAMES, M.D. Dub., F.K.&Q.C.P.I., at Dalkey Lodge, Dalkey, County Dublin, on July 14, in his 78th year.

LUCY, WILLIAM, M.R.C.S., L.S.A., at Dunmarklyn Lodge, Cotham-road, Bristol, on May 19, aged 51.

MACKINNON, CHARLES JOHN NISBETT, eldest son of Surgeon-Major Charles Mackinnon, Army Medical Department, at Aldershot, on July 13, aged 6 years and 9 months.

O'BRIEN, JAMES OCTAVIUS, third son of Rev. John O'Brien, deceased, late vicar of Henfield, Sussex, at sea, on board ship *Pomono*, on March 7, aged 29.

OLIVER, LAURA HELEN CONSTANTIA, widow of the late Lewis Bentley Oliver, M.D., of Kensington, at Zoffany House, King's Langley, Herts, on July 11, in her 81st year.

WILSON, CLAVELL W., son of Dr. T. W. Wilson, H.M.I. Medical Service, at Koyat Cachar, India, from a fall from his horse, on June 29, aged 36.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

FESTINIOG UNION.—Medical Officer. Candidates must be fully qualified by law to practise both medicine and surgery, as specified in the Orders of the Local Government Board. Applications, with testimonials, to G. S. Jones, Clerk to the Guardians, on or before July 24.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—House-Physician. Candidates must have a recognised medical or surgical qualification. Applications, with testimonials as to character and professional ability, to David Cannon, Secretary.

KEIGHLEY LOCAL BOARD OF HEALTH.—Medical Officer of Health. Candidates must be legally qualified medical practitioners. Applications, not later than July 25, to the Chairman of the Sanitary Committee, Town's Office, Keighley, endorsed "Medical Officer of Health."

MANCHESTER ROYAL EYE HOSPITAL.—House-Surgeon and Secretary. Applications (by legally qualified practitioners) and testimonials to the Chairman of the Board of Management on or before August 1.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Physician (Out-Department). Candidates must be graduates of a university in the United Kingdom, or if holding a foreign degree only, must be members of the London College of Physicians. Applications, with testimonials, to George Scudamore, Secretary, Lower Seymour-street, Portman-square, W.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—House-Physician (who will also be required to act as Chloroformist, Medical Registrar, and Medical Pathologist). Candidates must be graduates of a British university, or be possessed of such medical qualifications as are satisfactory to the Medical Committee and the Weekly Board. Testimonials to the "Chairman of the Medical Committee," not later than July 24.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Clifton Union.—Mr. Wm. Hodges has resigned the Workhouse; salary £130 per annum.

Mere Union.—Mr. Frederick A. A. Smith has resigned the Second District; area 14,224; population 3557; salary £105 per annum. Also the Workhouse; salary £10 per annum.

North Witchford Union.—Mr. William Stanger has resigned the Second District; area 10,628; population 2987; salary £40 per annum.

Sudbury Union.—Mr. Francis Marshall has resigned the First District; area 12,651; population 3241; salary £55 per annum.

APPOINTMENTS.

Bourn Union.—Joseph Edward Collingwood, M.R.C.S., L.R.C.P., to the Corby District.

Crediton Union.—Wm. Conner, L.R.C.S. Ire., L.R.C.P. Edin., to the Cheriton Bishop District.

Burnley Union.—Alfred Sutcliffe, F.F.P. & S. Glasg., L.R.C.P. Edin., to the Habergham Eaves District.

Eastry Union.—Richard S. Davey, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Walmer District.

Fylde Union.—Robert H. Bowness, M.R.C.S. Eng., L.S.A., L.R.C.P., to the Poulton District.

Isle of Wight Union.—Edward A. Waterworth, M.D. Aber., M.R.C.S. Eng., L.S.A., to the Carisbrooke District.

Lancashire.—James Campbell Brown, D.Sc., F.C.S., as Analyst for the County Palatine of Lancaster for two years.

Portsea Island Union.—Jacob O'Connor, M.D. and M.C. Dub., to the Workhouse.

Settle Union.—Frederick Griffiths, M.R.C.S. Eng., L.S.A., to the Bentham District.

Wincanton Union.—Cornelius F. Stovin, M.D. St. And., L.R.C.P. Edin., L.R.C.S. Edin., to the Queen Camel District.

NEW HOSPITAL FOR GRIMSBY.—The foundation-stone of the District Hospital for Grimsby was laid on Monday by the Countess of Yarborough. The sum of £4100 is already subscribed towards the total cost (£4600) of the building, and it will take £4000 additional for furniture.

COUNTRY TRIPS FOR TOWN SCHOOL-CHILDREN.—The *Sanitary Record* considers these country trips, and their effects, as of so much importance, that, in the opinion of the *Record*, the School Board should take the matter in hand, and provide, not one, but several of these trips annually, out of the rates for all children attending Board schools, as a part, and no insignificant part, of their education, and thus send the children occasionally to the grand old dame-school—the school of Dame Nature.

A HOME FOR APPRENTICES.—For its hygienic, physical, and moral advantages the following institution is worthy of notice. In the German Section of the Brussels Exhibition are to be found plans of a building recently erected at Stuttgart by the "Christian Society for the Benefit of Children and the Youth of Both Sexes," which is intended for the reception of apprentices both male and female, who, as the report very rightly states, are often ruined, both physically and morally, by the evil habits which they contract, as the result of evil companionship, and the carelessness of those who should be their legitimate guardians.

A CONTEMPORARY announces that a number of young men connected with the University of Rome have issued an invitation to the students and others belonging to the principal European universities to co-operate with them in raising a monument to Giordano Bruno, of Nola, in the Campo die Fiori, where after seven years' imprisonment he was buried alive by order of the Sacred Office, on February 17, 1600. The address states that his memory should be vindicated by the world, as he belonged not merely to Italy, but to the countries where he taught publicly, in England, Germany, France, Switzerland, and Bohemia. The committee of management consists of representatives selected from the faculties of law, literature and philosophy, medicine and surgery, natural science, etc.

THE SEAFORD CONVALESCENT HOSPITAL.—From the Sixteenth Annual Report of the Seaside Convalescent Hospital at Seaford, Sussex, which has reached us, it would appear that the committee are reluctantly compelled to record a falling off in donations to the charity for the past year; this they partly attribute to the urgent appeal which was made to the patrons of the institution to assist in re-building the new Hospital. The total cost of the new building up to the present time has been £8656, but it is now nearly completed, and as soon as sufficient funds are forthcoming it will afford accommodation for 100 beds. There can be no doubt as to the utility of institutions of this description when properly managed, and the committee, not unreasonably, appeal to the subscribers to exercise a certain amount of judgment in discriminating between chronic sufferers and convalescents before distributing letters for the Convalescent Hospital.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Deane, Nairne, South Australia.—Taking the statement as made by you we should esteem you perfectly justified, both in hindering the introduction of a new homœopathic practitioner, and in substituting a qualified for an unqualified man. We should think Dr. Gething would at once admit this.

Adolphus.— "For want of timely help,
Thousands have died of *medicable* wounds."—*Shakespeare.*
"I wish to die, yet dare not death endure;
Detest the *med'cine*, yet desire the cure."—*Dryden.*

U. A. D.—About the middle of the last century, Vicesimus Muapratt lived in Great Newport-street, Soho. Although generally designated "doctor" by his neighbours, he was not a member of the College of Physicians, and held no doctor's degree. He was a surgeon of some repute, attached to St. Bartholomew's Hospital, and a Fellow of the Royal Society. He had acquired distinction by the extent of his anatomical and pathological investigations, and by the production of various medical works. His work "On the Membranes" was for many years a standard authority. He was buried in Bunhill-fields Burial-ground.

Abstemious.—Sumptuary laws were in force in 1336. In that year an Act of Parliament was passed which recited that no man, of what state or condition soever he be, shall cause himself to be served in his house, or elsewhere, at dinner-meal or supper, or at any other time, with more than two courses, and each mess of two sorts of victuals at the utmost, be it of flesh or fish, with the common sorts of pottages, without sauce, or any other sort of victuals. Exceptions were made on the principal feasts of the year, on which days every man might be served with three courses at the utmost, after the manner aforesaid. Sumptuary enactments have long since become obsolete.

Rufus.—From the time of Thessalus of Trallis, who set the example, it became the custom for the Roman physicians to visit their patients attended by all their pupils; in allusion to which we have the epigram of Martial—

"I'm ill. I send for Symmachus; he's here,
An hundred pupils following in his rear.
All feel my pulse with hands as cold as snow;
I had no fever then,—I have it now!"

A COOL BED ON A SULTRY NIGHT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The few sultry nights annually allotted to London are sufficient to destroy, for the time, the rest of many of its inhabitants, than which nothing is more injurious, especially to the feeble, and all those who "suffer from the heat."

In this temperate climate it is not the extreme general atmospheric heat which disturbs sleep, but it is our own bad management of ourselves; for in the hottest day the hours of darkness are comparatively cool, and 20° less than in daylight, and were we to adapt our clothing to the circumstances we should sleep very well. In summer, people put on cooler garments in the *day-time*, and, indeed, make a sorry attempt to do so at night, by throwing off some or all of the blankets, and lying half nude—so far as half of the body is concerned—a most wretched and uncomfortable proceeding; for, being accustomed to the weight of several blankets, the mere absence of it is sufficient to scare away sleep, independently of the increased heat of the weather.

To enjoy sleep, a cool skin is necessary; but in many subjects this is no easy matter, unless the secret be known. Persons with a hot, dry skin, bear increase of temperature badly; whilst those who freely perspire feel no inconvenience—the evaporation of the abundant secretion carrying off the extra caloric. There are two methods of cooling the body—first, to make it perspire; secondly, by the direct application of cooler substances. To induce perspiration in the subjects I speak of, considerable exertion would be necessary; but on resting, the evaporation is soon completed, and the skin again becomes hot and dry. Cold water cannot be had in London, unless iced—a troublesome and expensive process. The effect of a cold bath only lasts about half an hour or so. To dress without drying the skin is more effectual. To sprinkle the sheet or night-dress with water is objectionable and inefficient. The proper way to cool the body at night is to allow the free circulation of the night air all round the body.

On a hot day, as we sit in our stuffed easy chairs, we may notice that the front part of the body is tolerably cool, but the back, leaning against the stuffing, will remain—may I say so?—*sticky*. If in this condition we now sit upright and allow the air to get at the back, it will soon be equally cool. Thus, in bed we submerge half the body in a quantity of feathers, or surround it with hair or wool or cotton of some four inches deep. In winter the mattress can scarcely, perhaps, be too thick; but in summer to have one half of the body nearly naked while the other half is embedded in feathers, is highly unreasonable; the feathers become intolerably hot—it is "blowing hot and cold." Little children will kick off the clothes in their restlessness and unconscious desire to get away from the heated mass, but unfortunately all the kicking will not get rid of the heated mass under them, for there the mattress, hot and burning, remains immovable. On a sultry day, when dressed, to wear such a burden on the back would not be tolerated, but at night the thing is done nearly always.

If the body were suspended from the ceiling in mid-air, covered with a single blanket, it would remain cool during the hottest night in England, the window being open. This cannot be done, but we can approximate to this. The "wire-wove" should be substituted for the ordinary mattress. Supported on this, the body is in almost direct contact with the air, the sheet only intervening. However, thus used, the mattress is too hard, and to remedy this a folded blanket should be laid on it. It then forms a luxurious mattress. On an ordinary mattress a blanket is an abomination in hot weather, but here it may be employed with impunity. When recumbent the body is lying on a sheet and a folded blanket, supported by the mattress of wire, resembling a tightly stretched fishing-net. There should be no valance to the bedstead to interfere with the circulation of air underneath the mattress.

It is curious to experience, as the weather becomes cooler, the desire, not to draw an additional blanket *over* the body, but *under* it—quite a novel sensation.

For three summers I have used the new wire mattress with so much comfort that I am induced to recommend it to others who "suffer from the heat," instead of going to rest in fear and trembling. All who so suffer may, I believe, retire from their hot drawing-rooms to their metallic couch, with the sure and certain hope of finding a "cool bed on a sultry night."

I am, &c.,
A BAYSWATER M.D.

DR. JONATHAN HEARDER.

The last remaining of the men who, forty years ago, made Plymouth famous for scientific discoveries—Dr. Jonathan Hearder—died on Sunday evening, at Plymouth, after a sudden paralytic seizure. His researches in science, especially electricity and chemistry, were extensive. To the leading physicists, not only of England, but Europe and America, he was well known. Many years ago an unfortunate accident befell him while experi-

menting, by which he was deprived of sight; but, nothing daunted, he pursued his scientific researches, and his discoveries and inventions were many and valuable. He contrived a medical electric apparatus, and practised as a medical electrician, and was electrician to the South Devon Hospital. He possessed a wonderful memory, and took great interest in local antiquities and history.

COMMUNICATIONS have been received from—

Mr. Tom Bird, London; Dr. Wm. Carter, Liverpool; Messrs. R. E. Thomas and Co., Falmouth; Dr. Bevan Lewis, Cardigan; Dr. W. Alfred Johnson, London; Dr. Edis, London; Dr. C. M. Deane, Nairne; Dr. J. W. Moore, Dublin; Dr. Burdon Sanderson, London; Dr. E. L. Fox, Bristol; The Secretary of the British Medical Association; Mr. Blackett, London; The Registrar of Apothecaries' Hall, London; Dr. E. Heiman, London; Mr. Napier, London; Dr. J. Rogers, London; The Secretary of the Social Science Congress, London; Mr. Haviland, London; Dr. George Johnson, London; Mr. A. T. T. Wise, London; Dr. J. Haddon, Eccles; Dr. Dudgeon, Glasgow; Dr. Francis Goston, Aberdeen; Dr. Moxell Mackenzie, London; Mr. Henry Morris, London; Dr. Gavin Milroy, Richmond, Surrey; Dr. Bruce, London; Mr. Rickman J. Godlee, London; Dr. Charles Bell Taylor, Nottingham; Dr. T. W. Hime, Sheffield; Mr. C. J. Cullingworth, Manchester; Mr. J. Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

John Whitmore, M.D., Monthly Report on the Health and Meteorology of the Parish of St. Marylebone—Frederick W. Lowndes, M.R.C.S. Eng., The Extension of the Contagious Diseases Acts to Liverpool and other Seaports, Practically Considered—Andrew Dickson White, LL.D., The Warfare of Science—Charles Slagg, Sanitary Work in the Smaller Towns and in Villages—John Sloane, M.D., Report on the Infantile Diarrhœa of Leicester—J. M. Ludwig, M.D., Pontresina and its Neighbourhood—Révue des Sciences Médicales, vol. viii.—W. J. Little, M.D., Remarks on the Treatment of Infantile Congenital Club-Foot—Narcotism—Frederick James Gant, F.R.C.S., Diseases of the Bladder, Prostate Gland, and Urethra—Henry Smith, F.R.C.S., The Surgery of the Rectum—A. B. Judson, A.M., M.D., The Cause of Rotation in Lateral Curvature of the Spine—Daniel Hanbury, F.R.S., Science Papers, chiefly Pharmacological and Botanical—Great Western Railway Panoramic Guide—Report of a Drawing-room Conference on Boarding-out Pauper Children—Drs. Bucknill and Clouston on Asylums for Drunkards, and the Relations of Drink and Insanity.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—The Shield—Nature—Archives Générales de Médecine—Journal of Anatomy and Physiology, July—Boston Journal of Chemistry, July—Western Times—Sussex Daily News—Monthly Letter of the English Anti-Tobacco Society and Anti-Narcotic League, July—Canada Lancet—Chicago Medical Journal and Examiner, July—Students' Journal—Westminster Review, July—New York Medical Journal, July.

APPOINTMENTS FOR THE WEEK.

July 22. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

24. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

25. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

26. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

28. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Quekett Micaoscopical Club, 8 p.m. Annual General Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 15, 1876.

BIRTHS.

Births of Boys, 1217; Girls, 1094; Total, 2311.
Average of 10 corresponding years 1866-75, 2123·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	768	707	1475
Average of the ten years 1866-75	729·6	656·2	1385·8
Average corrected to increased population ...	...	...	1483
Deaths of people aged 80 and upwards ...	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	5	9	1	7	1	2	...	34
North	751729	...	5	7	2	13	...	1	...	46
Central ...	334369	...	2	1	2	4	...	1	...	28
East	639111	...	2	2	1	5	...	1	...	78
South	967692	2	10	16	3	13	...	5	1	63
Total	3254260	2	24	35	9	42	1	10	1	249

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·098 in.
Mean temperature	65·5°
Highest point of thermometer	93·0°
Lowest point of thermometer	44·7°
Mean dew-point temperature	52·7°
General direction of wind	W.S.W. & N.W.
Whole amount of rain in the week...	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 15, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending July 15.	Deaths Registered during the week ending July 15.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2311	1475	93·0	44·7	65·5	18·61	0·00	0·00
Brighton	100532	42·7	53	39	77·7	49·6	60·9	16·06	0·00	0·00
Portsmouth ...	124867	27·8	78	63	...	...	...	...	...	...
Norwich	83430	11·2	68	30	84·5	54·0	63·9	17·72	0·17	0·43
Plymouth	72230	51·8	26	42	78·0	46·0	59 6	15·34	0·00	0·00
Bristol	199539	44·8	123	78	91·2	44·5	64·2	17·89	0·00	0·00
Wolverhampton ...	72549	21·4	66	30	92·2	44·1	63·3	17·39	0·01	0·03
Birmingham ...	371839	41·3	271	138	...	...	...	...	...	...
Leicester	113581	35·5	106	42	90·0	44·5	63·2	17·33	0·01	0·03
Nottingham ...	93627	46·9	63	27	89·4	41·3	61·6	16·45	0·00	0·00
Liverpool	521544	109·1	337	236	82·8	51·4	61·1	16·17	0·00	0·00
Manchester ...	357917	83·4	260	172	89·0	44·0	62·1	16·73	0·02	0·05
Salford	138425	26·8	143	62	89·2	41·2	59·0	15·00	0·05	0·13
Oldham	88609	19·0	68	50	...	...	...	...	...	...
Bradford	173723	24·1	147	69	83·3	48·1	60·3	15·73	0·08	0·20
Leeds	291580	13·5	225	123	84·0	47·0	61·7	16·50	0·00	0·00
Sheffield	274914	14·0	230	125	88·0	46·5	62·3	16·84	0·00	0·00
Hull	136933	37·7	85	47	85·0	46·0	61·8	16·56	0·06	0·15
Sunderland ...	108343	32·8	64	38	88·0	49·0	63·8	17·67	0·15	0·38
Newcastle-on-Tyne	139929	26·1	112	60	...	46·0	...	...	0·38	0·97
Edinburgh	215146	51·3	174	61	...	...	...	...	...	...
Glasgow	545144	90·4	360	180	78·5	42·9	57·7	14·28	0·43	1·09
Dublin	314666	31·3	155	105	81·4	39·4	60·9	16·06	0·00	0·00
Total of 23 Towns in United Kingdm	8028595	37·7	5531	3293	94·2	39·4	61·8	16·56	0·08	0·20

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·10 in. The lowest was 29·70 in. at the beginning of the week, and the highest 30·26 in. on Wednesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture VIII.

MEDICO-LEGAL INSPECTION.

The post-mortem inspection in *legal medicine* is a more important and difficult matter than it usually is in *private practice*. It is not enough here to point out in some one or other organ or organs some such obvious morbid changes as will suffice to explain the character of the symptoms which marked the closing scenes of life, and will account for the fatal event. The medical jurist must be able from this source to trace, as far as can be done, the chain of connexion, whether longer or shorter, betwixt the morbid agency—the injury received, the poison administered—and its ultimate consequences, and carefully and accurately to distinguish the effects of merely *natural causes* from those which are purely *adventitious*. In other words, the effect produced must be shown by him to be such as inevitably followed, and could only have resulted from, the causes suspected or assigned on reasonable presumption; and the verification of whose truth, or its original suggestion and consequent establishment, are the tasks which fall to his especial province.

The nature of the duties thus devolving on the expert will have been sufficiently seen from the elucidation of the subjects which have immediately preceded—the points which call for particular attention in all such investigations, the cautions to be kept in view in drawing conclusions from the observations presenting themselves in the course of the inspection, and the difficulties which the different aspects of the body in its various stages of alteration after death may occasion, in regard to the correct appreciation of the cause, progress, and ultimate termination of previous vital actions within or foreign to the organism. All this, it will be perceived, necessitates here a *thoroughness* of investigation not called for elsewhere, and one which overlooks no circumstance, however apparently trivial, which may throw light upon the case in hand, or on the previous history of the party.

Still, it may be observed that, although the inspection of the dead body by the medical jurist may, and usually does, embrace more points than are called for in an ordinary inspection, the mode of procedure otherwise, in either case, is nearly the same in the majority of cases; any differences in this respect regarding rather certain *special* investigations than those called for in the ordinary run of cases. Thus, we have already had occasion to point out the best mode of procedure in the inspection of the infant in cases of suspected infanticide; and shall afterwards have to notice the best mode of procedure in certain other instances, which present other peculiarities, requiring to be traced out in a prescribed order.

This being the case, and presuming that you are sufficiently familiar with the ordinary mode of procedure in post-mortem inspections, I shall confine myself at present to the notice, in order, of the more obvious directions requiring your attention in the conduct of medico-legal inspections *generally*.

1. Thus, in every autopsy undertaken for forensic purposes it is desirable that the *examiner should* be enabled by the legal authorities to *undertake the investigation as soon after death as possible*, before any of the various post-mortem phenomena, already described, have intervened to obscure facts and appearances, or to render their correct appreciation difficult or impossible. At from twenty-four to forty-eight hours after death the body is in the fittest state for its efficient and satisfactory examination. On the Continent the autopsy is not legally permissible till twenty-four hours have elapsed; and though in this country no legal enactment of the same kind exists, public opinion would be against an inspection much earlier than this.

But as, from various causes, this inspection, before the changes which are induced in the body by the progress of decay have had time to commence or proceed, cannot be set on foot, the medical jurist must be ready to undertake the autopsy at any later period at which he may be called on to do so. I have had occasion already to direct your attention to the circumstances under which the inspection of the body may be usefully undertaken long after death, and need not here recur to this topic. Several additional illustrations to the same purport will be found in the volume of Caspar's "Forensic Medicine" lately translated and published by the New Sydenham Society.

2. It is desirable in every medico-legal autopsy that the body, as respects its position and surroundings, should have been as little interfered with as possible. This is especially important in all cases of sudden and violent death. Where this precaution has not been attended to on the part of the attendants of the deceased or the law authorities, it may be necessary to procure information on these points from those who have been present at the death, or been the first to discover the body afterwards, or who have seen it before it had been in any way disturbed. The impossibility of supplying such desiderata, however, either at first or second hand, only renders it the more imperative on the examiner to attend closely to such indications as may still be available deducible from extraneous sources.

3. The medico-legal examiner is not at liberty to decline the investigation as superfluous or useless, even where the body has been still further interfered with; as remarked by Caspar—"Cases occasionally occur in which the body, being brought to the medico-legal dissecting-table, has not only had all its cavities, but even all its organs laid open, partly from precipitation, and partly because it was not known at the time of death that the case would not come under the cognisance of the law, etc."

I have met with instances of this sort in my own practice, and Caspar has adduced some instructive cases; as, for instance, of fractures at the base of the skull, rupture of the liver, fracture of the ribs, and gunshot wound of the axillary artery, in bodies previously dissected. In one of my own cases I was able to verify fractures of two of the cervical vertebræ after a previous inspection at the infirmary.—(Caspar, Syd. Ed., 61-3, *pass.*)

4. In medico-legal cases which are likely to come before any of the courts the inspection should be made by *at least two properly qualified medical men*. This is necessary, because the testimony of two witnesses is required to substantiate facts in courts of law. Besides, *one* might overlook things of importance that would not escape two. They should proceed to the duty imposed on them with impartial and unbiased minds, and be careful to adopt no opinion which they cannot establish on scientific grounds. They should also proceed deliberately, and not allow themselves to be hurried in their examination.

5. It not unfrequently happens, in cases which are thought to be instances of suicide, that the authorities only require the report of one medical man to establish the proof of this fact.

6. In such an instance, should any circumstance become apparent which would tend to excite suspicion that a wrong estimate had been formed—that the case, for example, was one of homicide, not suicide,—it would be proper to suspend proceedings till another medical man was procured, who would be able to certify to the appearances. I have more than once been under the necessity of doing this.

7. The medical inspectors should not proceed to examine the body without a regular *warrant* from the properly constituted legal authorities. If the inspectors have not this warrant they are liable to be obstructed and fettered in their examination by the unreasonable and improper interference of the friends of the deceased, who may even have an interest in obstructing the proceedings.

A warrant is necessary, also, to give power to exclude improper persons from being present at the inspection, who may intrude themselves, either from curiosity or otherwise. There can be no objection, however, to one or two of the friends of the deceased being present, if they are neither the suspected parties nor the principal witnesses in the case. Neither could there be any reasonable objection to the presence of one or more medical men on the part of the accused, if desired; for this may be said to be an important part of his trial.

8. It occasionally happens that, notwithstanding the medical examiners are furnished with a legal warrant, the relatives of the deceased, from ignorance or obstinacy, may refuse their permission for the inspection. In this case the examiners should not attempt to proceed by force, but at once, where mere persuasion has failed, return to the party who has granted the warrant, who in such cases will direct an

officer to take possession of the body, whether the refusing persons give their consent or not.

The warrant in Scotland (technically, the remit) directs the medical jurist to "examine the body and report as to the appearances and the cause of death."

9. In addition to the usual instruments required for opening the different cavities of the body and the spinal canal, a measure for fluids, a lineal measure, and an apparatus for weighing may also be necessary.

10. In connexion with investigations of this sort, a duty of a somewhat extraneous character may have to be undertaken by the medical jurist, and one which will be best discharged before proceeding with the proper work in hand. I refer to those occasions, sometimes arising, in which, in addition to the inspection of the dead body found under suspicious circumstances, the expert may be called on to examine a party presumably connected with the death in question. Here the points which chiefly call for notice are the physical appearance of the examinee; the state of his dress; any marks of violence on his person; any traces of blood on his surface or clothes, etc.

In an alleged charge of rape, for instance, seminal or blood-stains should be looked for on the shirt of the accused. If he had inflicted a serious wound on the deceased, blood should be discovered on his hands or dress unless previously removed. In the case of rape and murder referred to in Lecture IV., page 296, soot was detected in the seams of a pair of corduroy trousers, the man having entered the cottage of his victim by descending the wooden chimney (*Scottice*, "lum"). In the case of the murder near Kintore, referred to in Lecture I., page 55, the only suspicious circumstance elicited at the examination of the accused was the detection of slight traces of blood in the seams betwixt the soles and uppers of his shoes. In a man of the name of Fraser, apprehended here for attempted rape some years ago, a linear scratch was detected on the upper surface of the penis. At the apprehension of a factory operative in 1870 the accused was found in possession of several of the drugs used as abortives, and a uterine sound. Cases of this sort might easily be multiplied.

But to return to the post-mortem:—

11. When the body has remained in the spot where it was discovered, and has not been disturbed by the relatives or others, it may be of importance to direct attention to the situation and position of the corpse before being interfered with; the state of the clothes; whether it is wholly or partially dressed; whether, if dressed, the clothes are disarranged or are decently disposed; whether they have been torn, stained with mud, blood, or other foreign matters. Any blood near the body, or other marks of violence; footprints, indications of a struggle, or running; lethal weapons, &c.,—should be noted. For it often happens that, by attention to such circumstances as these, the guilt or innocence of the accused is established.

12. It is also of consequence to be furnished with an account of the circumstances attending the death of an individual, so far as these can be ascertained; for this often leads to an attention to important particulars which might otherwise escape notice. The authorities, however, are rarely willing to communicate such information, lest it should bias the examiners. This unwillingness will usually be got over, if the medical inspectors state explicitly the purpose for which the information is required.

If the clothes, etc., are likely to be produced in the trial afterwards, the examiners should see them sealed and labelled on the spot, and should attach their signatures or initials to the label, in order that they may be able to identify them at once when afterwards brought into court.

13. The body is to be stripped, if not previously done; the state of the corpse, the apparent age, the position of the limbs, and the expression of the countenance, are to be particularly observed; if not already identified, its height ascertained; and any marks of scars, small-pox, nævi materni, etc., which might serve for this purpose are to be carefully noticed. If any stains are to be detected about the lips, teeth, or nostrils, or about the fingers, these should be particularly examined; and, also, any vomited matters near the mouth, or any discharges which may have escaped from the outlets of the body,—carefully preserving these.

Any filth or foreign matter on the surface of the body should be washed away, as such matters may obscure slight discolorations, and may hide minute scratches or abrasions of the skin, nævi, tattooings, or superficial cicatrices. Any spots of bloody fluid, above all, should be washed off. In the case of rape and murder to which I had to refer in this and a previous lecture (Lecture IV., page 246), two medical men, who had viewed the body previous to the official inspection, certified, in a report drawn up by them for the law authorities, that there were marks of bruises on the upper and inner part of the woman's thighs. The application of a wet sponge to the parts in their presence convinced them of their error on this point.

In every instance of suspected or probable death by violence it is advisable to cut short the hair, or, better, to shave the head, as contusions, abrasions, and such slight wounds as have not bled may otherwise escape notice at the inspection.

14. It is always proper at every medico-legal dissection to dictate notes of the points elicited in the course of the examination, as well as the whole of the investigation. This should be done fully, slowly, and deliberately, indicating all the points inquired into, with the observations made and appearances presented, *negative* as well as positive, and stating simple *facts* only, without either generalisations or opinions. These notes are best managed where one inspector conducts the examination and the other takes notes of its successive steps, the person thus dictating taking care that the other practitioner or practitioners present fully concur in what is thus dictated. When finished, the signatures of *all* the medical persons present should be obtained to the document, particularly if any professional witnesses for the accused are present, as it prevents them from objecting to any of the facts on the trial. These notes should be looked over by both inspectors before the body is sewed up, so that omissions in the notes or in the inspection itself may be then supplied. A copy of this document should *always* be preserved by the examiners for future reference, to prevent their forgetting the facts elicited.

15. The examination and dissection of the dead body should not be undertaken, if possible, except with sufficient daylight in prospect to allow the whole inspection to be made without artificial light.

16. After the points already noticed have been attended to, the surface of the body should be inspected with regard to its colour—whether the skin be rosy, or blanched, or natural. The state of the eyes should be noted down: the eyelids, whether shut or open; the state of the pupils, if dilated, contracted, or natural; the state of the mouth, nose, ears; the marks of putrefaction, if present; the hands and feet, particularly the state of the nails. The state of the outlets of the body—the anus and the genitals,—also the breasts (in the female) and the abdomen, should be noted down.

In order to impress you with the importance that occasionally attaches to the observation of these minute particulars, which are so apt to be overlooked or despised, I may mention that a legal functionary once related to me the particulars of a case that came under his notice, in which a murder was committed, the crime having been brought home to the guilty party chiefly by the apparently trifling circumstance that a few fragments of a white substance, which proved to be cuticle, were found under the nails of the deceased person. These portions of cuticle were preserved, and afterwards compared with certain abrasions on the face of the guilty person, and found exactly to agree with them; the deceased having, in the struggle which took place, applied his nails to the face of his assailant. I am sorry to say that I am unable to give any reference to where the case is to be found—if, indeed, it ever was recorded,—as the conversation took place several years ago.

17. The inspection proper should never be confined solely to the cavity of the body where the fatal lesion is suspected or discovered. The whole of the great cavities of the body should be opened, and the state of the viscera, whether healthy or morbid, noted down. When there is room for the slightest doubt to be raised whether the diseased appearances found in the above parts are sufficient to account for death, the whole length of the spinal cord ought to be laid bare, and thus put it out of the power of the counsel to raise quibbling objections on the trial, as occurred in a case tried in Aberdeen at the Autumn Circuit, 1838:—

Two men were seen to quarrel in a crowd at a cattle market in Banffshire, when one of them, a stout, powerful man, threw the other on his back, sat down cross-legged on his chest, and twisted his victim's cravat till death by strangulation followed. A medical inspection directed by the law authorities in that case was not a very full one, and the spine had not been opened. This omission was taken advantage of

by the counsel for the defence, who set up a theory that the man had died from spinal apoplexy—a plea which, however improbable in the circumstances of the case, could not be satisfactorily refuted by the Crown from the want of any evidence as to the state of the spine.

18. In proceeding with the dissection it has been directed that the cavity in which the cause of death is supposed to be situated should be the first to be opened. But even if this be known, some obvious objections apply to such a procedure. It is better, therefore, to proceed in a systematic manner in every instance. For this purpose some such procedure as the following may be advantageously adopted :—

If not previously done, the hairs are to be cut close, to give a complete view of the scalp. The head should be raised with a block as high as can be done without stretching the parts about the nucha. The head is then to be opened in the usual way, and the brain examined *in situ*. The head should be then allowed to remain in the same posture till the state of the heart and large vessels in the thorax is first ascertained ; or, if lowered to its former position, an assistant should be directed to compress the vessels at the base of the skull, to prevent any draining of blood from the carotid or vertebral arteries or jugular veins.

The chest should then be laid open in the usual way, taking care in removing the sternum that the jugular or subclavian veins are not opened. After glancing at the state of the exterior of the lungs as far as they are exposed, the cavity of the pericardium should be cautiously opened, without moving the parts within it. After noting the quantity and appearance of the fluid in this sac (if any), and the aspect and state of apparent fulness of the different compartments of the heart, the left ventricle should be laid open by a longitudinal incision with a scalpel, without displacing it from its original position, noting down the state of its interior, and the quantity and appearance of the blood in it, if any. With a scissors the incision should be extended to the auricle, and the same information obtained regarding its interior, as well as the commencement of the aorta, and the pulmonary veins. The blood is then to be gently sponged up, taking care that none of it escape into the general cavity of the chest ; and the right side of the heart is to be examined in precisely the same way. It will be convenient then, after applying ligatures to the arteries and veins attached to the heart, to remove this viscus, and examine it as to its healthy or morbid state. Our lecture on the Modes of Death will have prepared you for appreciating the important information to be derived from this mode of procedure in regard to the heart. If death has taken place by coma or asphyxia, you are already aware that a strong confirmation of this is obtained when the right cavities of the heart are found gorged with blood, and the left nearly empty. Or, supposing the person to have died of hæmorrhage, or by syncope from any other cause, you would expect to find the blood in nearly equal proportions in both sides of the heart. I may merely note here, in passing, that in some cases of death by violence the heart's cavities may be met not only free from blood, but their inner walls clean—a state of matters in this viscus which will call for special notice in a future lecture. The state of the cavities of the pleura should next be ascertained ; but before proceeding to disturb the lungs it is best to inspect the mouth.

For this purpose the usual vertical incision along the front of the chest should be continued upwards, in the same direction, along the front of the neck and over the chin to the lower lip, turning back the flap to ascertain the state of the vessels of the neck. The symphysis, when sawn through, allows the inspector to divide the attachments of the muscles to the rami of the jaw, which can then be turned back and dislocated outwards, completely exposing the mouth and the pharynx. By drawing the tongue to one side, the larynx, and the trachea as far as its subdivision, can be exposed. The lungs, with the trachea attached, can now be easily examined, either *in situ* or by removal altogether from the chest, taking care, after examining the œsophagus, first to apply a ligature to it and to the aorta and descending cava.

The examination of the abdomen requires little notice. The whole of the viscera should be examined, and particularly the stomach and smaller intestines, as also the uterus and vagina in the female, and the rectum in both sexes.

19. The notes of the inspection taken as above are not to be produced as part of the evidence at the trial which may follow, but are solely for the guidance of the practitioner, or the law authorities if called for by them. In this country (Scotland), official instructions issued for the use of the public prosecutors in 1839 direct that "within two days after the post-mortem examination, where no further examination is required, the inspectors must deliver to the authorities a *distinct* report containing their opinion on the case, with the reasons succinctly but clearly stated. They must understand that they cannot found their opinion on any facts represented to have been ascertained by themselves during the inspection *which are not specified in their notes*."

This report—which is intended to form part of the written productions on a trial—should be framed with a view to be understood by a jury, and should therefore be free from *technicalities*.

The official document to which I have just referred was one drawn up at the request of the Crown officers in Scotland, in 1839, by Sir Robert Christison and the late Mr. Syme and Dr. Trail, and sent out by the Lord Advocate. As, however, the document was not published at the time, and is now, I believe, out of print, I have availed myself largely in this lecture of its contents, as the value and importance of the directions for the conduct of the legal inspection in criminal cases by these eminent authorities are amply entitled to your fullest confidence and attention. I have also freely availed myself in what has preceded of the excellent directions in Devergie's work.—("Med.-Lég.," vol. i., pages 256-61.)

To complete the present subject I have only further here to advert to a kindred topic—*medico-legal disinterment*, or *juridical exhumation*. I have already (Lecture IV., pages 217-18) noticed the *occasions* on which it may be required of the medical jurist to undertake with any prospect of utility the examination of bodies which have been already interred.

The dangers attendant on these disinterments have been over-estimated on the one hand, and under-estimated on the other, both by the profession and the public. That with due care and attention there is no stage of the body's decay at which it may not be inspected has been shown by Parent du Châtelet by a copious deduction of *facts*. The same opinion is advanced by Orfila, Tardieu, and more guardedly by Devergie.

In proof of his position, Parent du Châtelet points to the history of the sanitary state of the dissecting-rooms in Paris ; to the results of certain experiments of his own ; to the disinterment of from 15,000 to 20,000 bodies in all stages of decomposition, and at all seasons of the year, for eradicating the Cimetière des Innocens at Paris in 1789 ; to the disinterment at all seasons of the year at Père-la-Chaise of about 200 bodies annually, at two, three, four, or more months after death, deposited temporarily in trenches previously to their removal to family grounds or more suitable graves elsewhere ; and to the experience of the Commission of the Provisional Government of France in disposing of the victims of the Revolution of 1830.—("Hyg. Pub.," vol. ii., pages 1-100, *pass.*)

It must be admitted, however, that these authors have underrated the hazards of such inspections, as shown by published cases of serious or fatal results from exposure to the emanations from putrid bodies, particularly during the period at which the evolution of gases is most active, prior and posterior to which period the danger is reduced to a minimum.

The following directions are given by Devergie for conducting the disinterment of bodies some time buried :—

1. Never to proceed to the operation fasting, and to be sure first to *take a dram*. 2. To disinter the body early in the morning, if in summer, as at this time the air is cooler, and the disengagement of gas less free. 3. To provide sponges, towels, water, and from three to four pounds of dry chloride of lime ; a pound of the chloride is to be diffused through about two pails of water. 4. To prepare a large table, to be placed on a platform raised above the ground, and, if possible, in a current of air. 5. To proceed as speedily as possible with the disinterment of the body, and with a relay of grave-diggers. As soon as the coffin is exposed, it is to be copiously sprinkled with the solution of the chloride, to enable the workmen to draw it up without danger, which is to be done with ropes. 6. To open the coffin at the side of the grave, remove the body, and to have it exposed to the air for a short time (from fifteen to twenty minutes). 7. To place it on the table, sprinkling around the body (but not on it) dry chloride of lime to at least the extent of half a pound, replacing it by a like quantity three or four times during the examination. 8. *To proceed to the inspection* of the body, during which the examiner's hands are to be repeatedly washed with the solution

of the chloride. 9. During the course of the inspection the examiner should keep on the wind ward side of the body.—(*Op. cit.*, vol. i., page 320.)

Where the body interred has had time to be reduced to the state of skeleton the previous precautions to avoid danger on the part of the examiners are not called for. In this case, that no part of the bones may be lost or destroyed, the following directions from the same author may be followed with advantage:—1. The suspected spot itself should not be touched in the first instance. 2. A trench ought to be dug, at a distance of twelve or fourteen feet from the suspected spot, of about fifteen or twenty feet in length, by four feet and a half or five feet in depth; observing, as they approach the bones, whether the soil has been previously *disturbed*, which can be readily done by comparing it with the earth first dug up. 3. As soon as the workmen come upon the bones they are to stop, and begin their operations on the opposite side. 4. The body is then to be exposed, little by little, and when the point is reached where the first bones were observed, the earth is to be passed through a fine sieve; by this means all the smaller bones may be collected, and even the nails. 5. As bone after bone is detected, the directions in which the skeleton's head and feet were placed should be noticed. 6. The respective depths of the different bones from the surface may afford some indications of the manner in which the grave was originally dug. 7. If any remains of a cord are found around the spinal vertebræ, its position is to be carefully noted. 8. The bones are to be collected, and their respective lengths ascertained, and whether or not they mutually correspond. By this means, with the aid of Sue and Orfila's tables, or those of Gordon of Edinburgh, the length of the individual during life may be ascertained (*Ibid.*, pages 325-6), adding one inch and a half as an allowance for the thickness of the soft parts, and keeping in view that *average results* are only attainable in this way, and that, as shown by Dr. Guy, even such averages are not always to be implicitly trusted, from the want occasionally of correspondence in the proportionate lengths of the long bones ("Man," pages 112-13). Lastly, the points adverted to in our lectures on Age and Sex require to be attended to in the examination of the skeleton procured by disinterment.

Local Treatment of Muguet.—Whether muguet be idiopathic or symptomatic of other affections in the adult or in the infant, its local alkaline treatment is the same, with the view of correcting the acidity upon which the production of the *oïdium albicans* depends. The chlorate of potash, which has obtained so much reputation in the treatment of ulcerative stomatitis of children and mercurial stomatitis of adults, is not of the same efficacy in muguet, the salts of soda being far superior. For infants we may employ ten parts of the borate of soda combined with fifteen parts of honey, smearing it every two hours by means of a brush over the interior of the mouth, the lips, and even sometimes the pharynx. In two days the muguet is cured. The bicarbonate of soda may be employed with as complete success. For adults who can gargle it is preferable to employ either alkaline gargles or douches, for either of which a drachm and a half of bicarbonate of soda in a quart of water may be used. A simple bottle of Vichy or Vals water will suffice, gargling with it every hour.—Dr. Bouchut, *Gaz. des Hôp.*, No. 60.

The Pope and his Physicians.—The Pope finds his old friends with whom he was so fond of conversing gradually dying off; and he has just lost his private physician, "Professor" Sartori, who paid him a visit every morning, rather with the object of telling him the news of the Court and the town than for any other purpose. In this way the Holy Father has habituated himself to a daily medical visit, which otherwise would have seemed to augur ill for him. Signor Sartori was always in good humour, which he easily communicated to his august patient. The sad news of his loss had to be most carefully broken to the Pope, who manifested great grief on hearing of it. A successor has to be appointed, who will in all probability be Prof. Ceccarelli, who is the personal attendant of Cardinal Mérode, and who has visited the Pope from time to time. The health of Pius IX. is, in fact, excellent, considering his age; a little general debility and a kind of paresis being the only things observable. The heat, which drives everybody else away from Rome, suits him; and the swelling of the legs from which he suffers disappears in summer.—*Union Méd.*, July 18.

ORIGINAL COMMUNICATIONS.

CASES ILLUSTRATING THE OCCASIONAL OBSCURITY OF THE ACUTE SPECIFIC DISEASES.

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The first case I have to relate is one of, I believe, typhus fever, in which a joint affection, in many respects having the characters of such as occurs in acute rheumatism, existed. It was this joint-affection which made the diagnosis obscure; and in its absence the disease would have been so well marked that typhus would most certainly have been at once diagnosed by all physicians. But those observers who have devoted much attention to the acute specific diseases record no instance of typhus in which an articular affection (except as a sequela) appeared, much less an instance where several joints were enlarged in the manner of acute rheumatism. It was not, therefore, without considerable hesitation and careful examination of the symptoms, course, and post-mortem appearances in this case that I came to the conclusion that such complication can occur in typhus.

The patient, G. M., a labourer, aged sixteen, a strong and well-built lad, who had always enjoyed good health, was admitted under my friend Dr. Green (of whose beds I had at the time charge), at Charing-cross Hospital, on Tuesday, November 30, 1875. Shortly after admission, Mr. Potts, the Assistant Resident Medical Officer, found him to all appearances dangerously ill. He complained greatly of headache, and was beginning to exhibit signs of restlessness, with occasional violent delirium. In the evening his temperature was 103·6°. He was described as having been altogether in a very "queer" way. I saw him at two o'clock in the afternoon of the day after his admission. It was not easy to obtain a very clear history of the patient's illness prior to admission, though the mother was questioned on the point; but this much was determined with accuracy:—On the Wednesday previous he had first felt wrong, was generally out of sorts, and had repeated shivering attacks; he experienced pain in the limbs, and a sense of weariness and weakness, which obliged him to knock off work, though he did not take to his bed. On Friday he came to the hospital as an out-patient, and had all the symptoms of one a few days ill of some severe acute specific disease. Next day he was much worse, and on Sunday he began to suffer from more decided local pains, chiefly in the left shoulder, movement of which caused much distress. On Monday the left knee-joint became painful and swollen, and the patient was thought to be quite "losing his senses." The general symptoms had gone from bad to worse, in the decided manner we meet with in a dangerous acute specific disease.

When I first saw him he had the dull, heavy look of a person suffering from such disease, even to the extent it declares itself in typhus. So strikingly indicative of typhus was it, that no one could be surprised on examining the abdomen to find an eruption. There was an eruption of by no means numerous small reddish spots, which were not well defined, and disappeared on pressure, scattered over the abdomen and lower part of the thorax. It was not a rash typical of typhus, but it was associated with another appearance, especially over the lower part of the abdomen—an irregular dusky redness, very suggestive of a subcuticular typhus mottling. It had that peculiarity we meet with in typhus-rash—it looked as if seen through something. It disappeared imperfectly on pressure. The wrists, thorax, and other parts of the body were spotless. The skin was everywhere dry, hot, and pungent. There was no iliac tenderness; no perceptible enlargement of the left shoulder; but the left knee was swollen precisely as occurs in rheumatism. Both these joints were tender and painful on movement, though careful handling did not excite much distress in the shoulder. The temperature was 103°; pulse 120, firm and full; respirations 40, and not of pneumonic type. The tongue, centrally dry and brown, was white and moist along the edges; it was protruded with difficulty, and its extreme dryness interfered with the lad's speech. When questioned closely, he answered as if he understood all said, but hesitatingly and with uncertainty, especially as to dates—as to such as, under ordinary circumstances, he would

have been clear about. He could not maintain a fixed attention; but, pressed on any particular point, replied correctly, and even (after repeated attempts) mentioned the days on which he suffered from certain symptoms, on which he first came to the hospital, and when he was admitted. He complained of frontal headache, and of pain in the left shoulder and knee. There was no heart affection; the systolic sound was remarkably distinct. He had a cough, but no expectoration; bronchitic râles prevailed over the whole back. The bowels had not been open since admission; the urine, passed voluntarily, was normal. During the night he had frequently tried to get out of bed, but was easily soothed into rational behaviour. Delirium came on, indeed, the moment he was allowed to be at rest, and was associated with a tendency to commencing sopor, and with slight but dangerous subsultus tendinum. The pupils, dilated and answering to light, varied rapidly and strangely with the mental and physical movements of the patient.

Next day (December 2) the report was that he had passed a moderately good night. His attempts to get out of bed had been easily restrained by simply tucking in the bed-clothes. Urine had once been passed under him. An enema brought away normal evacuations. Delirium had been pitiful, turning on a summons he had received just prior to his illness for wheeling a hand-cart on the footpath. He complained but little of headache, and not at all of the left knee, from which almost all swelling had gone. The right knee was now larger than had been the left. He complained of the shoulder when the arm was moved. The skin was hot and dry as before. During this day and to midnight of the next (December 3—tenth day of disease) the temperature rose almost uninterruptedly. At two o'clock on the 3rd he was decidedly worse: delirium was more marked, and there was an increased tendency to sopor. Questions were answered wildly, yet the boy had clearly not lost all control in this direction. He had constantly expressed his gratitude for attention given to him, and had most willingly taken everything offered to him. He had two or three times passed urine under him, but no fæces. There was a copious flow of urine free from albumen. Only a trace of eruption was left; the face was dusky. The right knee, still swollen, was no longer tender or painful. A slight swelling with redness had appeared on the outer side of the dorsum of the right foot. There was no pain on movement of the left arm. A simple enema acted well with normal results.

December 4.—No rash was visible. The general symptoms were worse. The tongue hard, dry, and brown; bronchitic râles over the whole chest; the pupils dilated, and not answering to light; no sign of pain or tenderness in any joint; manifestatious of the onset of a true coma-vigil. Iced water had been used freely externally.

5th.—The morning temperature remitted, but an exacerbation began as early as 3 a.m., and continued to 10 p.m., when it had nearly reached 105° Fahr. The pupils were now contracted. The patient spoke in uncertain mutterings; answered questions in doubtful monosyllables; had the subsultus of one typically typhoid, and since yesterday had incessantly picked the bed-clothes and betrayed febrile restlessness. On the afternoon of this day (twelfth of the disease) he was lying low in bed, and required constant attention. He passed urine under him; moaned when disturbed, but not when joints were handled. Of joint affection there only remained swelling of the right knee. It was possible to arouse the patient to a state of brief semi-consciousness.

6th.—The temperature had remitted during the night, the remission lasting up to six in the morning (103°). But the pulse, though lower than previously, was nearly 150, and rose with the exacerbation of temperature from six o'clock, though not proportionately. On the afternoon of this day the patient was so much worse that previous hopes of a successful issue were almost altogether abandoned. He had all the appearances of one in the last stage of a fatal typhus: a suspicious tracheal rattle had set in; the face was dusky; coma almost complete; picking of bed-clothes incessant. At 2 p.m. the pulse was 148, but firm and regular; temperature, 101·6°; respirations, 68. The temperature rapidly rose; the tracheal rattle increased from hour to hour; and during the afternoon a free perspiration, especially about the face, broke out. Coma became complete; the pupils were contracted. The evacuations were passed not only involuntarily, but unconsciously. The mouth was half opened, and sordes gathered on the teeth.

At 1 a.m. (December 7) the patient died, the temperature immediately before death being 108°. During the last twenty hours of life the temperature had risen five degrees, while the pulse varied between 150 and 160, and respirations between 64 and 61. A record of the temperature (taken frequently), pulse, and respiration is appended. It should be noticed that the fall of temperature was decided on the seventh and eighth days of disease:—

November 30 (seventh day).—Temperature: 7 p.m., 102·6°.

December 1 (eighth day).—Temperature: 9 a.m., 101·6°; 2 p.m., 102·2°; 7 p.m., 103°. Pulse: Morning, 108; evening, 124. Respirations: Morning, 44; evening, 48.

2nd (ninth day).—Temperature: 9 a.m., 102·2°; 2 p.m., 103°; 7 p.m., 103·2°. Pulse: Morning, 116; evening, 120. Respirations: Morning, 40; evening, 44.

3rd (tenth day).—Temperature: 9 a.m., 103°; 5 p.m., 104·2°; 12 midnight, 104·6°. Pulse: Morning, 120; evening, 128. Respirations: Morning, 44; evening, 41.

4th (eleventh day).—Temperature: 4 a.m., 102·4°; 9 a.m., 104°; 11 a.m., 104·4°; 1 p.m., 104°; 3 p.m., 105·2°; 6 p.m., 104·4°; 8 p.m., 104·2°; 10 p.m., 104·4°; 11 p.m., 104·6°. Pulse: Morning, 140; evening, 172. Respirations: Morning, 52; evening, 60.

5th (twelfth day).—Temperature: 1 a.m., 104°; 3 a.m., 103°; 5 a.m., 103·4°; 9 a.m., 103·8°; 1 p.m., 104·2°; 3 p.m., 104·6°; 7 p.m., 104·2°; 10 p.m., 104·6°; 12 midnight, 103·6°. Pulse: Morning, 168; evening, 156. Respirations: Morning, 68; evening, 68.

6th (thirteenth day).—Temperature: 2 a.m., 103·4°; 4 a.m., 103°; 6 a.m., 103°; 8 a.m., 104·2°; 10 a.m., 105·2°; 12 noon, 105°; 2 p.m., 104·6°; 4 p.m., 107·2°; 6 p.m., 107·4°; 8 p.m., 107°; 10 p.m., 108°; 12 midnight, 108°. Pulse: Morning, 148; evening, 160. Respirations: Morning, 68; evening, 64.

Post-mortem, thirty-eight hours after Death.—Weather cold. Body emaciated; rigor mortis well marked. Face pale, and a little drawn; no smokiness of nostrils or blackness of lips. Post-mortem lividity generally over abdomen. The skull-cap was easily removed; no adhesions. The veins of dura mater mostly distended, but sinuses nearly empty; vessels of pia mater full, but least so near median fissure; the membrane was slightly adherent posteriorly on left side of this fissure over a square inch, but beneath it brain-substance was normal; white substance generally punctated, and from the punctations cherry-coloured blood flowed freely; no extravasations; ventricles healthy; no softening; nerves at base quite healthy; brain had a full and bulging appearance when skull-cap was removed. On dissection of chest, muscles found to be very firm and black, contrasting strongly with exceeding whiteness of costal cartilages. Lungs retracted normally. No fluid in pericardium. Heart bloodless-looking; its muscle firm, as if from rigor mortis, and cavities hence small; there was no trace of disease. At bases of both lungs a hypostatic pneumonia; pieces floated imperfectly. Bronchi loaded with serum and mucus, which frothed from them; their mucous membranes extremely congested, and here and there discoloured by extravasations. No change in glands. The liver was large, and weighed fifty-five ounces; nutmeg on section, but firm; putrefaction advanced along edges and under surface. Spleen weighed seven ounces; pale and firm. Stomach and intestines white and glistening. Kidneys somewhat congested. The joints were normal, with exception of right knee; in it was about an ounce and a half of slightly turbid serum, with a little flaky matter; bones and cartilages perfectly healthy, appearances in this joint being exactly those met with in acute rheumatism.

This case I have written out somewhat minutely, because obscurity of diagnosis makes the least particular of possible importance. With the post-mortem appearances as aids it is not easy to say positively of what the patient died. During life the diagnosis rested among three diseases—acute rheumatism, pyæmia, and typhus. The balance of evidence, I believed, was in favour of typhus; but, as I have said, those who have a right to speak with almost unlimited authority on that disease have recorded no instance attended by a joint affection. Sir William Jenner and Dr. Murchison do not allude to even the possibility of such occurrence, though the latter has met with it in relapsing fever. Under such circumstances one is bound to hesitate.

Looking at the case as it presented itself shortly after admission of the patient, it may be said roughly that the joint affection indicated acute rheumatism; the general symptoms and the rash, typhus; and the joint affection with the rash, pyæmia. Shortly after admission, I believe I took too little notice of the chances of pyæmia, though pyæmia was afterwards certainly excluded; but it is a disease of such obscure

nature frequently, that when difficulty arises, and the general course of the symptoms is that of the acute specific diseases, every attention should be given to the possibility of its existence. In this case, however, pyæmia could almost positively be excluded in a few days. There was no history of any injury, nor of any disease likely to be followed by pyæmia. The patient was a remarkably steady lad, and one not likely to meet with injury unknown to himself.

He was perfectly well, so to speak, when he was suddenly seized with rigors, pains in the limbs, and general distress. Three days afterwards he had all the appearance of one suffering from a continuous fever. Then a joint affection declared itself, not like that of pyæmia, but like that of rheumatism. As new joints became affected those previously attacked became quite free. In pyæmia, a joint once attacked remains diseased; there is not the flitting character of articular swelling met with in rheumatism. Rigors did not repeat themselves; there were no sweatings; and the fever was in a manner definite. In short, against pyæmia clinical history argued strongly, and post-mortem examination assisted it; for (1) there was no history of any cause of pyæmia, (2) the joint affection was fugitive in kind, (3) the disease ran a defined course, and in its general symptoms and temperature-curve was not like pyæmia, and (4) post-mortem there were no local lesions such as lead to pyæmia, and no secondary lesions in the chief viscera such as are met with in pyæmia.

In regard to acute rheumatism, there was nothing in the joint-condition which did not point to it. The redness which appeared about the left foot had a suspicious look of pyæmia about it. Yet such erythema does occasionally occur in rheumatism. But the local disease was comparatively slight, the general symptoms exceedingly severe, and manifesting themselves before any local affection appeared. In rheumatism, fever may precede the joint affection; but is it possible for a person to be several days—nearly a week—severely ill of rheumatism before any articular change is evident? A slight swelling in a single joint, unaccompanied by perspiration or any cardiac disease, but accompanied by high fever, by headache (which had been one of the earliest symptoms), and by commencing delirium, is certainly not like acute rheumatism. But there was also a rash of a peculiar nature, enough in itself to exclude rheumatism as the sole disease. In its absence, perhaps there was nothing which could certainly exclude rheumatism; but its presence, while not excluding it, most undoubtedly argued in favour of the opinion that, if rheumatism existed, it was but as a complication of something more grave, whose symptoms so far predominated as to give their special characteristics to the clinical history of the case, notwithstanding the occurrence of puzzling accidents.

Against typhus was the joint affection; but, putting it aside, everything pointed to typhus. The history most certainly did. The boy was well, then suddenly was seized with rigors, pains in the limbs, headache; and three days afterwards had, as was clearly proved on the day he came as an out-patient, all the appearances of one in the early stages of a severe acute specific disease. Shortly afterwards he showed certain local affections, but the general symptoms were out of all proportion to these, and day by day increased in severity, though the local affection remained insignificant. Then a rash appeared on the abdomen, very similar to what is often met with in typhus; and, though not typical, it should be remembered that at the patient's age the rash fails altogether in 14 per cent. of true and undoubted cases of typhus. As the disease advanced, symptoms like those of unmixed typhus declared themselves: delirium, at first controllable, by-and-by overpowering; the look of the patient, and his general behaviour; the state of the tongue; the state of the skin, free from perspiration; cessation of the headache as the delirium advanced—about the tenth day of disease; the coma-vigil, which preceded a complete coma; the bronchial catarrh; the muddy look of the face towards the end; the temperature as accurately determined almost from hour to hour; the date of death and the mode of death, with the prior occurrence of free perspiration for the first time, with coma-symptoms on the thirteenth day (on which the majority of fatal cases have ended); the post-mortem appearances, excepting the state of the right knee;—all these things seem to be undoubtedly indicative of typhus. May not typhus and acute rheumatism have co-existed? But, no matter what was the true nature of the disease, its obscurity seemed to make it worthy of being placed on record. I have not entered into the treatment of the case at any length. It is enough to state that stimulants were taken freely. Almost to the last the patient was very obedient in regard to food and drink, and I believe this obedience was in great measure due to exhortations made as to his future behaviour when delirium first appeared. At any rate, in cases of unmistakable typhus I have seen such obedience result during severe delirium, just as if the strong impression made at the onset by forcible advice held its ground throughout. In typhus the delirium often turns (as in this case) on some circumstance which immediately prior to its onset had decidedly affected the mind; and there seems no reason to deny that strongly urged advice may similarly affect the patient to his good, and reduce the delirium to one characterised by a peculiar obedience to nurse or physician.

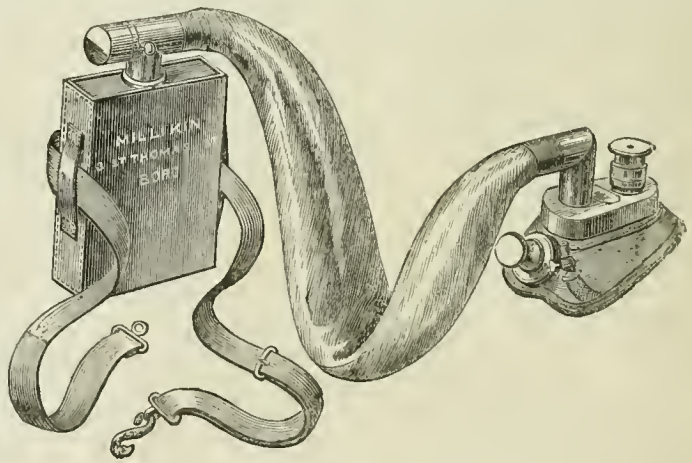
(To be continued.)

A NEW FLASK FOR THE ADMINISTRATION OF ETHER.

By TOM BIRD, M.B.

Since Mr. Clover introduced the exhibition of nitrous oxide gas as a preliminary in the administration of ether, no method proposed seems so free from objection. Through Mr. Clover's kindness, I was enabled to make numerous useful observations at many of his early administrations.

It has been, and I am afraid to a great extent always will be, difficult to devise a simple, and at the same time light portable apparatus for those who administer these anæsthetics. The portable gas apparatus of Coxeter, worked with the cylinder either vertical (Mr. Clover) or horizontal (the more portable),



by means of the foot, is the lightest and simplest at our disposal. In the gas-and-ether apparatus of Mr. Clover, the Catlin bag is done away with. An elastic bag, ovoid in shape, has been substituted between the ether-box and the face-piece, communicating with the latter by means of a valve, which regulates the supply of gas and ether to the face-piece. In this apparatus the gas does not pass through the ether, but mixes with it in the bag. Mr. Clover did first try passing the gas through the ether, but abandoned it for his present plan.

In suggesting the ether-flask shown in the drawing I have kept the facility of driving the gas through the ether, as by this means the ether vapour can be driven on to the patient. Disconnected easily from the gas apparatus, it can be used for the administration of ether alone, without the trouble of constantly adding the ether, its full charge being six ounces.

The flask is made of thin tin, in the shape shown in the engraving. The upper surface is perforated by an oval opening,

lined with a piece of tubing, which acts as a collar, in which slides a tap. The flask is connected by the horizontal part of the tap on the one hand with the gas-tube, on the other with Mr. Clover's bag and Coxeter's ordinary face-piece; or it slips easily into a leather case, fitted on to an elastic belt, worn in the ordinary position when in use; some heat is obtained from the body by this means.

I have not tried the flask as yet in the winter time, but I propose, when using it disconnected from the gas apparatus, to draw the air into the flask through a tube of indiarubber worn under the waistcoat, once round the neck, its free end projecting externally. I found last year, during some experiments made with a view to using the heat of my own body for the evaporation of the ether, that a thermometer carried in the waistcoat pocket generally registered 80° Fahr.

The flask with belt weighs only eleven ounces and a quarter; disconnected from the gas, it can be carried without any inconvenience in the coat-tail pocket.

In conclusion, should I seem, from the foregoing, to incline to ether rather than chloroform, I am of opinion that chloroform vapour sufficiently diluted to produce anæsthesia "acts as a stimulant"; that it is "possible to produce paralysis of the heart with ether" (Snow); that ether ought not to be advised in some cases; but, beyond all, that "insensibility is not caused so much by giving a dose as by performing a process," and that in this, at least at present, lies the whole of anæsthesia.

The Austrian Government have fixed upon an anæsthetic to be used in the empire, varying in proportions, according to the season of the year. This, however, enters upon another phase beyond the object of this communication.

Mr. Millikin, of St. Thomas's-street, Borough, has made the principal parts of the above apparatus.

38, Brook-street, W.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

THREE CASES OF BROKEN NECK.

(Under the care of Mr. HULKE.)

EARLY in the course of last year we reported several cases of fracture of the vertebral column, attended with damage to the spinal cord, admitted into this Hospital under Mr. Hulke. Amongst those in which the damage happened in the back and loins, some remarkable recoveries took place. In the three following cases the cord was injured in the neck, and all were fatal. In none could a fracture or dislocation be detected during life by justifiable handling. In the first case, the circumstances of the accident—a heavy fall while in liquor down several steps—suggested a fracture; and the incompleteness of the palsy of the arms, on the morning the man was taken into the hospital, fixed the probable situation of it and of the damage to the spinal cord below the level of most of the nerves forming the brachial plexus, at the last cervical vertebra. After death, however, at the inspection of the body, the centrum of the fourth cervical vertebra was found broken and displaced, and the immediate injury to the spinal cord had occurred here, and so at a much higher level than had been supposed. Here life was prolonged for twenty-seven days after the accident.

In the second case, death occurred about forty-eight hours after the injury. Here the fracture was at the same part of the column as in the last case—the fourth cervical vertebra,—and here, also, the arms at first were not completely palsied. The fracture detached only so very small a piece—part of the lateral lip of the upper articular surface,—that the damage to the column has a better claim to be regarded as a laceration of the disc with dislocation of the fourth centrum. Here, also, there were two distinct injuries separated by an interval of three weeks: the first a violent blow on the nape; the second sustained from a fall, not from a height, but merely on to the floor upon which the man was walking—an accident happily not usually attended with enough violence to break the neck, unless this has been already weakened. This history of a double injury led to the alternative diagnosis of a latent fracture occasioned by the blow on the nape, the untorn ligaments and muscles preventing displacement of the fragments, and preserving the cord until their rupture by the fall three weeks later; or of a severe bruise of the soft parts of the nape by the blow, followed by inflammation in these extending during the following three weeks deeply into the ligamentous structures of the column, and weakening these, so as to allow subsequently of dislocation by a relatively slight fall. The post-mortem appearances favoured the second view.

In the last of the three cases the fracture happened in a woman who had for some time kept her bed with cancer of the breast, and the precise moment of its occurrence escaped notice. In patients with cancer, particularly the atrophying varieties of scirrhus of the breast, especially where the primary tumour is followed by the dissemination of large numbers of smaller secondary knots in the surrounding skin, and these blend in hard shrinking plates, bendings of the vertebral column not infrequently happen from a weakening of the natural resistance of the bony tissues, which occurs in at least two ways. It is commonly thought that the softening of the vertebræ which allows their crushing by the weight of the parts of the body above is always due to the substitution of cancerous tissue for bone. This is, we believe, not invariably true, for besides cancerous infiltration and substitution, from time to time the cancer-wards have furnished examples of mollities where the process appeared to be a simple fatty atrophy, in which, with the microscope, no trace of cancerous tissue could be found. In the present case, however, although to the unaided eye the appearances were those of a simple fatty atrophy, the microscope brought out the presence of small quantities of degenerating cancer-tissue, so that it is probable that here the process consisted primarily and essentially in the infiltration and rarefaction of the bone by cancerous growth, which itself subsequently atrophied.

Case 1.—About eight o'clock in the evening, April 10, 1875, a gouty basket-maker, after drinking a couple of pints of beer and some gin, felt, he said, his head swim as he went downstairs, and, at about five feet from the bottom of the flight, he fell headforemost. On recovering his senses—for he was stunned for a few moments—he found himself lying with his head against a door, and his feet resting on the lowest steps. He could not get up, and his friends, seeing that he was seriously hurt, brought him directly to the Middlesex Hospital. Both his lower extremities were found to have lost voluntary movement and reflex action. The intercostal muscles did not act, and he breathed wholly with the diaphragm. The sensibility of the surface of the lower two-thirds of the trunk and of the legs was very much blunted. His arms were kept abducted at about ninety degrees from the chest, and the forearms flexed and slightly pronated. When the arms were abducted to the side, upon releasing them they immediately resumed the above posture, and the forearms when extended and let go were directly again flexed. He could not micturate. No irregularity of the vertebral spinous processes, or crepitus, could be made out, nor did pressure upon them or percussion elicit the existence of tenderness in any part of the spinal column. Movement of his head gave him pain, he said, in the upper part of his back between the shoulders, and he complained of formication in the hands and feet. His pulse was weak, slightly intermittent, 60; the temperature 97° Fahr. Coarse, moist sounds were heard over both sides of the chest. His urine was acid, and its specific gravity 1020. He slept but little, and he unconsciously passed a stool.

April 11.—No noteworthy change in his system occurred on this day; but on the 12th, tickling the soles of his feet excited slight reflex movements, and the sensibility of the surface of the legs and of the belly was found to be rather less blunt. He could raise his right arm to his head, and also place it by his side; but these movements were effected in an unsteady and irregular manner, indicative of a want of concert as well as weakness of the muscles called into play. He could also hold a light pamphlet with his thumb pressed against the radial border of the forefinger, but he could not grasp it in the usual way; his finger-tips were bent in on the palm, and he could not extend them. Voluntary movement had also returned in the left arm, but in a less degree than in the right. He complained of tenderness over the spinous processes of the second and third dorsal vertebræ, which were now thought to project slightly.

13th.—Slept well. Voluntary mobility of arms not appreciably increased since yesterday. Flexion is more evenly performed than extension, which is slow and trembling.

For a week his state did not materially alter, but on the 20th several red spots on the back on both sides of the spinal column, one on the right outer ankle, a bulla in the sole of this foot, and a black gangrenous patch of the size of a florin on the left heel, were noticed. His legs had become slightly œdematous; their motor and sensory paralyses had not changed.

21st.—Legs slightly œdematous.

24th.—Looseness of the bowels began, which continued more or less till his death, and the red spots just mentioned soon became sores.

30th.—Œdema of legs less; their surface dry and brawny. The extensors of the upper limbs have regained much of their lost power and concert, extension being almost as evenly performed as flexion.

May 3.—Reflex action, which had been decreasing, could no longer be provoked in the feet; but when a catheter was passed, his thighs were still slightly adducted. His lungs acted less freely, and his face was flushed. The pulmonary embarrassment increased, and he sank on the 7th, having survived his accident twenty-seven days.

Post-mortem Examination, twenty-eight hours after Death.—Rigidity barely perceptible. General appearance emaciated. Over the prominent spines of dorsal vertebræ and the left os calcis were commencing bedsores. A vertical incision being made from the occiput downwards along the median line of the back, and the muscles exposed, showing the absence of ecchymosis into their substance, the spinal column was removed intact from the axis to the mid-dorsal vertebra. Anteriorly to the spine, in the cervical region, were the remains of old considerable ecchymoses into the pre-vertebral muscles. The anterior spinous ligament was unruptured, and on removing this the line of fracture through the upper part of the fifth cervical vertebra was seen. This fracture ran from above downwards and forwards through the whole thickness of the body of the vertebra. Posteriorly the spinous process of the same vertebra was broken off through its base, and remained in position by its soft attachments. The spinous processes, with the rami, were then removed by the saw, and the dura mater and membranes of cord slit up in the median line. There was no hæmorrhage into the spinal canal, and the membranes appeared healthy. *In situ* the cord presented no abnormal appearance to the naked eye, except a small patch of softening in the antero-lateral columns, just above the seat of fracture. After having been in spirit for thirty-six hours, the cord was removed from the canal with its membranes. Some little difficulty was experienced in detaching the anterior surface of the dura mater from the bodies of vertebræ above the fracture, and from the posterior ligament lining these, owing to intimate inflammatory adhesions. These adhesions existed for about two inches above the fracture, elsewhere the posterior ligament being glistening and non-adherent. Over the seat of fracture transversely, for a part of its extent, the posterior ligament of bodies of the vertebræ was ruptured, and here the upper fragment of the fractured body was projected somewhat backwards. It was to be noticed here that the line of fracture extended vertically upwards through the left half of the fourth cervical vertebra. On examining the anterior aspect of the cord there is seen to be a distinct central dimple in the anterior columns of the cord, almost exactly corresponding to the bony fracture, and situated about midway between the points of exit of the fifth and sixth anterior cervical roots. No other injuries. Thorax: No fluid or old adhesions in either pleura. Right lung was œdematous and of a dirty greyish colour. Left lung, except at extreme base, which was œdematous, was crepitant, and exuded a very large quantity of frothy and purulent secretion. At apices of both lungs there were a few scattered points of cretaceous tubercle, and patches of old pleuritic inflammation, of almost cartilaginous consistence. The mucous membrane of the bronchi was intensely congested and swollen, and the bronchial tubes were filled with muco-purulent secretion. Heart somewhat large and flabby. Right cavities contained some small, pale, soft clots, entangled in columnæ carneæ; the endocardium very much stained, of a dark purplish-red colour. Left cavities contained a little black fluid blood; endocardium also intensely stained. Valves quite competent; some fibroid thickening at base of mitral valve; aortic valves healthy. A few patches of atheroma in ascending aorta, the lining membrane of which was stained similarly to the endocardium. Abdomen: Liver normal. Kidneys both in a state of granular degeneration; cortex wasted, capsule adherent, with a few small cysts scattered through their substance. Spleen normal. Bladder normal.

Case 2.—A tall, stout tailor, fifty-four years old, fond of his glass, was admitted into Forbes Ward in the forenoon of November 28, 1875. He had a pale face and a suffering expression. The entire surface of both lower limbs, of the trunk as high as a line drawn transversely two inches above the nipples, and also of both upper limbs, with the doubtful exception of a small patch at the upper and inner part of the right arm, were insensible. Voluntary mobility and reflex irritability were also lost in all those parts, with the following slight exceptions: when the right forearm had been extended and the arm abducted by another, he was able, by a great effort of will, slowly and by jerks to bend the forearm and to adduct the arm towards the chest, and slight flexions of its toes followed pricking the sole of the right foot. His breathing was diaphragmatic, fourteen per minute. He could not micturate; the bladder contained forty ounces of clear urine, specific gravity 1004, of acid reaction. From the occiput to the shoulders the back of his neck was swollen, hard, and tender, and he complained of great pain here, but no irregularity of the spinous processes and no crepitus could be detected. There was no wry-neck. His pulse was sixty per minute, and his temperature in the armpits 97·2° F. Three weeks before, probably whilst slightly intoxicated, he was hit on the back of the neck by a cab-shaft, which stunned him. A bystander, who saw him fall, and a constable, put him into a cab and brought him to the hospital, the distance being under half a mile. He had regained his senses by the time they reached it. His only apparent hurt was a slight graze upon the nape, and when this had been dressed he refused to stay, and went home to his lodgings in Poland-street. During the next fortnight he came daily to the surgery, about a quarter of a mile, and he then returned to work, although his neck remained stiff and painful. A week later (exactly three after the blow), having taken a few glasses of beer with his shopmates, but gone home, he says, sober, he stumbled on the landing of the third storey, and fell upon the floor close to the door of his room. His neighbours, disturbed by the noise, came to his help, and finding that he could not get up, they supposed him to be drunk, and put him to bed. Next morning, when his drunkenness ought to have passed off, as he was still unable to move, they were frightened, and brought him to the hospital.

He was placed on a thick firm mattress, with a small soft pillow under the neck, and the head and neck were steadily fixed with sand-bags. When this was done he was easier, he said, than he had been since the time of the first accident.

In the course of the day his complexion grew dusky; by the following morning his face was purplish. The slight power over the right upper limb and the reflex irritability of the right foot were lost in the course of this day. He became slowly suffocated, and expired at 1 a.m. Tuesday—nearly forty-eight hours after the time of the fall.

At the inspection of his body the left lower articular process of the fourth cervical vertebra was found to have slipped forward over the upper articular process of the fifth, and to be caught by the latter. The disc between the fourth and fifth vertebræ was torn, and a very small piece of the lip laterally bounding the upper surface of the centrum of the fifth on the left side was broken off. The fourth, carrying with it the three upper vertebræ, was then rotated slightly towards the right side, and advanced, pivoting, so to say, on the articulation of the right oblique processes of the fourth and fifth vertebræ, which was unhurt. The left articulation, opened by the laceration of its capsular ligament, presented no abnormal appearances. The articular surfaces were uninjured. The spinal cord was nipped by the arch of the fourth vertebra against the upper margin of the posterior surface of the body of the fifth, its left half being most compressed. The anterior common ligament was incompletely torn across opposite the intervertebral disc between the fourth and fifth vertebræ. This, with all the soft parts, fibrous and muscular, surrounding this part of the vertebral column, was succulent, congested, and swollen.

Case 3.—A nursery governess, aged forty-two, a moderately stout blonde, rather short-breathed (she said she had long been asthmatic), was admitted into Whitbread ward, October 29, 1875, with scirrhus of the left breast. This was shrunken and flat, and its nipple was retracted towards the axillary border. Its upper and inner front was overlaid by clusters of small, hard, cutaneous tubercles, in size ranging from that of

a small pea to that of a millet-seed; near the nipple comparatively large and blended in plates, and, with increasing distance from this, progressively smaller and separated by wider intervals of supple and seemingly healthy skin. Other groups of similar tubercles occurred between the breast and the armpit, also in this, and between the breast and collar-bone, each giving the impression of dissemination from a centre. Several enlarged, indurated lymph-glands were felt in the left posterior triangle of the neck. The breast was not particularly painful excepting when she coughed, but she complained greatly of very severe pain in the nape of the neck, the right shoulder, and right arm. She had first become aware of the presence of a small hard knot in her left breast shortly after her last confinement, two years before. The little tubercles in the skin had, she thought, not existed more than four months. Early in November the pains in the right shoulder and arm increased, and the limb became helpless. Whether this powerlessness proceeded from excessive painfulness, or was a true palsy, was at first somewhat uncertain. The absence of any palpable cause for it in the limb itself, and in the brachial plexus above the collar-bone, made the latter supposition the more probable; and the supervention, a few days later, of similar symptoms in the left arm confirmed it. No abnormal thickening or swelling could be felt on a very careful examination of the cervical vertebræ; but the fact that the patient was relatively easy only when the neck was kept immovably fixed, the least movement greatly aggravating her sufferings, unmistakably pointed to it as the seat of disease; and the known greater frequency of secondary affections of the bones in the particular form of scirrhus present made it probable that the pain and motor palsy were due to a cancerous knot in a cervical centrum, encroaching upon the vertebral canal and pressing on the spinal cord. Later in the same month, pains and loss of motor power in the legs, followed by loss of sensitiveness of the surface, first noticed in them, and thence ascending the trunk nearly to the root of the neck, amounting finally to a complete motor and sensory paraplegia, palsy of the urinary bladder, a sense of tight constriction round the upper part of the chest, and diaphragmatic breathing, with palsy of the intercostal muscles, pointed to destruction of the conductivity of the cord just below the origin of the phrenic nerve. During the last fortnight of her life the dyspnœa was terrible. She lingered till December 20.

The post-mortem examination was made eleven hours after death. The left breast was replaced by a small tumour, very hard and firm, and traversed in an oblique direction outwards and downwards by a deep sulcus, three inches in length, and three-quarters of an inch in width. At the inner extremity of this sulcus the nipple lay deeply retracted. A few hard cutaneous nodules occurred in the neighbourhood of the tumour. On section, a dense scirrhous tissue was found pervading the skin, replacing the normal breast-tissue, but not infiltrating the subjacent muscle. The axillary glands were converted into a firm scirrhous mass, investing the axillary vessels. The right mamma and the axillary glands were natural. The visceral and parietal layers of the pleura on each side were covered by closely set *plaques* of firm white tissue. Lungs emphysematous; lower lobes engorged; free from infiltration. Heart and abdominal organs natural. Some of the inguinal glands were firm and white on section. After removal of the larynx and thoracic viscera, the spinal column was examined. At the lower cervical region the anterior plane of the column abruptly receded, as if the first dorsal vertebra had been carried backwards beneath the overhanging seventh cervical, so that opposite to the sixth intervertebral disc the two parts of the column formed an acute angle (about seventy-five degrees), whilst above, the normal convexity of the cervical spine appeared to be increased. On the posterior aspect this distortion was less evident. The whole of the cervical spine, together with the upper three dorsal vertebræ, was then placed in spirit, preparatory to a section being made through it. When the column was subsequently divided vertically, the cause of the distortion was made evident. It was due to softening and absorption of the bodies of the seventh cervical, second and first dorsal vertebræ, especially the latter, which, on section, had a wedge shape, the apex of the wedge being foremost. The intervertebral cartilages in the same region also showed evidence of softening. Corresponding to the incurvation of the anterior surface of the spine there was a marked projection of the vertebral centra into the spinal canal, which for the distance of an inch was much narrowed the point of greatest narrowing being opposite to the sixth intervertebral disc. The antero-posterior diameter of the canal was here diminished to fully one-fourth of that between the body and arch of the first dorsal vertebra. The spinal cord within its sheath of membranes was compressed extremely at this part, but was free from any inflammatory products. Its precise condition—*i.e.*, as to softening and the extent of this above and below the point of compression—could not be ascertained, owing to the specimen having been preserved in spirit. For the same reason a microscopical examination of the cord was not attempted. The affected vertebræ were examined microscopically, and, although no stromal tissue was found, there was a considerable quantity of shrivelled and deformed epithelioid cells obtained from scrapings of the softened bone—enough to justify the inference that the bone was to a certain extent infiltrated with cancer.

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Medical Times and Gazette.

SATURDAY, JULY 29, 1876.

THE LONDON HOSPITAL AND THE MEDICAL WOMEN.

The women have just sustained a very heavy blow and great discouragement to their cause by the decision which the Committee of the London Hospital have arrived at concerning the question of their admission to the wards of the new wing. The Committee, though greatly inclined to come to favourable terms with the delegates from the Medical College for Women, have, before all, the interest of their Hospital most nearly at heart. No better proof of this is needed than the recent addition to the institution, which the Queen herself so graciously opened, in token not only of her own interest in the work of hospitals generally, but in acknowledgment of the disinterested kindness and energies of those gentlemen who form the Managing Committee. We fail to see how such a practical committee could have arrived at any other conclusion than the one which will keep the doors closed to the female students, and which, unless some different tactics are shortly adopted and carried out by them, will be a death-blow alike to their hopes and their cause. Nevertheless, the Committee did that which was obviously right and just to the

existing school; and in so doing acted in accordance with the feelings of the great majority of the staff and of the entire school. Our views on these matters are now well known, and we are pleased to know that they are shared in by a large majority of the profession.

We believe that a meeting of the authorities of the Medical School for Women will be shortly held, in order to consider their present position and their future prospects. It seems to us that the whole subject can be summed up in a few words. They have everything but a hospital. With a hospital they could conform in all particulars to the regulations required by the examining boards. Their course therefore is clear: they must provide themselves with a hospital. Such, we think, is the evil and the remedy. There can be no doubt that the future of the movement lies in the decisions which are to be come to during the next few weeks. Parliament has expressed its intention of removing all legal difficulties; the corporate bodies will no doubt—though reluctantly, perhaps—give way; the profession will offer no serious obstacles; while a large number of practitioners will even give help; so that the only remaining obstacles are those which the women must overcome for themselves. Hitherto they have tried in vain to gain admission to schools of medicine which were established for male students; and in trying thus to upset the very basis on which modern civilisation has been built, they have lost much valuable time, besides having weakened the cause for which they strive. Now let them in their turn establish schools and hospitals for women-students; let these be built with a view to the physical, no less than the physiological requirements of a sex, the very *raison d'être* of which lies in peculiarities that forbid an indiscriminate association, such as mixed classes and mixed schools would infallibly bring about. We ask, Have they ever applied seriously at any of the hospitals at which there is no school, backing up their request, of course, by those material guarantees which, in a commercial country like England, are the very soul of all business communications and undertakings? There are several such hospitals in London, and it does not seem impossible that one or other could be obtained for a price. First may be named the "Royal Free," an old-established hospital, with a lecture theatre all ready made, and a staff to succeed to chairs long empty, but once well occupied by men who now rank high in their profession. Here there is a large out-patient practice in addition to a number of beds which are always well filled with interesting cases, and which, according to the advertisements that every now and then appear in the medical papers, afford splendid opportunities for clinical study. In the northern district is the Great Northern Hospital, where the opportunities for hospital work are already great, and which is seeking funds wherewith to build a new and larger hospital. There is also the West London Hospital. Here we should think that an excellent school might be founded, and that from a residential point of view the neighbourhood could offer to the lady-students facilities with which neither of the previously mentioned institutions could compete. There is also the "Metropolitan Free," which has just been driven from its old home in Devonshire-square by the omnivorous railways to a new site in Bishopsgate. Here would be an excellent opportunity of beginning *ab initio;* the plans for the new hospital not yet, we believe, being finally decided upon.

It seems not altogether improbable that a request from the Women's College, properly backed up by a solid, substantial guarantee, might be accepted at one or other of these hospitals. At all events, is it not worth while to try, as it would obviously be the quickest road to success? Then, if this attempt should fail, we would advise the establishment of a temporary hospital, to serve until a permanent one could be built. This would be useful in many ways: it would serve as a basis on which to work; it would be useful as a training institution for nurses, no less than for a female resident staff, such as would be required for a hospital with 100 or 150 beds. Above all, it would be proof of the vitality of the movement—an attribute which, we think, has hitherto been conspicuous by its absence. If only two or three houses were adapted to the work, it could serve as a nucleus from which a more imposing structure could ultimately arise; and much useful work might be done, even in such a hospital as this. There is in London at the present moment more than one well-established hospital that began with as small beginnings as we now suggest to the promoters and supporters of the medical-women movement; and if good management were brought to bear on it, together with earnest work, success would probably attend it.

We repeat our belief that the whole future of this subject depends on the action which the Council of the Medical College for Women decide on as the result of their latest failure at the London Hospital.

THE CAUSES OF STERILITY.

The idea that sterility in women is chiefly dependent on causes which interfere with the proper union of the ovum and spermatozoon, appears from recent observations to be to a large extent incorrect. The question has been carefully studied by Dr. O. von Grünewald, of St. Petersburg, and he has published in the *Archiv für Gynäkologie*, Bd. 8, Heft 3, the results of his investigation of about 500 cases, partly of congenital and partly of acquired sterility, applying the term congenital to those in which there has never been a child, and acquired to those in which women below the age of thirty-six, who had previously had one or more children, have ceased to bear any for at least three years, although living with their husbands. He finds that, in considering the relations of sterility to the various affections of the female generative organs, the impermeability of the cervix uteri by the semen is but very rarely one of the factors. When we consider the relative positions of the uterus and vagina, which are nearly at right angles to one another, and, further, the great impediment which appears to exist in many fruitful animals to the onward progress of the spermatozoa, we can only imagine that the latter can reach and unite with the ovum by their own independent locomotive powers. From this it follows that nothing short of actual atresia can be a sufficient mechanical obstacle to their advance. Dr. Grünewald therefore believes that the power of conception is much less often at fault than the power of the uterus to bring the impregnated ovum to maturity; and he regards the various inflammatory affections of the uterine tissues themselves as the most potent of all causes of sterility; in fact, out of 450 cases of sterility, more than 50 per cent. were of this nature. Of the others, 20 per cent. arose without any detectable inflammation having occurred in the uterus and its outlet, and 30 per cent. were due to various anomalies in the sexual organs complicated with inflammatory processes. Dealing with these various causes more in detail, Dr. Grünewald shows that in endometritis the cervix uteri is generally too wide, the menstruation is regular, and the secretion from the parts is as little injurious to the life of the spermatozoa as other secretions—for example, that of carcinoma uteri; yet that still this disease gives rise to sterility as soon as it involves the major portion of the uterine mucous membrane, and it certainly does so when the latter is destroyed and converted into a thin connective-tissue layer.

Inflammation of the body of the uterus—Dr. Grünewald's mesometritis—prevents the development of the ovum, according to the greater or less extent of tissue which it involves. It most frequently is the result of parturition, which explains why many women who suffer from it have become sterile after a single pregnancy. Sterility from this cause is more

intractable under treatment than that due to endometritis; for while 8·4 per cent. of those who were sterile from the latter recovered, only 3·1 per cent. of patients with the former conceived again.

Parametritis and perimetritis, which so often complicate other forms of inflammation, could be proved to be the sole cause of sterility in 10 per cent. of the whole number of barren women. They not only interfere with the nutrition of the uterus and its appendages, but also with their position, owing to the contraction of the adhesions and other inflammatory residua. They often begin in the first few weeks after marriage, and frequently relapse later on. The position of the exudation which they excite is, probably, of more importance than its size. The fact that some women in whom sterility from these causes has existed for a long time do again conceive may, perhaps, be explained by the development of a collateral circulation.

Sterility dependent on stenosis of the external os is, according to Grünewald, always the result of previous inflammatory processes, and may sometimes, though not often, be cured by dividing the stricture. With regard to flexions, he agrees with Scanzoni, that since the sound can almost always be made to pass the point where the bend exists without using violence, there is no reason to assume that the spermatozoa cannot also pass. As a fact, conception not unfrequently occurs in cases of flexion. New growths do not, according to Grünewald, interfere with conception so far as the uterus is concerned, unless they are large and affect its mucous membrane sympathetically. The latter event, however, generally occurs owing to the length of time which elapses before their removal, and this accounts for the rarity of pregnancy after the operation has been performed. Generally speaking, it may be asserted of all the above-mentioned causes of sterility, that since their injurious effect must necessarily be most potent at that time when the greatest call is made upon the uterine mucous membrane—namely, in the third and fourth months of pregnancy—it will be at that time that abortion will most frequently occur. For the same reason we can understand how easily abortion, when it has once occurred, may become habitual.

The two axioms in which the author sums up the views to which his researches have led him are as follows:—1. Conception is only one link in the chain of phenomena which are involved in the propagation of the species, and its importance is relatively much less than that of many other vital processes which occur during pregnancy. 2. The woman's capability of maturing the impregnated ovum is the important element of her reproductive power, and it depends for its part on a certain amount of integrity in the tissues of which the uterus consists.

We shall only make one comment on Dr. von Grünewald's valuable paper—namely, that it gives but little encouragement to a mechanical treatment of the causes of sterility. It rather lends its support to the views of those gynæcologists who consider that general remedies which improve the tone of the whole system are as likely to be successful in affections of the uterus as in those of other organs.

THE WARFARE OF SCIENCE WITH RELIGION.

Dr. Andrew Dickson White, President of the Cornell University in the United States of America, has published a little work, with a recommendatory preface by Professor Tyndall, entitled "The Warfare of Science." His position is that all interference with science in the supposed interest of religion has invariably resulted in the direst evils to religion and science alike. On the other hand, scientific investigation untrammelled, though some of its stages may have seemed dangerous to religion, has always resulted in the greatest benefit to religion and science alike.

The first example he gives is derived from geography. At one time it was believed by the orthodox that the earth was flat. Before the doctrine of gravitation was propounded it was difficult to conceive how men could walk on the under surface of the earth without tumbling off. Moreover, the very existence of antipodes was considered an impious dream, and somehow contrary to the doctrine of the Atonement.

The next great battle was fought on the question of the earth's position. It was clear and demonstrated by the evidence of the senses that the earth was the centre of the universe, and that sun, moon, and stars revolved around it. To uphold the contrary was opposed to common sense as well as to the testimony of the Scriptures.

A third battle raged on the question whether the earth was not merely the centre of the universe, but fixed as well; and the notion of the daily rotation of the earth on its own axis, and the annual revolution round the sun, was held by ecclesiastical authority to be absurd in itself, and contrary to the express words of Holy Writ.

Chemistry and physics formed another subject of warfare. To make new mechanical contrivances, to explore the infant mysteries of chemistry, and to pursue natural history by original research, exposed the perpetrators to constant persecution. They were accused of atheism, infidelity, and, still worse, of magic and dealing with the devil. That anyone should prefer original research to the authority of Aristotle was held to be suspicious of heresy.

The same opposition marked the introduction of modern medicine, or rather of the anatomical research which was one of its distinctions. The dissection of the human body was pronounced sacrilegious, and the authority of Galen supreme, and above all contradiction by later observers. Sylvius, in the preface to his edition of Harvey, compares the hubbub raised against the discovery of the circulation with that raised eight hundred years before against the notion that there could be antipodes. Certain dregs of the opposition of well-meaning bigots against medical improvement are noted by Dr. White, in the shape of the outcry raised by certain low preachers against inoculation for the small-pox, against vaccination, and against the administration of anæsthetics to women in labour.

Geology is well known to be a sixth subject of warfare, which has not subsided entirely to the present day. It has been impossible to search the strata of the earth without running counter to the Mosaic cosmogony as generally understood. Cowper, the poet laureate of twaddledom, wrote:—

> . . . . "Some drill and perforate
> The solid earth, and from the strata there
> Extract a register, by which we learn
> That He who made it and revealed its date
> To Moses, was mistaken in its age."

Of course such statements assume that the date of the Creation was revealed to Moses, which is the very point at issue.

In the field of political economy, the cultivators of a narrow and miserable Bibliolatry have attempted to interfere with the taking of a census, and with the payment of reasonable interest for loans; and lastly, there is hardly any limit to the instances of interference with industry and the arts, though these are now mostly confined to small and obscure sects or individuals. Scottish ministers have been debarred the means of cleanliness on the "Sabbath"; the winnowing of corn has been denounced as interfering with the Lord's air; the Thames Tunnel was preached against as an audacious interference with the earth; gas has been objected to because turning night into day; and autumn crops of hay, on the ground that they make two harvests in one year.

Now, although of late years the "warfare against science" has been mainly carried on by the lowest, meanest, and most ignorant of the professedly religious, yet it must be confessed that, taking the last eleven hundred years, it has been shared by some of the best and ablest of mankind. It was Boniface,

the apostle of Germany, a native of Wessex, a man of the greatest energy and benevolence, who persecuted Virgilius for asserting the existence of antipodes. We are not dealing with the crime of Papist as against Protestant, nor of orthodox against heretic. The jovial Luther, the saturnine Calvin, the amiable Melancthon, were as bigoted as the Holy Inquisition. The name of Cardinal Wiseman will always be illustrious for his liberality; whilst such persons as Dean Cockburn, of York, if remembered at all, will be known only to be despised. With few and illustrious exceptions, it must, we fear, be admitted that religion has been at bitter warfare with physical science. The results have been calamitous to both. Religion has been deprived of some of the most splendid illustrations of the power, wisdom, and goodness of God, and humanity has been deprived of numberless means of increasing human comfort and welfare which might have existed had science been allowed to thrive in the thirteenth century. Dr. White even believes that some mode would have been discovered of annihilating the zymotic poisons which now ravage the civilised world in the form of small-pox, scarlet fever, and the like.

We have said enough for the present. There is another side to the question which we may recur to shortly—Has the opposition of religious people to science nothing to justify it?

THE WEEK.

TOPICS OF THE DAY.

By permission of the Council a public meeting was held last week at University College, Gower-street, in aid of the Parkes Memorial Fund. Sir William Jenner presided, and among those present were Mr. Erichsen, Dr. Reynolds, Dr. Sieveking, Dr. Sibson, Dr. Wilson Fox, Dr. Hare, Dr. G. Hewitt, Mr. J. Marshall, Mr. Berkeley Hill, etc. The chairman, in opening the proceedings, called attention to the meeting held on April 10 at the residence of Mr. Erichsen, at which it was resolved "to establish at University College, London, a permanent memorial of the late Dr. Parkes, in such a form as to aid scientific investigation and practical study in the subjects to which Dr. Parkes's life was especially devoted." It was then proposed to establish a memorial to Dr. Parkes, and that it should be connected with University College, where his education was altogether effected. With reference to the form which the memorial should take, the chairman again quoted from the above-mentioned resolution, and observed that Dr. Parkes's life, although not long, was devoted to several subjects, but particularly to two—clinical medicine and hygiene. Quoting from the circular which had been sent out, he said it was hoped a sufficient sum might be collected to establish a museum and laboratory of hygiene similar to these now existing in the Army Medical School, Netley. In order that it might be a permanent memorial, however, it must be endowed, otherwise it would be perfectly worthless, and he should be absolutely opposed to establishing anything like a museum unless a sufficient amount was collected. Dr. W. R. Gowers then traced the origin of the movement, and announced, amid cheers, subscriptions amounting to £675. Dr. Poore then detailed information he had acquired at Netley and Brussels relative to museums of hygiene. On the motion of Dr. Reynolds, seconded by Dr. Corfield, it was resolved that the memorial should take the form of a museum of hygiene.

In reference to the recent terrible explosion on board the *Thunderer*, Dr. R. H. Allnutt writes to the *Times* as follows:—"The late lamentable accident at Portsmouth recalls to my recollection a remedy for burns or scalds which was suggested to me some years ago by Lord Ebury. As an old medical man, and from personal observation, I can vouch for its efficacy, and, in the absence of professional assistance, the application may prove of inestimable value. The remedy is simply this. The common whiting of commerce, reduced by cold water to the consistence of thick cream, is to be spread on light linen rag, and the whole burnt surface instantly covered, and thus excluded from the action of the air. The ease it affords is instantaneous, and it only requires to be kept moist by subsequent occasional sprinklings of cold water."

A Royal Warrant, dated July 12, accompanied by the Secretary of State for War's instructions thereon, has just been issued, containing important regulations with regard to the pay of medical officers of the militia auxiliary force, and other matters affecting their position. It is intimated that medical officers of the militia who do not, before December 31 next, signify their wish to be placed on a departmental list, shall not be entitled to any of the advantages specified in the present Warrant. It is also announced that no further first appointment of medical officers will be made—after the date of this Warrant—to the militia, but that militia medical duties shall be thenceforth performed under the orders of the Director-General of the Army Medical Department. The names of such medical officers of militia as shall elect to serve under the direct supervision of the Director-General of the Army Medical Department are to be placed on a departmental list. In another place we publish the rules which are set forth in the new Warrant.

Last week a deputation from the Society for the Abolition of Vivisection waited upon Mr. Cross at the Home Office for the purpose of asking the Government, should the Vivisection Bill not pass this session, to frame a measure of a much more stringent character next session. The Home Secretary, in reply, said the Government were trying to reconcile the extreme views entertained on both sides of this subject. He hoped the matter, if discussed at all, would be discussed dispassionately and calmly. The Government were in no way influenced by passionate appeals, but acted from a point of common sense and without prejudice. He hoped the question would soon be settled one way or the other. The *Sheffield Telegraph* has published a letter from Mr. Roebuck on the Bill now before Parliament, in which he expresses his indignation at the indignity sought to be imposed upon the medical profession, and his wonder at the "folly and weakness" of those of the Peers who support the measure. Dr. Ward will move the rejection of the Bill when it comes on for a second reading in the House of Commons.

We have received the details of a discussion by the members of the Medical Society of Victoria on the report of the sub-committee appointed to test the efficacy of ammonia as an injection in cases of snake-bites. It would appear, from the evidence of the several members of the sub-committee, that very partial success has attended the experiments which were carried out on dogs, and it is suggested by some that the action of snake-poisoning on dogs is not similar to the action on human beings. One of the symptoms, especially coma, which invariably presented itself in man after snake-bites, was entirely absent in dogs. Up to the very last moment the animals did not become comatose. Several members of the Society took part in the discussion; and Dr. Halford, whilst admitting that the experiments of the sub-committee had been carefully carried out, expressed his inability to account for the difference between the results now obtained, and those of his own experiments on this subject. He contended, however, that there were sufficient cases on record to show the value of ammonia as the proper treatment in the case of snake-bites occurring in human beings. He was supported in his opinion by that of many experienced practitioners, and he should calmly await the result of more extended inquiries. The general opinion expressed seemed to be that much yet remained to be discovered to avert the deadly effects of snake-poisoning, but

that at present the evidence collected was against the treatment of snake-bites by ammonia.

The result of the present year's Hospital Sunday and Hospital Saturday collections for North Staffordshire has just been published. The Hospital Sunday subscriptions amounted to £930 1s. 3d., as against £867 16s. 7d. for last year; and the Hospital Saturday sum to £350 2s. 2d., as against £215 6s. 4d. for the year 1875.

We see by the placards which have been distributed that the Hospital Saturday collection from all and sundry, and not from workmen alone, has not been abandoned this year, but that it is to take place upon September 2.

From the report of Major Bolton for the month of June, presented to the Local Government Board, it appears that the water in the River Thames at Hampton, Molesey, and Sunbury (where the intakes of the West Middlesex, Grand Junction, Southwark and Vauxhall, and East London Companies are situated) was very good during the first twenty-three days of June, and slightly coloured during the rest of the month. The rainfall for the month was 1·42 inches.

Dr. Hooker, the President of the Royal Society, and Mr. Spottiswoode, the Treasurer, together with Dr. Burdon Sanderson and Dr. Siemens, had an interview with the Lord President of the Council, the Duke of Richmond and Gordon, on the 17th inst., and presented a memorial from gentlemen who have been connected with the loan collection of scientific apparatus at South Kensington, urging the importance of establishing a museum to contain scientific apparatus, appliances, and chemical products illustrating both the history and the latest developments of science. His Grace discussed the subject of the proposed museum with the deputation, and stated that he would consult his colleagues.

At the Middlesex magistrates' meeting last week, two letters from the Home Secretary on the subject of the Middlesex Coroners' salaries were brought before the Court, the Home Secretary requesting the views of the Court upon them. One enclosed a petition from Mr. Payne, the Coroner, and the other a letter from Dr. Diplock, the Coroner, appealing against the amount of the salary proposed to be paid to him. It appears that the committee appointed in April last to consider the question of the Coroners' salaries had reported that they considered the Coroners were already amply paid for the services they rendered, and the Court had adopted the report. It was, therefore, decided that a copy of the report should be forwarded to the Home Secretary, as it embodied the opinion of the Court on the subject.

DUPUYTREN'S FINGER-CONTRACTION.

Dr. Madelung, of Bonn, makes an interesting contribution on the causes and operative treatment of this very tedious disease. Contraction of the palmar fascia of English authors has hitherto been looked on as a most intractable condition, and one in which operative interference was both useless and dangerous. Dr. Madelung has recently had some cases under his care in Bonn. He finds that it does not occur solely among persons gaining their livelihood by hard manual labour. "By availing one's self of the opportunity offered, for instance, by a poor-house infirmary of large size for the examination of the hands of elderly people, one is struck with the frequency among men and women (and by no means only among smiths and day labourers) of a moderate permanent bending of the fingers of both hands, with the exception of the thumb; and it is astonishing how many of the old folks will be found unable, either actively or passively, to extend their fingers completely." Copious small fatty aggregations are found in the palmar fasciæ of young and middle-aged people, ingrained between the fibres of the connective tissue of the palmar fascia and the numerous fibres ascending from it to the skin. Every interstice is filled with them, and every movement of the hands causes shifting of them within certain limits. It is clear that the function of the fat, in this as in other parts of the body, is to moderate pressure and to distribute it over a larger area. By the disappearance of this fat, then (with advancing years it regularly disappears), single regions of the palm become more exposed to constant pressure, and are therefore more easily injured. This leads to a chronic inflammation, with hyperplasia of the normal fibres, and finally to their shrinking, with consequent permanent bending of the fingers. This seems to the author a much more rational explanation of the process than a rheumatic or gouty tendency, to which it is often and ordinarily ascribed. His treatment is as follows:—The patient is placed under chloroform, and his hand is laid on its back on a firm support. The hands of an assistant fix the forearm and the tips of the fingers. A piece of skin of an acute triangular form is raised, its base falling into the furrow separating the bent finger from the palm of the hand. Its apex meets that point of the palm of the hand where, with the utmost stretching of the same finger, diseased fibres of the palmar connective tissue are clearly discernible. The piece of skin is raised, beginning at the top, from the parts beneath, with the most extensive removal of the subcutaneous connective tissue. Then the operator pushes a scalpel along the whole piece of the fascia thus laid open, with small incisions into every place where firmer fibres show a stronger tension. Thus an entire portion of the fascia may be incised without danger of a lesion of the sheath of a tendon." The piece of skin is then sewn up with sutures, provided no tension is exerted, otherwise it is left to granulate. A light bandage is the only dressing required. No extension is kept up; nor are any extension movements begun until the wound has quite closed, and then of the most gentle description. The author has had a series of successful cases treated in this manner.

HÆMORRHAGE FROM THE GENITAL ORGANS IN THE RECENTLY BORN FEMALE CHILD.

In the *Liverpool and Manchester Medical and Surgical Reports* there is an interesting paper on the above subject by Mr. Charles Cullingworth, a reprint of which has been forwarded to us. The affection is a very rare one. It now and then occurs in the female child, and makes its appearance within a few days of birth. The duration of the flow is generally from two to five days. It much resembles an ordinary menstrual flow, but from the absence of any excessive development of the generative organs, and also from the fact of the non-recurrence of the discharge, it is at once obvious that it cannot be looked upon as an instance of precocious menstruation. The author has had two cases in his own practice, and on consulting the many works on children's diseases in our own language, he found that, with the exception of a word or two in Underwood, there was no mention of the disease in any work within his reach; hence this paper, which contains a *résumé* of all that is known or written on this subject. The table contains thirty-two cases, collected from various sources. It would appear that the general health is very rarely affected, and then only temporarily. In four of these cases there was coincident swelling of the mammæ. With regard to the source of the hæmorrhage, the evidence is almost entirely negative; but it seems to be well established that the bleeding does not take place from the external generative organs. Billard considers the uterine lining membrane as its real source. Dr. Camerer, in Langenau, thinks it is to be explained by the ligature of the umbilical cord before the circulation in the pulmonary vessels is thoroughly established. The blood which has been streaming from the iliac vessels into those of the umbilical cord is necessarily urged downwards into the pelvis, and so causes a local

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plethora; this seeking an outlet, exudes from the organs of generation. How, then, does Nature deal with the corresponding condition in the male, seeing that here too the umbilical cord is occasionally tied too early, with presumably similar results? Dr. Camerer makes the interesting suggestion that the discharge of blood from the bowels which is sometimes observed may answer this question. Rilliet and Barthez, in a very full account of this latter disease (melæna), distinctly state that boys are more subject to it than girls; and by comparing the ages at which the two diseases most frequently occur, it is found that they accurately correspond. And there is further evidence of this view in the observations of Dr. Bednar, that intestinal and genital hæmorrhages occur simultaneously in the same child. The subject is interesting both from a clinical and from a pathological point of view, and will well bear further investigation. We are not inclined to accept Dr. Camerer's explanation, though ingenious, as suitable for all or even the majority of cases.

THE VIVISECTION BILL.

A MEETING of the Metropolitan Counties Branch of the British Medical Association was held at St. George's Hall on Wednesday evening, July 26, to consider the Vivisection Bill introduced into Parliament by the Earl of Carnarvon. The chair was taken at 8 p.m. by Mr. Jonathan Hutchinson, President of the Branch. The following resolutions were proposed:—"1. That this meeting, although fully recognising the improvements effected in Lord Carnarvon's Cruelty to Animals Bill in its latest form, is still strongly of opinion that, should it become law, the progress of science will be most seriously hindered, and the interests both of animals and of men much prejudiced. 2. That this meeting would urge upon the promoters of the Bill that legislation on this subject should be abandoned for the present session. 3. That, in the event of its being thought necessary to propose legislation on this subject in the future, this meeting would suggest as alternative measures (1) an Act of simple registration of persons licensed, on the plan of Dr. Lyon Playfair's proposal; or (2), which would be much preferable, an Act in extension of Martin's law, applicable to cruelty of all forms to all animals, but exempting, under certain regulations, experiments performed solely for the advancement of science." The first and second were carried *nem. con.*, but the third was warmly discussed—some being in favour of entirely omitting it, on the ground that legislation was not required at all. Finally, the resolution was modified—the alternative measures to be (1) simple registration of persons licensed, or (2) an Act applicable to cruelty in all forms to all animals. This was put, and carried by a large majority. The meeting was well attended, and was addressed by Mr. Hutchinson, Mr. Simon, Dr. Andrew Clark, Dr. Wilson Fox, Dr. Hare, Dr. Pye-Smith, Dr. Quain, and many others.

THE INFLUENCE OF THE CORTEX CEREBRI ON TEMPERATURE.

PROFESSORS EULENBURG AND LANDOIS, of Greifswald, have communicated to the *Centralblatt* (No. 15, 1876) the results of some researches on the influence of the cortex cerebri on the temperature of the body, which may be summed up as follows:—1. Destruction, to a depth of one to one and a half millimetres, of certain areas of the anterior part of the brain of dogs (which correspond to the parietal region) immediately produces a considerable elevation of temperature in both extremities of the opposite side of the body. This may amount to as much as from 5° to 7° Cent. shortly after the operation; while in other cases it is not more than 1·5° to 2° Cent. 2. The area which is thus affected is bounded in front with considerable accuracy by the crucial fissure; it occupies the posterior and lateral part of the convolutions, which correspond to the anterior central convolution in the brain of man and monkeys. The thermic areæ for the fore and hind feet are different. 3. As a rule, when the animals recover from the effects of the chloroform used during the operation, disturbances of movement and of the muscular sense are observed in the extremities of the opposite side, according as the "motor centres" for the fore or hind foot are most involved. 4. The elevation of temperature generally remains pretty constant until the second or third day after the operation, and then gradually sinks to the normal, or even below it; but sometimes it remains almost unaltered for two or three weeks. 5. If the cortical areæ, whose destruction produces an elevation of temperature, be irritated with weak induced currents, a slight and transitory cooling of the opposite extremities (0·2° to 0·6°) can be detected by means of a galvanometer. It occurs whether the animals are curarised or not, and no result is obtained if parts of the brain other than these special districts are electrically irritated. The author's explanation of these phenomena is this: that by the destruction of the cortex certain vaso-motor apparatus there situated are interfered with. These probably in part represent the central terminations of the vaso-motor nerves, which run in the cerebral peduncles, and "perhaps serve, on the one hand, to transmit psychical influences to the vaso-motor nerve-tracts, and, on the other hand, to make the individual conscious of local changes in the temperature and circulation through their connexion with other nerve-centres in the cortex." Professor E. Hitzig, of Zürich, confirms Professors Eulenburg and Landois' conclusions from independent experiments (*Centralblatt*, No. 18, 1876) in the following two important points:—1. That after superficial destruction of certain portions of the cortex cerebri, the temperature in the extremities of the opposite side rises considerably. 2. That the localisation of the injured parts is the same as that which affects the movements of those extremities.

AN UNFORTUNATE PROSECUTION.

A SOMEWHAT noticeable case was recently heard at the Lambeth Police-court. Charles Davies, Southampton-street, Camberwell, was summoned by the Vestry of St. Giles, Camberwell, for selling arrowroot in an adulterated condition. The case was heard on the 29th ult., when, from the evidence of the inspector, it appeared that on June 14 last, he purchased some arrowroot at the shop of the defendant. He divided it into three parts, one of which he took to Dr. Bernays, who gave a certificate stating that the arrowroot was almost entirely composed of potato starch. The defendant declared that he had purchased the arrowroot of a firm in the City, and sold it just as he received it. Mr. Ellison directed that a portion of the arrowroot should be forwarded to the Principal of the Laboratory of the Inland Revenue for examination. Subsequently, Dr. Bernays stated that since the last hearing he had again examined the sample, and found it *was* arrowroot; he very much regretted that a mistake had been made. Mr. Marsden, the Vestry Clerk, also regretted that the proceedings had been taken, and Mr. Ellison stated that he had received a letter from the Inland Revenue Board, stating that the sample of arrowroot received was genuine. The prosecution in this instance has been a most lamentable mistake. The Adulteration Act is, as may be easily conceived, by no means a popular one with large numbers of tradesmen, and more than usual care should be taken in applying it so as to avoid even the appearance of injustice, or grave hardship. The recurrence of such grievous mistakes as that made in this case would soon make the Act unpopular with the public at large—with buyers as well as with sellers.

SALICINE AS AN ANTIPYRETIC.

ACCORDING to Professor Senator (*Centralblatt Med. Wiss.*, No. 14, 1876), salicine administered in doses of from two and a half to six grammes lowers the temperature in some febrile

diseases just as certainly as salicylic acid does. He has used it in typhoid fever, phthisis, and parametritis. Dr. Maclagan has shown that salicine has the same specific action in acute rheumatism as salicylic acid, into which, according to the researches of Ranke, Lehmann, and others, it is converted in the blood. Salicine is less unpleasant to take than salicylic acid. It can be given in powder mixed with sugar, or, better, in the form of pills. Its price is somewhat less than that of the acid and its salts, and no doubt, if the demand for it increases, it will be still cheaper, for it can be procured in abundance from poplars and willows. Salicylate of ammonia is recommended by Dr. Martenson, of St. Petersburg, as a substitute for salicylic acid. It is easily prepared by saturating an aqueous emulsion of the latter with ammonia or carbonate of ammonia. It is easily soluble in water and alcohol, has a sweet taste, and contains nearly 89 per cent. of acid.

THE "THUNDERER" DISASTER.

Up to noon of Wednesday, the 19th, eighteen patients had died in Haslar Hospital from the results of the explosion on board of the *Thunderer*. Since that time one died on the evening of the 19th, one in the morning and two in the evening of the 20th, one on the 22nd, and one on the 23rd inst., making a total of twenty-four deaths out of the fifty-nine patients admitted into Haslar Hospital on the 14th inst., the day the accident occurred; three have been discharged cured; and at the present time there are thirty-two in hospital. Of those remaining, four are pronounced dangerously and four seriously ill. Some are extensively scalded over the body as well as the face and hands; but it is remarkable that some of the worst cases are only scalded about the face, neck, and hands, and have never yet rallied from the state of collapse in which they were received. The semi-unconscious state in which many were found on the 19th still continues, and appears due to cerebral more than to laryngeal and pulmonary mischief, the scalp as well as the face and neck having been seriously scalded. In one case, where the outer scalding, so to speak, was very slight, and the patient making very little complaint, ulceration of the uvula was observed. It is very certain that many more have suffered from the inhalation of steam, and that some time must elapse before any one of the sufferers can be pronounced perfectly safe. With one exception, there are no indications of internal ulceration of a serious character. In this case diarrhœa has supervened; and in this, as in all the most serious cases, there is very great prostration, requiring the liberal but careful exhibition of wine, with nourishing diet and unremitting attendance. A list is put up outside the Hospital gate, on which the state and condition of every patient are daily noted for the information of the friends of the sufferers. We may observe, in conclusion, that a medical officer is present day and night to insure proper attendance—an amount of care which few people in civil life are able to procure.

THE HARVEY TERCENTENARY MEMORIAL FUND.

The sum now contributed to this Fund nearly reaches £900. The response to the appeal which is at present being made to the members of the medical profession is considered by the secretaries to be very satisfactory; but as it is desirable that the funds should come from all classes of the community, it is hoped that practitioners will, upon receipt of the circular, make an appeal for subscriptions to their more wealthy patients. If this be generally done, a sum which will be quite adequate for the purposes of the promoters of this very worthy object will be easily raised. Harvey was, indeed, the benefactor of all; and that fact cannot be too widely taught in these days, when experimental physiologists labour under such unjust suspicions.

MR. T. M. STONE, OF THE ROYAL COLLEGE OF SURGEONS.

The Council of the Royal College of Surgeons have, among their other merits, the virtue of possessing the common sense to recognise and appreciate good and faithful service. Mr. Thomas M. Stone—we need not note how well known he is—entered the service of the College so long ago, we believe, as the year 1832, and for nearly twenty-five years past he has occupied apartments in the College. Some little while back, however, he was advised, for health's sake, to live out of London, while still attending daily to his official duties; and at the last annual meeting of the Council of the College for the election of officers, etc., the following resolution was passed—at the instance of two ex-Presidents, we believe—and ordered to be written on vellum, and presented to Mr. Stone:—"That, on reappointing Mr. Thomas Madden Stone to his office, for the first time since he ceased to be resident in the College, the Council do record their appreciation of the services he has rendered during many years. The Council estimate very highly his watchful care of the College premises, and his active and judicious supervision of the College servants in the discharge of their several duties; and especially they thank him for the zeal which he has always shown for the honour and welfare of the College, not only in the performance of his appointed duties, but in all his intercourse with the Fellows and Members, and with the students of the medical schools."

PATHOLOGICAL ALTERATIONS IN THE NERVOUS SYSTEM IN RABIES.

The *Centralblatt*, No. 50, November 20, 1875, contains a communication from Dr. Kobsnikoff, of St. Petersburg, describing the microscopical changes found by him in the nervous system of ten dogs which had suffered from hydrophobia. The principal alterations were met with in the sympathetic and spinal ganglia, and were of two kinds:—1. Extreme dilatation of the bloodvessels, which were infarcted with red blood-corpuscles. Some of the latter had escaped from the vessels, and lay outside, scattered among a number of white corpuscles in the perivascular spaces. In some parts of the vascular walls, hyaloid masses of various shapes were visible, which sometimes projected into the lumen of the vessels so as to block them completely. These masses appeared to be produced by a metamorphosis of the white and red blood-corpuscles. 2. Around the nerve-cells, collections of round indifferent cell-elements were seen, some of which had penetrated into the protoplasm of the nerve-cells, so as to alter the shape of the latter and give them a jagged outline. Sometimes the nucleus was forced outwards to the edge of the nerve-cell and sometimes the new cell-elements appeared to occupy the place of nerve-cells, which were no longer visible. Dr. Kobsnikoff remarks that the pathological changes which occur in rabies closely resemble those described by Dr. Popoff in typhoid fever, and after mechanical injuries to the nervous system (cf. *Medical Times and Gazette*, vol. ii. 1875, page 369).

FURTHER CONVICTIONS UNDER THE MEDICAL ACT.

The Medical Defence Association has, we are pleased to hear, been successful in obtaining within the last few days the conviction of two illegal practitioners under the Medical Act of 1858. In the first case the defendant, a man named Balls, had for several years been practising as a surgeon in Bermondsey. He had formerly been an assistant to a surgeon (now deceased) named Richmond, and on his door-plate was the following inscription:—"Mr. T. C. Balls [from] Richmond's, Surgeon, etc." The case was heard at the Southwark Police-court on the 21st inst., and the magistrate inflicted a penalty of £5. A heavier penalty would probably have been inflicted, but the prisoner pleaded for mercy on account of his wife and family. The second case was heard at the Wandsworth Police-court on Monday last. The defendant was a chemist named Witherington, who resides at 410, Wandsworth-road

It was proved that he had falsely pretended to be a "doctor" and a "surgeon," and the magistrate inflicted a penalty of £15 and costs. In this case the prosecution was instituted by the East London Branch of the Defence Association.

OPHTHALMOLOGICAL CONGRESS, NEW YORK.

THE meetings of this Congress are to be held in New York on September 12, 13, and 14. A large gathering of ophthalmologists from all parts of the world is expected, and we doubt not that the meeting will be highly successful. Foreigners especially may look forward to a warm and hospitable reception; we believe that they are to be entertained at a banquet specially got up for the occasion. Many interesting papers have already been promised.

PARLIAMENTARY.—POLLUTION OF RIVERS BILL—CATTLE DISEASES —PUBLIC HEALTH—CLEAN RIVERS—VACCINATION.

IN the House of Commons, on Thursday, July 20,

Mr. Sclater-Booth said that he had framed certain amendments to the Pollution of Rivers Bill which he believed would remove the objections entertained to the Bill by the manufacturing interests, and he hoped, therefore, that the House would now allow it to be read a second time.

Sir C. Dilke contended that the House ought to be put in possession of the amendments before the Bill was read a second time, and moved the adjournment of the debate; which was agreed to.

The Cattle Diseases Bill for Ireland passed through Committee.

On Monday, July 27, the adjourned debate on the Pollution of Rivers Bill was resumed.

Dr. Lyon Playfair condemned the Bill. It neither carried out the recommendations of the Royal Commission nor the amendments proposed by the Committee of the House of Lords.

Colonel Mure hoped that the Bill would pass a second reading. The deputations were at first opposed to this Bill; but they had at last come to the conclusion that while it would prevent the pollution of rivers, it would not be oppressive to the manufacturing and other interests. In Scotland there was a general desire that the Bill should pass.

Mr. Sclater-Booth said that in several towns the manufacturers who had at first opposed the measure were now anxious that it should pass, and that there should be a uniform provision for the whole of the kingdom, making it a statutory offence to pollute rivers. The important thing was to get the obligation of law placed upon the sanitary authorities, the owners of mines and manufactories, and private individuals in every district. In future years there might be special tribunals and Conservancy Boards to improve the rivers of the kingdom in their sources; but the initial measure must be some such a Bill as the present. It was impossible to exaggerate the importance in regard to the water-supply of this country of keeping the sources of rivers free from pollution, and this Bill would do more to improve the purity of the domestic supply of water than any other measure that could be proposed.

The Bill was read a second time.

Sir M. Hicks-Beach, in reply to the O'Conor, said that it was not intended to proceed with the Public Health Bill this session.

In the House of Lords, on Tuesday, July 25,

The Earl of Shaftesbury moved the second reading of the Medical Act (Qualifications) Bill, the object of which was to enable every university, or other body entitled under the Medical Act to grant qualifications for registration, to grant such qualifications to all persons without distinction of sex. There was a proviso that no woman should be entitled to take any part in the government, management, or proceedings of the universities or corporations mentioned in the said Medical Act.

The Bill was read a second time.

The Duke of Buccleuch moved and obtained the second reading of the Clean Rivers Bill, its object being simply to prevent any pollution of clean rivers.

In the House of Commons,

Mr. Sclater-Booth, in reply to Mr. P. Taylor, said he was aware that Mr. Pearce had been prosecuted a number of times for non-compliance with the provisions of the Vaccination Act. Mr. Pearce had stated that four cases had recently occurred at Andover in which death, or illness near to death, had been the effect of vaccination. He immediately caused inquiry to be made, but there was no reason whatever to believe that those deaths were owing to vaccination. He could not say that he intended to interfere further with the case, as the guardians knew his views.

The Pollution of Rivers Bill passed through Committee *pro formâ*, and was ordered to be reprinted.

THE ROYAL WARRANT FOR MILITIA MEDICAL OFFICERS.

1. MEDICAL Officers of the Militia who elect to be placed on a departmental list shall only be required to perform army medical duties during the embodiment of their regiment, or during training, or when present during preliminary drill or recruit drill, or when ordered by competent authority to perform during the non-training period other medical duties connected with the militia, at the place where their regiment is stationed, or where such regiment recruits.

2. Those who held the ranks of Surgeon and Assistant-Surgeon on or before March 1, 1873, shall be commissioned as Surgeon-Major and Surgeon respectively from that date.

3. Those who have been appointed to the rank of Assistant-Surgeon, or promoted to the rank of Surgeon, between March 1, 1873, and the date of our present Warrant, shall be commissioned as Surgeon and Surgeon-Major respectively, from the date of such appointment or promotion.

4. Medical Officers of the Militia promoted to the rank of Surgeon under our present Warrant shall, on the completion of twelve years' service from the date of first appointment, be eligible for promotion to the rank of Surgeon-Major.

5. Surgeons-Major and Surgeons promoted to those ranks as aforesaid shall take rank with medical officers of our regular forces as juniors of such ranks, in the manner following:—(*a.*) A Surgeon-Major shall rank as Major, according to the date of his commission; and after twenty years' service as Surgeon and Surgeon-Major he shall rank as Lieutenant-Colonel, but junior of the latter rank. (*b.*) A Surgeon shall rank as Lieutenant, according to the date of his commission; and after six years' service, as Captain, according to the date of the completion of such service.

6. The rates of pay of the Medical Officers of the Militia during embodiment, preliminary drill, or training, shall be as follows:—Surgeon-Major, £1 daily; Surgeon, 13s. 8d. Their quarters and allowances shall be regulated by their relative rank, as defined in article 5.

7. Medical Officers of the Militia who, when performing any of the duties enumerated in article 1, are in receipt of the full pay and allowances of their rank, shall be liable to be called upon to examine recruits for our regular forces without being entitled to claim any additional pay or remuneration.

8. The allowances to Medical Officers of the Militia for medicines shall not be granted during the training of a militia regiment at a brigade depôt, or at a station where there is a military hospital from which medicine can be furnished.

9. The allowances granted to Medical Officers of the Militia for the expenses of necessary medicines and attendance for the non-commissioned officers and men of the permanent staff, and for their wives and families, while the militia regiment is not out for training, shall not be granted when the head-quarters of the regiment are at a brigade depôt.

10. Nothing contained in our present Warrant shall be held as giving to any Medical Officer of the Militia a claim to any pension or retiring allowance granted to medical officers of our regular forces.

The following are the Secretary of State's instructions on the Warrant:—

1. In all cases where battalions of militia are called out for training they will be under the general administration of the Principal Medical Officer of the district. The medical officer of the militia battalion will, under all circumstances, be in immediate charge of his battalion.

2. The medical administration of the brigade depôt or other army hospital will, during the training of the militia, remain in the hands of the army medical officer in charge, without reference to seniority of rank.

3. There shall be only one medical officer upon the establish-

ment of a battalion of militia during disembodiment, and supernumerary officers shall be absorbed as vacancies occur.

4. When a battalion of militia requires the services of a second medical officer, the Army Medical Department will provide such officer.

5. Militia recruits will be examined by an army medical officer whenever available, at or near the place of enlistment. When not available, the examination will be made by the militia medical officer, or the nearest civil practitioner who is registered for the examination of recruits, preference being given to the former when equally accessible.

6. The Medical Officers of the Militia will also attend the permanent staff of the militia and their families during the non-training period, according to the rules prescribed by existing regulations, when the head-quarters are not at the brigade depôt; but when the head-quarters are at the brigade depôt the permanent staff and their families will be attended by the medical officers of the brigade depôt.

7. Militia recruits, when trained at a brigade depôt or at an army station, will be under the medical charge of the army medical officer.

Dated July 12, 1876.

VOLKMANN'S "BEITRÄGE ZUR CHIRURGIE."

We cannot too strongly recommend to our surgical readers the perusal of this admirable volume.(a) It contains a report, copiously annotated, of 552 in-patients and 2799 out-patients treated in the surgical clinic of Halle University in 1873, under the superintendence of Professor Volkmann. The number of beds at his disposal was about fifty, which is extremely few, when one considers that Halle is a town of 60,000 inhabitants, with numerous manufactories, as well as coal mines in its immediate neighbourhood, and surrounded by a close network of railways in such a way as to admit of the easy transport of patients from all parts of the country to it. It will thus be seen, however, that the situation of Halle is peculiarly favourable for supplying the clinic with every variety of case requiring surgical interference. The volume opens with an essay on Lister's treatment, of which Professor Volkmann is an enthusiastic advocate. In this he specially points out, that while he himself reserves his opinion as to the truth of the theoretical side of Lister's treatment, he firmly believes in its practical value. He shows that the treatment (to say nothing of the diminution of mortality which follows it) reduces the after-pain of operations to a minimum; either abolishes fever or renders it most trifling in degree; and, lastly, shortens the healing process. He shows that in proportion as the surgeon becomes more and more familiar with the details of Lister's method, his success becomes greater and greater. Pyæmic processes, which Professor Volkmann still met with occasionally in his wards in the early days after the method was introduced, are now so rare, that he is able to say (writing in 1875), "it is now eighteen months at the moment I revise this sheet since the last patient died of pyæmia from a wound or after an operation, and erysipelas scarcely ever occurs now in our patients treated by Lister's method."

Passing on to the chapter in which erysipelas is dealt with, we find Professor Volkmann recommending an abortive treatment, which consists in removing all greasiness from the affected skin with a solution of soda, and then painting it for some distance beyond the visibly diseased area with a solution of nitrate of silver of the strength of one part to eight. The painting requires sometimes to be repeated in twelve or twenty-four hours. Professor Volkmann has some excellent remarks on the treatment of syphilis. He strongly recommends an energetic local attack on all kinds of syphilitic ulcers, and especially where they involve the nose and the lips. He scrapes away with his sharp spoon (*scharfen Löffel*) all the soft infiltrated tissue, until he reaches the healthy surface, and then with the scissors he takes away any part of undermined skin at the edge of the ulcer which resists the spoon. After the scraping the parts are vigorously cauterised with solid nitrate of silver. For the details of the method, as, in fact, for the details of any form of treatment to which we may call attention in our cursory glance at Professor Volkmann's "Beitrage," we must refer our readers to the book itself. A large amount of space is devoted to diseases of the extremities, including all kinds of fractures and injuries. Fractured clavicle is invariably treated at Halle with Sayre's adhesive-plaster bandage, which gives excellent results. In this section the remarks on the treatment for fractures of the thigh by means of weights will repay perusal. In speaking of injuries of the hands and fingers, Professor Volkmann states that in 1873 he treated the whole of the severe injuries of the former (in which one or more fingers were so much damaged as either to be permanently useless, or else to require primary or secondary amputation—seventy-one cases in all) according to Lister's method. Not a single case died, was attacked with acute phlegmonous inflammation or acute suppuration of the sheaths of the tendons, or required secondary amputation of the arm. Nearly all, including some of the most severe cases, were treated as out-patients. The injuries to the foot furnished the only case of pyæmia which Professor Volkmann has met with after a fresh injury or an operation since he introduced Lister's treatment, when the case was treated by it from the very first; and, curiously enough, in this very instance the pyæmia did not start from the injured foot, but from some thrombotic varicose veins; and it should be noted, too, that the patient was in the next bed to a pyæmic patient, who was not being treated antiseptically. We can only call attention in passing to some remarks on osteo-myelitis, a disease now exciting much discussion in Germany, and to Professor Volkmann's observation, that he does not regard the inflammation of joints which occurs in rheumatic fever as of so harmless a character as is generally supposed. He says (page 147), "I have not only seen chronic suppuration of the knee-, elbow-, and wrist-joints follow acute rheumatism, but also spontaneous dislocations of the hip, as well as disease of the cervical vertebræ, and caries of the tarsal bones, etc." Inflammations of the joints receive extended comment in these pages; and here again, in speaking of drainage of the knee-joint in acute and chronic suppuration, Professor Volkmann states that since he adopted the antiseptic method he has not lost a single patient with an open wound of the joint treated conservatively, provided he was able to treat him within the first few days after the injury, and before the onset of any dangerous symptoms. His faith in Lister's method, combined with that of drainage of the joint, is such that he says, "I would bind myself to carry a drainage-tube through a man's healthy knee-joint, and to let it stay there for several days, without injury to his health or to the future function of the joint; and I say this from a sense of the most profound conviction." Professor Volkmann holds that in every acute suppuration of a joint, as soon as it assumes at all a threatening character, the joint should be at once opened by several incisions, and then drained and treated antiseptically. A most excellent chapter on hygromata of the sheaths of the tendons containing loose bodies, and on the structure of the latter, will be read with interest, as also will that on the treatment of rachitic curvatures of the tibiæ by artificial fracture. In the chapter on diseases of the face, nose, and cavity of the mouth, Professor Volkmann gives details of the cure of scrofulous and syphilitic ozæna by chloroforming the patient and then scraping out all the diseased tissues and bone from the cavity of the nose with his sharp spoon. After this the parts are plugged with wool soaked in carbolic oil (1 in 10), which is changed twice daily, the wound being thoroughly syringed each time. (Careful details of the whole procedure will be found at page 267.) Lupus, Professor Volkmann still treats with the sharp spoon and multiple scarification, but he distinctly denies that he has ever claimed for his method that it prevented relapses: they occur in spite of every known treatment. In speaking of cancer of the lip, the author calls attention to the success which he has met with in a number of cases operated on *before any infection of the lymphatic glands had taken place*. Of 19 cases, 14 had remained up to December, 1874, completely free from any relapse for the following periods:—5¼ years, 23 months, 21, 20, 19, 19, 18, 17, 15, 15, 14, 13, 12½, and 12 months. He insists, with Billroth, that "the prognosis of cancer of the lip is a relatively good one as long as the lymphatic glands remain unaffected; and it is therefore the imperative duty of every medical man to take the earliest opportunity of himself undertaking or else of advising complete extirpation of the growth in every case he meets with." In the chapter on diseases of the breast, Professor Volkmann enters at considerable length into the questions

(a) "Beiträge zur Chirurgie anschliessend du einen. Bericht über die Thätigkeit der Chirurgischen Universitäts-Klinik zu Halle im Jahre 1873." Von Richard Volkmann. Leipzig: Breitkopf und Härtel. 1875.

of the etiology and method of extension of carcinoma mammæ. The whole of his remarks are worth reading carefully. We would only here refer to his views with regard to the value of excision of the mamma in these cases. He believes that its success is directly proportional to the time at which it is undertaken—that is to say, the earlier you operate the greater chance of the patient's permanent recovery. "I can only state," he says (page 327), "for myself, that I have operated on no inconsiderable number of women who have remained without relapse for from five to fifteen years. Some of these cases were apparently very unfavourable ones, in which a quickly fatal issue seemed inevitable." Professor Volkmann believes most strongly that the number of cures will steadily increase if ordinary practitioners will only send their cases to the surgeon, or else operate themselves, in the earliest stage of the disease after the diagnosis has been definitely made, instead of losing valuable time in trying a number of absolutely useless remedies. At present it is too much the fashion to recommend the operation as a *dernier ressort*, much in the same way as "prescriptions are habitually written for incurable or dying patients." With regard to the mere lengthening of life by the operation, Professor Volkmann is distinctly of opinion that it has such an effect. He lays great stress on the way the operation is to be performed, especially on minute attention to the removal of every portion of suspected tissue, as well as on the complete clearance of the fat and lymphatic glands from the axilla in case those glands are simultaneously involved; and here again the antiseptic treatment stands him in good stead. (An elaborate account of his method of operating and applying the dressings is given at page 329 and following pages.) In the chapter on diseases of the rectum the author states, as the result of his own and Dr. Carl Friedländer's histological researches, that certain forms of fistulæ in ano occurring in persons with "tuberculosis" of the lungs are due to a local tuberculosis—that is to say, to a new growth containing giant-cells and the other elements of tubercle, which casefy and break down.

In speaking of stone in the bladder, the author expresses his preference for the operation known as Allarton's median operation. He urgently recommends what he calls the bimanual examination for detecting the presence of stone in children. With the finger in the rectum, and the other hand over the abdomen, a stone can easily be felt, and its size (after a certain amount of practice) determined. The method is also applicable to some cases of stone in adults. The volume terminates with an excellent chapter on epithelioma of the scrotum, occurring among workmen in the tar and paraffin manufactories near Ilalle. These products of the distillation of coal are even more irritating to the human skin than the soot which gives rise to the so-called chimney-sweepers' cancer in England. They not only excite inflammation of an eczematous nature on various parts of the body, as well as the so-called tar-acne, but also occasionally give rise to true epithelioma, resembling in every respect chimney-sweepers' cancer as described by the best English authorities on the subject. Complete histories of two cases operated by Professor Volkmann are given, as well as coloured illustrations of the disease itself. While speaking of illustrations, we cannot help expressing our admiration at the execution of the lithographic plates which supplement several of Professor Volkmann's descriptions. They are as accurate as photographs, without their hardness; and they are free, too, from the coarseness of ordinary lithographs. We must here end our imperfect sketch of these "Beiträge." We have rather endeavoured to give our readers a general idea of their scope than to discuss any part of them at length. Their suggestive and progressive character will, we hope, be sufficiently indicated by the various topics on which we have briefly touched.

Nitrate of Lead in Erysipelas.—Dr. Firnat states that he much prefers the following to any of the numerous local applications in erysipelas which he has tried:—℞. Plumbi nitrat. gr. xvi., aq. lauro-cerasi ʒss., glycerin. ʒiijss.; to be well brushed over the affected part and one inch and a half beyond every three hours—giving, of course, appropriate internal medicines at the same time. He also has used with great success the nitrate (gr. xv. ad ʒj. glycerine) in eczema of the head, after previous washing it with tar-soap—giving also internally small doses of Fowler's solution of arsenic and iodide of potassium.—*Phil. Med. Times*, June 10.

FROM ABROAD.

Professor Charcot on Cerebral Localisations.

On commencing a new series of lectures on this subject, Prof. Charcot addressed the following observations to his class, as reported to the *Progrès Médical*, No. 28:—

"In this series of lectures I propose to exhibit the facts in encephalic pathological anatomy and physiology which, in the present state of science, serve as a foundation of the doctrine of cerebral localisations. These facts were indeed largely developed in my lectures of last year; and, if I now recur to them, it is because the signification which I attributed to them has been sharply criticised recently by a *savant* of eminent competence in this matter—one of the founders of the new physiology of the nervous system, my distinguished friend Prof. Brown-Séquard. In the face of an opposition coming from so high, it became my duty to submit the question in dispute to a complete and searching revision, in order to ascertain whether I might not have fallen into some error, and led you astray at the same time. Had this investigation proved me to be wrong, I should have come resolutely forward and made the *amende honorable* by confessing my error; but it is not so, for my new researches, and those pursued in the same direction by some of my auditors of last year, have only strengthened my former convictions. These convictions I wish to seize this opportunity of once more affirming before you, and to inform you concerning the documents which furnish them with new support. This is, in short, the purport of the lectures you are about to listen to; and now that you have been made aware of the motives which have led me to occupy you to-day with one of the great episodes of the pathology of the brain, I may at once enter upon the matter.

"I believe that it cannot be necessary to enter into long explanations in order to make you comprehend what is understood by *localisation* when speaking of cerebral physiology and pathology. The term has definitively passed into ordinary language, and everyone knows what it signifies: and I will confine myself to reminding you that the principle of cerebral localisations is founded on the following proposition: 'The brain does not represent a homogeneous organ, but an association—or, if you like the term better, a confederation—constituted by a certain number of different organs.' To each of these organs are physiologically attached distinct properties, functions, and faculties; and in the pathological domain the lesion of each of these is denoted by particular symptoms, resulting from the disturbance that has ensued in the exercise of its special properties and functions. This it is, in fact, which renders possible a *regional diagnosis* of cerebral affections—the ideal towards which tend all the efforts of the clinician.

"The method which should enable us to establish on firm bases the proposition which I have just stated, consists in making an appeal, turn by turn, to the conclusions furnished (1) by normal human and comparative anatomy; (2) by physiological experimentation; and (3) by clinical observation, supported by the methodical and minute examination of organic lesions. But I must not conceal from you that, in my view, in this kind of scientific trinity, the documents of this last group—those furnished by the incessant confrontation of pathological anatomy and clinical observation—should always be regarded as the most important and decisive: for if the others may often put us on the track of localisations, these only, as far as regards man, will allow of our judging in the last resort, and of furnishing the proof. For, in fact, it must never be forgotten that it is man who is the subject of our consideration—man, who, in relation to the functions of the superior nervous centres, is so profoundly separated, as regards many points, from animals, even those highest in the scale. As far as he is concerned in this respect, the results of the most ingenious and the best-conducted experimentation can furnish (remark it well) no other than more or less well-founded presumptions, and never an absolute demonstration.

"It is, then, in man himself, I repeat, that the proof must be sought for. But observations limited to the human domain, deprived of the powerful lever of experimentation, would seem at first condemned to play but a subaltern part. But this is only an appearance, by which we must not be deceived. Thus, as it

has been long since remarked, the conditions of an experiment —spontaneously produced, it is true—may be daily realised amidst the pathological circumstances in which man is placed. To profit by this, it is only necessary to learn how to adapt oneself to the necessities of a situation which is very different, incontestably, in many respects, from that which experimentation creates deliberately in the animal, but which is not always more complex. If it be true that observations made upon diseased man, by aid of the light of physiological knowledge, generally exact more time and more patience than corresponding researches conducted experimentally on animals; and if it be true that in man the conditions of the phenomena, contrary to what takes place in the laboratory, cannot be either modified or reproduced at the will of the observer,—it is equally true that disease frequently determines, in the body of man, lesions more exactly limited to an organ or a tissue, more systematic, so to say, and more compatible with the persistence of life, the integrity of functions not directly interested (and consequently more favourable to a methodical and prolonged analysis), than are the mutilations produced in animals by even the most skilful physiologist. Here is a series of assertions that may be easily justified, and especially with regard to the pathology of the nervous centres. This I hope to demonstrate to you superabundantly in the course of these lectures."

M. Péan's Cases of Removal of the Spleen.

M. Péan, at the meeting of the Académie de Médecine (*Bulletin*, No. 29) on July 18, exhibited two patients upon whom he had successfully performed ablation of the spleen in consequence of large tumours of the organ. The first was operated upon in September, 1867, and was shown to the Academy soon afterwards, since when she has continued to enjoy excellent health. The second, a woman twenty-four years of age, was operated upon three months ago, in consequence of the success that had been obtained by M. Péan in the first case, and in gastrotomy in general. An incision having been made from the pubes to the epigastrium, the hypertrophied spleen was found extending from the left hypochondrium to the right iliac region. Owing to its friability, great precaution was required in removing it, a ligature having first been placed around the omentum *en masse* prior to the excision. The omental stump, containing some enormous sanguineous and lymphatic vessels, was brought down to the lower angle of the wound. Very little blood was lost; and the patient, at the end of a month, was enabled to resume her occupation in a good state of health, and completely cured.

Prize Questions of the Académie de Médecine for 1877.

1. The Academy Prize of 1000 fr.—"Glycosuria in relation to Etiology and Prognosis." 2. The Portal Prize of 1000 fr. —"Does Caseous Pneumonia exist independently of Tuberculosis?" 3. The Civrieux Prize of 1000 fr.—"By what means of Treatment can General Paralysis be arrested at its commencement, and an Amelioration be assured or a Permanent Cure obtained?" 4. The Capuron Prize of 2000 fr.—"Chloral in the Treatment of Eclampsia." 5. The Barbier Prize of 3000 fr., to the discover of the Cure of Diseases reputed Incurable (as hydrophobia, cancer, epilepsy, scrofula, typhus, cholera, etc.) —rewards being adjudged to those who most nearly approach this object. 6. The Godard Prize of 1000 fr., to be adjudged to the author of the best work on External Pathology. 7. The Amussat Prize of 1000 fr., to be given to the author whose work or researches, based simultaneously on anatomy and experiment, have realised or paved the way for the most important progress in Surgical Therapeutics. 8. The Huguier Prize of 3000 fr., to be decreed to the author of the best work, either in M.S. or printed in France, on the Diseases of Women, and more especially the surgical treatment of these affections (accouchements not being comprised). 9. The St. Lager Prize of 1500 fr., for the artificial production of Bronchocele in animals by the administration of substances extracted from the waters or soil of localities where the disease prevails endemically. 10. The Rufz de Lavison Prize of 200 fr.: "Establish by a sufficient number of facts, observed with precision in man and animals who have passed from one climate to another, the modifications and changes in functions, and the organic lesions which may be attributed to acclimatation." All essays and works competing for these prizes are to be delivered at the Academy before May 1, 1877.

REVIEWS.

A History of Asiatic Cholera. By C. Macnamara, F.C.U., Surgeon to the Westminster Hospital. London: Macmillan. 1876. Pp. 472.

It has been observed that cholera is the one motive force which has set going all the modern sanitary legislation in England. It has influences which prevent us from looking upon it as a study for medical men alone, and we are glad to find that the author of the work before us writes avowedly for the educated public. There is nothing in this book about post-mortem examinations or treatment; but the key to the author's idea is that there is a "controllable disease which has within the last fifty years burst forth from British India"—six great epidemic outbursts have spread over the world since 1819, destroying on each occasion millions of human beings, many of them in the prime of life, after an illness of short but frightful agony. If the disease be controllable, it is for the statesman, instructed by medical science, and backed by intelligent public opinion, to control it; and this book is a contribution towards the good work—by stating how the control is to be exercised.

It is in vain to lament the divergence of opinion which is manifested in the profession and out of it on every question concerning cholera. It is part of the infirmity of the human intellect that it should be so, and it will cause every hypothesis to be tried till the right one is found and agreed upon. Now, of hypotheses of cholera there are three kinds. The first may be called the *agnostic*. We are supposed to know nothing of the origin or nature of the disease except its "capriciousness." It comes in an *epidemic wave;* but a wave of what oscillating medium is unknown. It is said not to be contagious nor communicable; but to be connected with supposed telluric and meteorological or magnetic disturbances of an unknown order; or perhaps social disturbances, such as the French Revolution of 1831. Such an agnostic theory leads to nothing. According to a most able and accomplished writer, "an epidemic cannot be suppressed."

A second theory, whilst affirming that the true cause is some unknown telluric or meteorological disturbance, and repudiating contagion, yet admits of *localising influences*, such as filth, overcrowding, and the like; so that although you cannot shut out cholera, yet you can render its visits transient, and not allow it to take root and flourish.

To a third class belongs the theory advocated by Mr. Macnamara; and a thoroughly practical one it is. It claims that cholera is a disease of human beings, which is carried from place to place "through a continuous chain of human beings affected with the disease, or through articles stained with their dejecta." Numberless are the modes in which the healthy may be infected by the dejecta of the sick. Nurses and attendants may eat with unwashed hands in the sick-chamber; the poisonous particles may be carried up with the steam of hot water, and so may infect the persons who wash soiled clothes; they may affect those who lay out or bury the dead; they may lurk in sewers and privies, and rise with the currents of vapour which in certain states of wind and atmospheric pressure may issue from those underground death-traps. But, practically speaking, all dirt in time finds its way into water; and it is through drinking-water, contaminated with cholera dejection, and in a certain state of decomposition (or, perhaps, rather of development), that the disease is practically carried and diffused when once *it* (that is, some person affected with it, or his apparel) has reached a new place.

It will thus be seen that Mr. Macnamara adopts and enforces the theory which was propounded by Snow, and adopted and worked out so ably and successfully in this country by W. Farr, Simon, W. Budd, and others, that cholera is contagious, and water the usual vehicle. This is defended and enforced by Mr. Macnamara in the course of a history which not only tells us what is known of the cholera from the earliest times, but, in addition, indicates the various stages in the progress of scientific opinion about it. We may now regard with wonder the conclusions of a Scientific Committee in 1854, with regard to the wholesale poisoning of the population of St. Anne's, Golden-square, by the water from the notorious Broad-street Pump. So much political odium had been attached to the doctrine of contagion; this doctrine was considered so imbued with all that was antiquated, and superstitious, and tyrannical; the practice of excluding infected persons by quarantine had been so inexorably carried out by communities which, whilst

trying to exclude disease from without, fostered filth and were content with foul water at home,—that none but the most robust intellects could venture at that time to assert that the disease was communicable in any sense. No better example of the fetters which a spurious liberalism imposed upon free thought can be given than the mode in which the Scientific Committee of 1854 dealt with the water theory, as instanced by the Broad-street Pump. "It seems probable," says the Committee, "that the water of this well did really act as a vehicle of choleraic infection; but this probability might easily be admitted without its therefrom resulting that infection depended on the specific material alleged (by Dr. Snow). The water was undeniably impure with organic contamination; and we have already argued that if at the time of epidemic invasion there were operating in the air some influence which converts putrefiable impurities into a specific poison, the water of the locality in proportion as it contains such impurities would probably be liable to similar poisonous conversion."(a) "The Committee argue," says Mr. Macnamara with grave irony, "if the specific action of the Broad-street pump-water be admitted as a fact, it did not arise from its containing the dejecta of those who had died of cholera, but because it had participated in the atmospheric infection of the district."—(P. 213.) Such are the subtleties by which the ablest and most honest men unconsciously strive to evade a palpable but unwelcome conclusion.

Mr. Macnamara, after a capital definition of cholera, gives a history of the communications between India and Europe, because it is along such routes that the disease of necessity travels. He then takes the history of the disease in India before 1817, showing that, whether recognised or not as "cholera," it was known to Europeans from the time of Vasco di Gama to the present; and that it was as prevalent in 1782-83 amongst the pilgrims at Hurdwar, and amongst troops in motion, as it has ever been since. He then describes the Indian cholera of 1817-23. Then the first European invasion, spreading from India by a northern overland route, and reaching Newcastle in England in 1831. Then, after a chapter treating of cholera in India in 1830 to 1845, he describes the epidemic which began in 1841 and spread to Europe in 1847-49. Next we have the third European invasion, which raged in London in 1854. Then follow in order the histories of the subsequent epidemics, including that which reached England in 1865-66, and of the state of the disease in India to the present time. As we have said, we have a history not merely of disease, but of opinion; and this is done shortly and pungently, and illustrated by quotations and comments, of which we may take as an example what we have quoted above anent the Broad-street Pump.

It is quite exhilarating to find Mr. Macnamara quoting the sturdy common sense of Dr. Ferguson's article in the *Quarterly Review* of 1839, with the illustration (which was also used in Sir T. Watson's lectures) comparing the man who could not believe that cholera was communicable, because many escaped, with the man who could not believe that bullets were mortal, because he had not been hit at Waterloo.

We must add that the influence of the wind, and of the states of atmosphere as regards warmth, movement, and ozone, and of soil and other agencies in the propagation of cholera, and Pettenköfer's theory, are all discussed fairly. In advocating the doctrine of the communication of cholera from sick to healthy, and usually by water, the writer confesses that there are many points inexplicable. Why should it ravage a country for three years, and then die out? This may be known when we know why Europeans cannot thrive in India, or why the indigo-planters are obliged to import fresh seed every year, for useful indigo would die out as cholera does in Europe, and requires fresh importation from a genial soil.

As is well known, Mr. Macnamara lived for many years in Calcutta, where he gained his reputation, and published his well-known "Treatise on Cholera." It is therefore noticeable that he expresses grave discontent with the Indian Government and its medical officials for their apathy. A commission, with Sir J. Strachey at its head, was appointed in 1861 to report on an outbreak of cholera in the Punjaub, "and this action on the part of the Indian Government in 1861 was the first effort made since 1817 to gain any real information on the subject of cholera among the troops serving in India. . . . It was not until the influence of England had begun to tell on India that it was found necessary to yield to the cry for an inquiry into the cholera in India."—(P. 266.)

We must express our own doubts as to whether English sanitarians have always exerted a good influence in India. In many respects Indian sanitarians have preceded the English in their recommendations; and whilst it is easy to trace the steps by which cholera is imported and propagated—say in Ireland(b)—on new ground, with no complications, the Indian medical officers may well be overwhelmed and confused with attempts to trace the steps of a disease which surrounds them, and has meshes of communication innumerable.

(a) "Report of Committee for Scientific Purposes into the Cholera Epidemic of 1854," p. 52.

(b) See Haughton's Papers on Cholera, *Medical Times and Gazette*, vol. i. 1867.

The Essentials of Bandaging; with Directions for Managing Fractures and Dislocations. By Berkeley Hill, Professor of Clinical Surgery in University College, Surgeon to University College Hospital, etc. Third edition. London: Smith, Elder and Co. 1876. Pp. 304.

This useful work is now so well known that little need be said respecting its merits in announcing the appearance of the third edition. It is one of those works which are indispensable to house-surgeons and dressers, and it is also of great value to students preparing for surgical examinations. Several additions have been made to the present edition which will increase its value, among them being a chapter of some sixty pages, in which are given the various landmarks which may be detected on the surface of the body, and the points which may be taken as guides in examining injuries and diseases of deep-seated parts. The material for this chapter has been obtained, for the most part, from Mr. Holden's "Landmarks" and Mr. Bellamy's work on "Surgical Anatomy"—a fact which is duly acknowledged by the author in his preface. Some important additions have been made to the section on antiseptic dressings, and in an appendix are given lists of preparations requisite for the sick-room and the operating-theatre, together with the instruments and appliances needful, or which might be required, in performing the ordinary surgical operations.

Syphilitic Lesions of the Osseous System in Infants and Young Children. By R. W. Taylor, M.D. New York. 1875.

Dr. Taylor has done good service by calling attention to certain lesions of the osseous system occurring in syphilitic children, which have until lately been but ill understood and often mistaken. These lesions consist of inflammatory swellings of the ends of the long bones at their junction with the epiphyses, leading in some cases to superficial necrosis, in others to a separation of the epiphyses from the diaphyses by the breaking down of newly formed granulation-tissue. The swelling can at first be felt as limited to the end of the shaft, or as a ring surrounding the bone at its junction with the epiphysis; subsequently the surrounding soft parts become involved, and the end of the bone may become softened and expanded. The affection is usually symmetrical, and gives rise to a pseudo-paralysis of the limb, the child often being supposed to have suffered fracture or loss of muscular power. There are, of course, usually other symptoms of syphilis; and Dr. Taylor, by a most careful investigation of his own cases, as well as of those recorded by other observers, has clearly established the syphilitic nature of the disease. Most of the cases have been met with in the inherited form of syphilis, but Dr. Taylor has shown that the affection may also occur in children the subjects of acquired syphilis, whose bones are still in the developmental stage, which renders them liable to suffer the changes which syphilis impresses upon the physiological process. The first systematic description of the disease was given by Dr. Wegner, of Berlin, in 1870, who pointed out its syphilitic character, but confined himself to its pathological aspect. The clinical features of the disease were well delineated by M. Parrot in 1872.

Dr. Taylor has collected and arranged all the available information concerning both its clinical and pathological characters, to which he has added many original observations, thus presenting us with by far the best published account of the affection, and one to the accuracy of which we can testify. It is important to distinguish the more chronic cases from rickets, to which they bear some resemblance; but other syphilitic symptoms will almost always be found if carefully looked for. Moreover, the syphilitic swellings are less numerous, and

occur earlier in infancy, as a rule, than those due to rickets, and, as Dr. Taylor points out, the ribs are less often affected in syphilis, and when they are attacked the disease is limited to a few of them.

Dr. Taylor describes also the affection as it is seen in some of the flat and irregular bones, and alludes to some of the joint affections occurring late in inherited syphilis, to which Mr. Furneaux Jordan has also called attention. Dr. Taylor recommends the treatment of all the osseous lesions of inherited syphilis by a combination of the bichloride of mercury and iodide of potassium, but does not recommend mercurial inunction, which he says sometimes produces in infants "severe cutaneous inflammation and grave systemic disturbance, such as great enfeeblement, and impoverishment of the blood with cachexia." We cannot but think that the symptoms here attributed to mercurial inunction are really due to the disease for which it is used, for in a very considerable experience of its use we have never seen any such effects produced, and it is well known that mercury given by the skin is much less liable to disturb the digestive apparatus than when given by the stomach. We may add that we have treated these cases with perfect success by grey powder without the iodide of potassium.

Les Bandages et les Appareils à Fractures. Par le Dr. J. F. Guillemin. Paris. 1875.

This is a very complete and elaborate little book on bandages and fracture apparatus. The descriptions are, as a rule, very clear, and their comprehension is much aided by the number and excellence of the illustrations. The book might, however, have been further reduced by the omission of some unnecessary repetition. The drawings of the different kinds of slings are very good, and a simple method of making a graduated compress by folding a single piece of linen, instead of by the superposition of several pieces, is well described.

The triangular coverings for the eyes, recommended by Dr. Guillemin, we consider less convenient, and less even in their pressure, than the method of bandaging round the forehead and occiput. Esmarch's bandage for bloodless operating is described, and some useful cautions given concerning its use. A convenient form of wire-gauze splint, invented by M. Sarazin, is mentioned, which seems to be very easily moulded to the limb, and to combine lightness and cleanliness. A good form of bandage for keeping the head inclined to one side, as in cases of torticollis, is figured; the bands which are attached to the occipital bandage being fixed below, to a band passing round the upper part of the chest and through the axillæ. With the exception of Dupuytren's splints, all the apparatus recommended for fracture of the lower end of the radius involves the harmful plan of including the fingers in the splint—a method that is responsible for much of the stiffness which so often follows this injury. Gordon's splints are not mentioned. Several machines are described for making pressure upon the bones of the leg in oblique fractures with riding of the fragments: we doubt, however, their practical utility, on account of the tendency to ulceration whenever pressure is concentrated upon a small portion of the surface of a limb. A great variety of methods of treating fractures of the patella are described. Malgaigne's hooks are not much in favour with the author, though we think the use of a crescentic piece of adhesive felt to the surface of the knee above and below the fragments makes the apparatus a very convenient one. The somewhat analogous plan of M. Trélat, who uses guttapercha shields, is, however, spoken of. The book ends with a description of modes of treating complicated fractures, and some instructions for the transport of the injured.

Metropolitan Asylum District: First Annual Report of the Committee for the Clapton and Darenth Asylums for Imbecile Children. London: Harrison and Sons. 1876. Pp. 40.

The First Annual Report of the working of the Clapton Asylum for Imbecile Children has just been issued. It tells of good work done in a good cause. For the first time the pauper imbecile children of London have been collected together, the chief objects being—firstly, to separate them from the adult imbeciles, very many of whom are indescribably depraved, and whose actions and words these poor children unconsciously imitate; and secondly, by appropriate education and training to develope any spark of intelligence which they may possess. It is only after sundry trials that the present system of treating them has been finally adopted; and the premises at Clapton (formerly known as the London Orphan Asylum) have been temporarily rented until the new buildings at Darenth, in Kent, can be completed. The new Asylum is to be built on the (so-called) pavilion system, and will contain every appliance that modern sanitary science considers necessary or desirable.

We are chiefly concerned with the medical report by Dr. Fletcher Beach. We find that 360 patients were admitted during the year. They are classed for general purposes as healthy, epileptic, and feeble and helpless; but in the schoolroom they are arranged in classes according to their varying capacities. It is, however, in the dormitories that the classification is most rigorously observed, and that, too, for obvious reasons. We may here mention that each child has its own wash-basin, soap, and towel; and, thanks to these hygienic measures, there has been an unusually small amount of parasitic and other disease incidental to childhood. They have not, however, escaped entirely, for we find that there has been a slight outbreak of scarlet fever. This was traced directly to its source, and was found to have been introduced by some of the parents, who had actually visited the Asylum even while they had other children ill at home with the fever. Typhoid fever, too, found its way in; eight cases are reported. It was quickly discovered that one of the overflow pipes communicated directly with the sewer, and so soon as this unwholesome condition of things was rectified the outbreak ceased. The children's training is partly educational and partly industrial. The girls are taught household work, while the boys are set to learn trades; and the success which has attended this part of the work has been as gratifying as it is encouraging.

Most cordially do we congratulate the members of the Clapton Asylum, and we wish it the continued success which will no doubt reward the untiring energies of its chairman (Sir Edmund Currie) and of its medical superintendent (Dr. Fletcher Beach), whose training—first at the Hospital for Sick Children, and then at the Bethlehem—renders him especially qualified for the office he holds.

The First Annual Report on the State of the Lunatic Asylum for the County of Nottingham, and the Sixty-fifth of the Original Institution, formerly the General Lunatic Asylum. Nottingham: John Howitt, Clumber-street. 1875.

The Twenty-fourth Report of the Derbyshire County Lunatic Asylum. Derby: *Reporter* Printing Office, Corn Market. 1875.

The above reports call for no special comment at our hands. The conduct and management of the asylums, and the proportion of cures effected, continue to be very satisfactory. Dr. Phillimore, the Resident Physician and Superintendent of the Nottingham Asylum, remarks that amongst the exciting causes of insanity in those admitted during the year, intemperance in the use of intoxicating drinks takes the highest place, furnishing twenty-one instances. The organic diseases of the brain and other viscera usually associated with this cause are among the least amenable to curative treatment, and have a marked tendency to shorten life. The greater mortality of male lunatics compared with females, in the proportion of four to three in this Asylum during the last twenty years, is in part due to the habit of systematic drinking being more prevalent among the former. Insanity, in this case, although avoidable in the ancestor, when once acquired, may be transmitted through or developed in the descendants, and thus become hereditary.

Fissure of the Anus in Infants.—Surgeon-Major Marboux having met with a case of fissure of the anus occurring in an infant two months old, was induced to look up the literature of the subject, and came to the following conclusions:—1. Fissure is met with in infants at the breast; but, if we are to judge by the few cases published, and the opinion of the principal authors, it is a very rare affection at this period of life. 2. At this age it is attended by the same symptoms as in the adult, except that the persistence of pain after defæcation is perhaps less constant. 3. It is generally induced by constipation, which therefore should be combated when met with in infants. 4. It is urgent to at once treat the affection, in the fear that the intensity and frequency of the pain induced by defæcation may give rise to attacks of convulsion. 5. It rapidly yields to rhatany employed either as an enema or as an ointment.—*Union Méd.*, June 10.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

July 22.

THE APPOINTMENT OF A MEDICAL OFFICER OF HEALTH—PROCEEDINGS OF THE HEALTH COMMITTEE AND THE TOWN COUNCIL—DECLINE OF THE OUTBREAK OF SMALL-POX.

MUCH comment in the local press, and a widespread dissatisfaction among the medical profession of Liverpool, have been excited by the method adopted by the Town Council in filling the post of Medical Officer of Health, rendered vacant by the retirement through illness of Dr. Trench. It need scarcely be said that the position is one of very great importance, demanding the exercise of much energy, and requiring the possession of extensive sanitary and scientific knowledge. It was naturally thought, therefore, when it became publicly known that Dr. Trench was definitively retiring from active duty, that the Council, as the Urban Sanitary Authority, would adopt such means as would secure for the town the ablest services that could be rendered; and it was felt that the first and most necessary step towards attaining this end would be to advertise the vacancy, and invite gentlemen from every quarter to submit statements of their qualifications. The next step of course, should have been the free and unbiased selection, in the simple interests of the public, of the candidate best qualified by health, age, attainments, and experience for the discharge of the duties.

These steps have not been taken, and hence the dissatisfaction. The Health Committee decided to nominate their late chairman, Alderman Taylor, who resigned the office of alderman in order to enable him to accept the post; and a majority of the members of the Council, at a special meeting convened for the 19th inst., ratified their recommendation.

Leaving out of consideration altogether the special fitness or unfitness of the nominee in this particular case, it is felt that the principles on which the proceedings of the Health Committee and the majority of the Council have been based are vicious, and that the proceedings throughout have been characterised by a want of consideration for the feelings of the town. It is felt also that there should not be the least possibility of suspicion resting on the motives which actuate men in seeking seats in public bodies, or accepting honorary positions of importance. Yet that suspicion is naturally excited when the chairman of a Health Committee—inevitably, from his position, exercising great influence over the minds of a considerable numerical section of the Council of which that Committee is a part—allows himself to be put in nomination before the Council for one of the most important stipendiary offices which it has it in its power to bestow. It is not to be wondered at, therefore, that an influential opposing member, when the question of the appointment was being discussed, expressed his sense of the desirability of a self-denying ordinance, in virtue of which every member of Council on taking his seat should preclude himself from applying for its paid offices on their falling vacant.

The final proceedings of the Health Committee, by which it was determined not to advertise, but to nominate Alderman Taylor, the recent chairman, were secret; as, under cover of the word "financial," reporters were excluded, although all the financial portion of the scheme had been publicly announced some time previously. This is as follows: Dr. Trench is to retain £500 yearly; and the Deputy Medical Officer (under which title the appointment is made, though it is well understood that, practically, it is that of Medical Officer) is to have during Dr. Trench's life £800 yearly—£700 for town, and £100 for port duties. When the title of Medical Officer, as well as its duties, is assumed, the yearly salary will be £1000.

The somewhat serious outbreak of small-pox with which the town has been visited is happily declining, although the number suffering from the disease at present in the West Derby Hospital (to which many of the borough patients are sent) is still very considerable. From inquiries which I have thus far made, I feel convinced that the history of this epidemic, its limitation, the cases in which the disease has proved severe or fatal, and other facts, will illustrate forcibly the advantages of thorough vaccination of children, and the early isolation of those attacked. I shall probably have an opportunity of submitting a definite numerical statement in support of this opinion, and, as well, some facts illustrative of the desirability, in the interests of the public and without undue injury to any private class, of an extension of some of the provisions of the Public Health Act, so far as they relate to infectious disease.

REPORTS OF SOCIETIES.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, JUNE 14.

J. NELTEN RADCLIFFE, Esq., President, in the Chair.

TWENTY-SIXTH ANNUAL GENERAL MEETING.

THE HONORARY SECRETARY presented his report, as follows:—During the present session the Society has received an addition of seventeen new members. Of this number five are corresponding members—viz., Dr. Arkhangelski, of St. Petersburg; Dr. Lent, of Cologne; Dr. Wortabet, of Beyrout; Surgeon-Major Colvill, of Bagdad; and Dr. Sternberg, of the United States Army,—worthy witnesses to the interest felt for our Society amongst distinguished epidemiologists in all parts of the world. Of the twelve other new elections, four are of non-resident and eight of resident members; a considerable accession of strength, not unneeded, as during the winter months the accustomed presence at our meetings of some of our elders has necessarily been interrupted. The Society has experienced heavy losses by death. We may place foremost and as greatest that of Dr. Parkes, the chief support and ornament of the science of hygiene; next, and near, comes that of Dr. Letheby, who, by the use of scientific method in the prominent sphere of his work, inaugurated much of the widely-spread utility of the medical officer of health; lastly, we miss from his place among us Mr. Sneade Brown, a most frequent attendant at our meetings, who, though not a member of the medical profession, worked earnestly to make the teaching of medical science beneficial to the health of the people. The income of the Society, if not largely increased, shows no diminution. Larger demands than usual have this year to be made upon it on the score of printing. Extra expenses have been incurred in the issue of a revised object-paper, in providing for a new edition of the laws of the Society (the first being exhausted), and for publishing the concluding part of the third volume of *Transactions*. A trivial cause of delay has prevented the completed volume being now in the hands of members. The new part, the end of which is in type, is somewhat increased in cost by the addition of illustrative lithographic charts. It contains, besides the presidential address, papers by Professors Léon Colin, Corfield, and Ransome, and the completion of my own contribution; an arithmetical study of the course of epidemics, by Dr. G. H. Evans; and a very clear and complete account of the work done at Vienna by the International Sanitary Conference, from the pen of Dr. Seaton, the representative of England at the Conference. The work of the present session has fully equalled that of its predecessor, and has exceeded my powers of doing it public justice. I need hardly recall to the minds of members the valuable aid rendered to the Society by the introductory address of our President; the importance of the original facts on the spread of cholera last autumn in Syria, by Dr. Wortabet; or of those sent us by Dr. Colvill, on plague in Mesopotamia. He himself visited many of the victims, and, by obtaining proofs of personal infection in many cases, and of the shortness of the resulting incubation period, established the basis of a scientific diagnosis, and the differentiation of the disease from marsh fever and malarial intermittents. Dr. Ballard's communication on medical meteorology has received full notice in the *Medical Times and Gazette;* and Dr. Sternberg read before us an essay on yellow fever, of the highest value, accompanied as it was by thirty-eight temperature charts, and elucidated by his personal experience of the disease. Dr. Smart's able review of the American report on cholera in the basin of the Mississippi, and the question of its importation by fomites, will appear in our next volume of *Transactions;* also the original report from the Turkish Archives of the first appearance of cholera in 1865. For this and for a report from Dr. Macgregor, the Chief Medical Officer of the Colony of Fiji, we are again indebted to the always ready aid of Mr. Simon. In this last report it is interesting to note the entire absence of measles and whooping-cough in the island before the terrible epidemic of last year; also that chicken-pox was recognised

there some years ago, and extended mildly with all its characteristics well-marked, though small-pox has fortunately never yet reached these islands. The new disease, *coko*, or, as it is pronounced, *thoko*, described by Dr. Macgregor, is shown, by a communication from Dr. Gavin Milroy, the last of the present session, to be analogous to the "yaws" of the West Indies, and to the "parangi" of Ceylon. Instances of the conveyance of diseases from the lower animals to man are attentively sought for by the Society; their absence from the reports of this session is somewhat compensated for by the very conclusive proof, submitted by Dr. Squire, of the conveyance of measles from man to the dog. A dog licked the hand of a child in bed with the rash of measles at its height; the dog sickened on the twelfth day after, suffered from coryza two days, and died on the fourth day of illness with most characteristic congestion of the throat and air-passages. The dog had gone through distemper four years before—a proof that the usual form of distemper in dogs is not measles. In revising the laws of the Society, the Council recommends that the old laws, chap. ii. and viii., providing for two General Secretaries, should remain unchanged, as their services are honorary; it is right that this provision for the division of labour should be maintained. The Council, meanwhile, has supplied the want by the election of George Henry Evans, M.A., M.D. Cantab., for the office, and asks this general meeting to sanction his appointment as one of the General Secretaries of the Society, to act in conjunction with the present Honorary Secretary.

The report was adopted unanimously.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 5.

W. O. PRIESTLEY, M.D., F.R.C.P., President, in the Chair.

BLUNT HOOK.

PROFESSOR LAZAREWITCH, of Kharkoff, Russia, exhibited a modification of the blunt hook. One end was adapted for replacing the funis, the other for extracting the child by the thigh, placing a silk tape round it, or for placing a plaited silk noose over the child's foot.

Dr. GODSON had on a former occasion called attention to the danger consequent upon using the blunt hook, formerly recommended by the Professor; he was glad to see he had discarded it for one with a different curve.

HYPERTROPHY OF SPLEEN AND LIVER.

Dr. ROUTH exhibited for Dr. Oswald specimens removed post-mortem from a child nine years old. The swelling had begun in early childhood. She was strumous, and measured thirty-three inches round the abdomen. A brother was similarly affected.

Dr. WILTSHIRE inquired as to the nature of the enlargement, whether there was any history of syphilis, or of chronic suppuration, or of tubercle, obsolete or with cavities. It looked as if it were a case of albuminoid infiltration. He would suggest the desirability of a microscopic examination.

Dr. WYNN WILLIAMS, who had had the case under his care, said the mother denied all knowledge of syphilis, but the father acknowledged to having had hard chancres. The condition was often seen in ague districts. Many children got it when the Metropolitan Railway was being made. The child was not rickety.

Dr. Routh, Dr. Williams, and Dr. Wiltshire were requested to examine and report further on the case.

ADDENDUM TO CASE OF COLLOID TUMOUR.

Dr. BARNES recorded the further history of the case reported last year. A mass nearly as large as before, weighing twenty-two pounds, had been removed by gastrotomy, and, spite of some wounding of the intestine owing to adhesions, the patient made a good recovery.

ON THE DISPLACEMENT OF THE UTERUS BY THE DISTENSION OF THE BLADDER, AS SHOWN BY EXPERIMENTS ON THE DEAD BODY.

Dr. BRAXTON HICKS read a paper upon this subject, detailing the results of numerous experiments he had made in conjunction with Dr. J. F. Goodhart, Demonstrator of Morbid Anatomy at Guy's Hospital. The conclusions arrived at coincided in many respects with those obtained by Dr. J. Williams. Distension of the bladder produces retroversion without flexion; and a combined distension, both of bladder and rectum, raises the uterus bodily in the pelvis in an axis more or less perpendicular to the plane of the brim. The uterus may be regarded as poised in its centre at the junction of the body and cervix. Moderate distension of the bladder suffices to tilt the fundus to a horizontal position; further distension, though generally completing the retroversion, may act in distending the anterior wall of the vagina, and in preventing version, but encouraging flexion, more especially if the cervical attachments be firm.

Dr. SNOW BECK inquired as to where the intestines were during these experiments.

Mr. SPENCER WELLS doubted whether experiments made on the dead body in the recumbent position, after removal of the small intestines, could afford reliable information as to the effect of varying degrees of distension of bladder and rectum upon the uterus of living women in the erect and other postures of the body. The influence of the small intestines (whether empty, or distended with fæces or gas) upon the uterus was, at least, as great as that of either bladder or rectum, or both, and when they fell at all low down behind the uterus into Douglas's pouch (as they certainly did not infrequently), they not only affected the position of the uterus, but often led to mistakes in practice.

Dr. CLEVELAND remarked that in estimating the full effect of a distended bladder upon the uterus it should be remembered that there is a considerable difference in degree between the distension—and, it may be added, thickness—of walls of a healthy bladder injected after death, and that of an organ gradually enlarging to an enormous size under retention during life. In Dr. Hicks's interesting experiments, the maximum of distension, produced by injecting two pints of water, did not probably reach one-fourth of what sometimes occurs under retention.

The PRESIDENT reminded the Society how Wm. Hunter had taught that retroversion of the gravid uterus was produced by an over-distended bladder, and this doctrine had been almost exclusively accepted for a time. Dr. Tyler Smith had pointed out that in some instances, at least, the retroversion was not due to the pressure of the bladder, but that pregnancy supervened in a uterus which had been known to be retroverted before gestation commenced. W. Hunter's observations applied especially to the uterus when its fundus was enlarged by pregnancy; but the investigations of Dr. Hicks carried the subject further, and seemed to indicate that the unimpregnated uterus might be displaced by a distended bladder.

Dr. JOHN WILLIAMS stated that his experiments were performed both on the living and on the dead subject. When the bladder and rectum were both full, the uterus was high up in the centre of the pelvis. If the bladder were empty, the uterus became immediately anteverted. When the bladder and rectum were both empty, the uterus was low and retroverted. As to the objections raised to the experiments, it was said that the intestines were generally found in Douglas's pouch during life: they were not found there once in twenty cases. When the uterus was attached to the posterior wall of the bladder for a longer distance than usual, it became anteverted when the bladder was empty. Unless the bladder and rectum were very much distended, the uterus never reached the brim of the pelvis. Constipation was an undoubted cause of retroflexion, as on defæcation the bladder was first emptied, and then the straining produced retroflexion.

Dr. ROUTH thought Dr. Williams's remarks very valuable. He had been in the habit for years of recommending patients with anteversion to hold their water for as long as possible. He thought the intestines were very rarely found in Douglas's pouch. In cases of rectocele he could not recall a single case where they had descended into the pouch.

Dr. SNOW BECK thought the intestines were very seldom found posteriorly—behind the uterus—he did not mean in Douglas's pouch.

Dr. BANTOCK stated that his experience gained in the operation of ovariotomy was directly contrary to that of Dr. Williams, as to the intestines being behind.

Mr. SPENCER WELLS believed the intestines were always behind the uterus.

Dr. J. WILLIAMS remarked that in most cases of ovarian tumour the uterus was either pressed down or else drawn up; in the latter case, of course, the intestines would go down behind.

Dr. WYNN WILLIAMS thought the cases of ovarian tumours and healthy abdomens were not comparable.

Mr. Lawson Tait said he had never found any evidence that the intestines were down behind the uterus in a case of ovarian tumour before its removal. He thought it must be exceptional, for he had observed it only twice. and then demonstrated it to others on account of its rarity. He did not think that any conclusions which Dr. Hicks might draw from experiments on a dead body lying on its back would materially aid us in judging of the influence of distension of the bladder in the living subject.

Dr. Roper thought it difficult to understand how distension of the bladder could produce retroflexion of a healthy uterus. Retroflexion was mostly connected with a morbid condition of the structure of the uterus resulting from metritis, or the uterus became bent by the contractions and adhesions brought about by parametritis.

Dr. Heywood Smith thought the weight of the lower segment of the bladder tended to pull down the uterus.

Dr. Galabin had been present at some of the experiments described in the paper, and he had noticed that the bladder did distend in a globular manner, and the lower segment first. It seemed evident that when the uterus was anteverted during life, the intestines were in contact with its posterior surface, and aided in maintaining its position.

Dr. Tilt thought the experiments interesting as far as they went, but we should understand better the effects of vesical distension on the womb by injecting the bladder without opening the abdomen, and by then making a section of the body after freezing it.

Dr. Hicks stated that he had brought forward his communication as a small contribution on the subject. In the horizontal position of the body the uterus was still vertical. The intestines did unquestionably get behind the uterus. It was impossible to distend the bladder to the umbilicus without bursting it.

Case of Vesico-vaginal Fistula.

Mr. Lawson Tait brought forward a case in which this condition remained fourteen years after lithotomy, and was cured by a series of plastic operations. In 1862 the patient underwent vaginal lithotomy; after that she went through a series of operative proceedings at the hands of different surgeons. In July, 1874, she came under Mr. Tait's care. Considerable loss of tissue had taken place by sloughing, atrophy, and attempted operations, so that a small pouch at the upper part of the vagina, not much larger than a walnut, represented the bladder. The patient suffered from phosphatic diathesis of the most inveterate description. During the eighteen months she was under treatment she was under the influence of chloroform some twenty-three times. In order to provide an exit from the bladder other than the urethra until the wound from the operation had fairly united, a Boudalt's trocar was passed through the left vaginal wall, as far from the urethra as possible, into the bladder and out on the other side close to the cervix. Through it a nickel wire drainage-tube was passed and fastened in. The operation was then conducted as before, and the result was most satisfactory. The stitches and drainage-tube were removed on the sixteenth day: the wound from the latter, being valvular, closed without trouble. The patient has now complete control over the bladder, and can retain as much as ten ounces of urine, rarely requiring to rise more than once during the night.

The President thought this an instance of the most unmitigated perseverance under the most difficult circumstances.

Mr. Spencer Wells had seen the patient operated on by Mr. Tait, and confirmed all that had been said in the paper as to the benefit which had followed the operation. In two similar cases, such great benefit was derived from the application of the actual cautery to the orifice of the urethra and for about an inch along the canal, leading to cicatricial contraction after the separation of the eschar, that no further operation was necessary. So much good was done in both cases that he would be disposed to try the effect of canterisation of the urethra in any case of incontinence of urine in women, where there was no vaginal fistula.

Dr. Bantock stated that Mr. Tait's experience confirmed that of Emmets—that in cases of fistulæ involving the urethra it was absolutely necessary to success to make an outlet for the urine through the floor of the bladder.

Dr. Routh remarked that Mr. Baker Brown had adopted the plan of making an artificial urethra, and sewing up the normal one, in similar cases.

Mr. Lawson Tait inquired if Mr. Wells would employ the actual cautery in cases of large dilatation of the urethra, such as proposed by Mr. Teale of Leeds.

Mr. Wells replied that he had not seen incontinence after dilatation.

Case of Hæmatocephalus.

Dr. Griffiths communicated the particulars of a case of this nature which had been mistaken for hydrocephalus. Brain-substance and clotted grumous blood issued from the opening made in the head, after which delivery was effected by the blunt hook.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 25th inst., viz.:—

Appleby, John Tranmere, Knutsford, Cheshire, student of the Manchester School.
Beverley, William Henry, Leeds, of the Leeds School.
Blaikie, John Robert, L.S.A., Oswestry, student of St. Bartholomew's Hospital.
Cash, John Theodore, M.B. Edin., Manchester, of the Edinburgh School.
Cattle, Charles Henry, Pontypridd, South Wales, of the Leeds School.
Dawson, Cantley, Leeds, of the Leeds School.
Lapage, Charles Clement, B.A. Cantab., Leeds, of the Leeds School.
Lennon, George Landon, Manchester, of the Manchester School.
Marsh, Octavius Edward Bulwer, L.R.C.P. Edin., Bristol, of the Bristol School.
Mercer, Robert, Bradford, of the Leeds School.
Moxon, William, Birmingham, of the Birmingham School.
Phillips, Alfred, L.S.A., Primrose-hill, of University College.
Pratt, William, M.D. Liége, Newtown, Montgomeryshire, of the Liége School.
Routh, Jules Isham, Manchester, of the Edinburgh School.
Spofforth, John, Lichfield, of the Birmingham School.
Sweeting, Martin Cass, Knaresborough, Yorkshire, of the Leeds School.
Thomas, Abraham Garrod, M.B. Edin., Aberayron, South Wales, of the Edinburgh School.
Wiglesworth, Joseph, Liverpool, of the Liverpool School.
Williams, Charles Lewis, Saltley, Warwickshire, of the Birmingham School.

Five candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. Three candidates passed the examination in Surgery, and when qualified in Medicine will be admitted Members of the College.

The following gentlemen were admitted Members on the 26th inst., viz.:—

Ballard, Philip, Bromyard, student of University College.
Donbavand, Edgar John, Hackney, of Guy's Hospital.
Dunbar, James John Macwhirter, Talbot-road, Bayswater, of St. George's Hospital.
Ellis, Philip Mackay, Chudleigh, South Devon, of St. George's Hospital.
Folkes, Frederick Hyde, Dukinfield, of the Manchester School.
Gosling, Charles Edward, The Green, Richmond, of the Birmingham School.
Harding, George Clarence, Clapham, of St. George's Hospital.
James, Charles, St. Just, Penzance, of King's College.
Kilbride, James, L.K., and Q.C.P.I., Dublin, of the Dublin School.
Phillips, Charles Henry, Ramsbottom, Lancashire, of the Manchester School.
Richardson, Thomas William, L.S.A., Norwich, of the London Hospital.
Robinson, Ernest Laurie, St. Martin's, Guernsey, of St. George's Hospital.
White, Alfred Oswald, Tangier, Morocco, of St. Mary's Hospital.

Two candidates passed the examination in Surgery, and when qualified in Medicine will be admitted Members of the College; and eleven candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their studies for six months.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 20:—

Anderson, Alexander Richard, Hammersmith.
Cox, William Laird, Abbey-road, Kilburn.
Duncan, Robert Byron, Glasgow.
Giles, George Michael James, North-terrace, S.W.
Gillam, Thomas Henry, Weaverham, Chester.
Jackson, Robert Alexander, Norfolk-square.
Jones, Price, Llanrwst, Denbigh.
Little, James, Maryport, Cumberland.
Mirza Hussein Khan, Hatherley-grove, Bayswater.
Parker, Arthur Frederick, Clifton, Bristol.
Richardson, Thomas William, Norwich.
Williams, William Henry, Sherborne, Dorset.

The following gentlemen also on the same day passed their primary professional examination:—

Battle, William Henry, St. Thomas's Hospital.
Boreham, Frank Squire, Charing-cross Hospital.
Candler, William John, St. Bartholomew's Hospital.
Coles, Donald Alexander, St. Bartholomew's Hospital.
Dingley, Allen, St. Bartholomew's Hospital.
Dutton, Thomas, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Leigh, Thos., L.R.C.P., M.R.C.S.—Acting-Surgeon to the Brighton Hospital for Sick Children.

Rudduck, J. B., M.R.C.S., L.S.A.—Resident Accoucheur to the London Hospital.

Whittle, E. G., L.R.C.P., M.R.C.S.—Acting-Surgeon to the Brighton Hospital for Sick Children.

NAVAL, MILITARY, &c., APPOINTMENTS.

Royal Horse Guards.—Surgeon Joseph Marmaduke Taylor to be Surgeon-Major, *vice* C. O. Logie, M.D., retired on half-pay.

Medical Department.—Surgeon Edmund Hunt Condon, M.D., to be Surgeon-Major; Surgeon-General Richard Coffin Elliot, C.B., retires upon half-pay; Deputy Surgeon-General Thomas Moorhead, M.D., Surgeon-Major Thomas Young Baker, and Surgeon Benjamin Richard Jagoe, M.D., retire upon temporary half-pay.

BIRTHS.

Cockburn.—On May 16, at Gover-street, North Adelaide, South Australia, the wife of John A. Cockburn, M.D. Lond., of a son.

Hendley.—On July 23, at Jeypore, Rajpootana, the wife of Thomas Holbein Hendley, L.R.C.P. Lond., of a son.

Hill.—On July 17, at 58, West Cromwell-road, South Kensington, S.W., the wife of T. Wood Hill, L.R.C.P. Edin., M.R.C.S., of a daughter.

Meadows.—On July 22, at Otley, Ipswich, the wife of G. F. W. Meadows, M.R.C.S., of a son.

Sansom.—On July 24, at 29, Duncan-terrace, City-road, N., the wife of Arthur Ernest Sansom, M.D., M.R.C.P., of a daughter.

Sharood.—On July 23, at 7, Headland-park, Plymouth, the wife of Edward Julian Sharood, M.D., Staff Surgeon Royal Navy, of a daughter.

Swan.—On July 20, at The Elms, Gosberton, Lincolnshire, the wife of R. Jocelyn Swan, M.R.C.S., of a son.

MARRIAGES.

Aldridge—Wanhill.—On July 12, at St. James's Church, Poole, Reginald Aldridge, Esq., solicitor, Poole, second son of J. P. Aldridge, M.D., of Shirley House, Dorchester, to Jessie Louisa, daughter of the late T. Wanhill, Esq., J.P., of Poole.

Geraty—Unthank.—On July 25, at Broad-street Chapel, Nottingham, Thomas Geraty, M.R.C.S., to Catherine, second daughter of Anthony Unthank, M.R.C.S.

Hole—Lindsay.—On July 18, at St. Paul's Episcopal Church, Edinburgh, Wm. Fergusson Brassey Hole, only son of the late Richard Brassey Hole, M.D., to Elizabeth Douglas, only daughter of James Lindsay, Esq.

Loveband—Furse.—On July 25, at St. John's, Hampstead, Henry Loveband, Esq., to Emma, fourth daughter of the late R. Furse, M.R.C.S., of South Molton, Devon.

Petavel—Hills.—On July 25, at the Swiss Church, Endell-street, Josias Chrétien Petavel, M.D., of Geneva, youngest son of the late Abram François Petavel, Doc. Phil. Neuchâtel, to Augusta, eldest daughter of H. Hills, Esq., of The Paragon, Blackheath.

Walsham—Spencer.—On July 26, at St. Bartholomew's, Sydenham, by the Hon. and Rev. Augustus Legge, William Johnson Walsham, M.B., F.R.C.S Eng., of Weymouth-street, Portland-place, W., to Edith Maria, elder daughter of Joseph Huntley Spencer, of High Wickham, Hastings, and London.

DEATHS.

Barker, Hugh Tratios, youngest son of Alfred Jas. Barker, M.D., at Ivy Lodge, Hornsey-road, on July 23, aged 17.

Roots, William Sudlow, F.R.C.S., at Kingston-on-Thames, on July 18, aged 71.

Sankey, Elizabeth, widow of the late Wm. Sankey, F.R.C.S., at Dover, on July 23, aged 77.

Webster, John, M.D., F.R.S., at 9, Queen-street, St. Andrews, N.B., on July 21, aged 82.

Wimberley, F. W., M.R.C.S., late of Brinklow, Warwickshire, on July 13, aged 33.

Wright, Ann, widow of the late Edward Wright, M.R.C.S., formerly of Bath, at 7, Darlington-street, Bath, on July 19.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Amersham Union.—Medical Officer. Candidates must possess the qualifications required by the Consolidated Orders of the Local Government Board, a certificate of qualification to vaccinate, and a certificate of being duly registered pursuant to 21 and 22 Vict., chap. 9, sec. 34. Applications, with testimonials, to Henry Bedford, Clerk, not later than July 31.

Birmingham and Midland Eye Hospital.—House-Surgeon, who will be required to be a member of one of the Colleges of Surgeons of Great Britain or Ireland. Testimonials to the Chairman of the Medical Committee not later than August 9. J. Cranmer Gell, Secretary, Committee-room, Temple-row, Birmingham.

Birmingham and Midland Eye Hospital.—Dispenser, who must either be a member of the Pharmaceutical Society or able to produce evidence of having been actively engaged in dispensing for a period of three years. He will be required to attend at the Hospital on week-days from 8.45 a.m. till 6 p.m., and on Sundays at 12.30 p.m. Dinner provided. Salary £70. Applications, with testimonials, not later than Monday, August 7, to J. Cranmer Gell, Secretary, Committee-room, Temple-row, Birmingham.

Birmingham and Midland Free Hospital for Sick Children.—Acting Physician and an extra Acting Physician. The duties of the extra Acting Physician will be limited to the out-patient department; he will have to attend on three days in each week. Salary £60. Candidates for above appointments must be graduates in medicine of a British university, or Fellows or Members of the Royal College of Physicians of London, Edinburgh, or Dublin. Applications, accompanied by diplomas and certificates of registration, to the Medical Committee, Children's Hospital, Steelhouse-lane, not later than Friday, August 4.

General Hospital, Birmingham.—Resident Medical Officer. Candidates must be graduates in medicine of a university by examination. Salary £130, with board and residence. Applications, accompanied by diplomas and original testimonials, to be sent in, under cover, not later than July 31, to Mr. T. Grant, House-Governor.

Keighley Local Board of Health.—Medical Officer of Health. Candidates must be legally qualified medical practitioners. Applications, not later than July 25, to the Chairman of the Sanitary Committee, Town's Office, Keighley, endorsed "Medical Officer of Health."

London Hospital Medical College, Mile-end, E.—Superintendent for the Department of Practical Anatomy. Applications, with testimonials, must be sent in before August 1.

Manchester Royal Eye Hospital.—House-Surgeon and Secretary. Applications (by legally qualified practitioners) and testimonials to the Chairman of the Board of Management on or before August 1.

Manchester Royal Infirmary.—Pathological Registrar. Salary £100, with permission to practise. Applications to the Resident Medical Officer.

Newcastle-upon-Tyne Infirmary.—Senior House-Surgeon. Salary £100, with board, lodgings, and washing. Candidates must be registered in medicine and surgery, unmarried, and free from the care of a family. Applications and testimonials to the Chairman of the House Committee before August 3.

Royal Hospital for Diseases of the Chest, City-road, E.C.—Physician. Candidates, who must be Fellows or Members of the Royal College of Physicians of England on the day of election, are requested to send in their applications, with testimonial, etc., by Wednesday, August 9, to C. Lowther Kemp, Secretary, etc.

Samaritan Free Hospital for Women and Children.—Physician (Out-Department). Candidates must be graduates of a university in the United Kingdom, or if holding a foreign degree only, must be members of the London College of Physicians. Applications, with testimonials, to George Scudamore, Secretary, Lower Seymour-street, Portman-square, W.

Warwick County Lunatic and Idiot Asylum.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Banbury Union.—Mr. James Dewar has resigned the Middleton Cheney District; area 6428; population 2438; salary £53 per annum.

Bristol Incorporation.—The Third District is vacant; area 173; population 11,748; salary £100 per annum.

Llandilofawr Union.—The Western District is vacant; salary £27 per annum.

Wharfedale Union.—The Second District is vacant; area 11,641; population 9687; salary £35 per annum.

APPOINTMENTS.

Nantwich Union.—John L. Seller, M.D., L.R.C.S. Edin., L.S.A. Lond., to the Tarporley District.

An annual subscription of twenty guineas has been voted by the Worshipful Company of Clothworkers to the University College Hospital.

Diphtheria in Milan.—In the *Gazzetta Medica Italiana Lombardia* for May 20 and June 3 and 10 is inserted a paper read by Dr. Felice dell' Acqua at the Lombard Institute, giving an elaborate account, illustrated by many tables, of the epidemic diphtheria which prevailed at Milan during the years 1873-75. It relates to 2811 cases.

Collegiate Finances.—From the annual report of the receipts and expenditure of the Royal College of Surgeons, which has just been published, it appears that the former amounted to £19,896 17s. 11d., and the expenditure to £20,776 9s. 8d. This excess of the latter over the former is owing to the judicious investment of £6450 in the purchase of the freehold house adjoining the College. The College now possesses a grand front from the united houses Nos. 37 to 43 inclusive.

THE sixth of the new series of Reports of the Medical Officers of the Privy Council and Local Government Board contains an article on the study of disinfectants by Dr. Baxter. A great number of very careful experiments were made with a view to test the disinfecting properties of the so-called disinfectants commonly used. Evidence was adduced to show that carbolic acid, sulphur, permanganate of potash, and chlorine are all endowed with true disinfectant properties, though in very varying degrees. The effectual disinfectant operation of chlorine and permanganate of potash appears to depend far more on the nature of the medium through which the particles of the infective matter are distributed than on the specific character of the particles themselves. A virulent liquid cannot be regarded as certainly and completely disinfected by sulphur unless it has been rendered permanently and thoroughly acid. No virulent liquid can be considered disinfected by carbolic acid unless it contains at least 2 per cent. by weight of the pure acid. When disinfectants are mixed with a liquid it is very important to be sure that they are thoroughly incorporated with it, and that no solid matters capable of shielding contagion from immediate contact with its destroyer be overlooked. Aërial disinfection, as commonly practised in the sick-room, is either useless or positively objectionable, owing to the false sense of security it is calculated to produce. To make the air of a room smell strongly of carbolic acid by scattering carbolic powder about the floor, or of chlorine, by placing a tray of chloride of lime in a corner, is, so far as the destruction of specific contagion is concerned, an utterly futile proceeding. The practical result of these experiments goes to prove (1) that dry heat, when it can be applied, is probably the most efficient of all disinfectants; (2) that the old plan of stopping up crevices and fumigating with sulphur and charcoal is more efficacious than any other proceeding with more modern disinfectants; (3) that the use of carbolic vapour for disinfecting purposes should be abandoned, owing to the relative feebleness and uncertainty of its action.

THE CLINICAL LECTURES ON INSANITY IN PARIS.—These lectures, which were so peremptorily stopped by M. Duval, the Prefét of the Seine, for some sentimental reasons, two years ago, are about to be resumed at the St. Anne Asylum. At the instance of Profs. Robin and Lieuville, M. Marcère, the new Home Minister, following in the steps of his predecessor M. Ricard, has investigated the alleged objections urged against these lectures, and has come to the conclusion that they are unfounded.—*Union Méd.*, July 22.

PROFESSIONAL EXAMINATIONS.—The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the pass examination for the diploma of membership of the Royal College of Surgeons on Friday and Saturday last, viz.:—1. Describe the boundaries of the popliteal space; and name the structures met with in its dissection, and their exact relations. 2. Mention the parts divided or exposed in the operation of ligature of the common iliac artery. 3. Give a brief account of such tumours as depend upon the formation of cysts; mentioning the chief varieties, and the modes of origin of such growths. 4. Mention the forms of polypus nasi; describe their structure and attachments, the symptoms to which they give rise, and the treatment. 5. Describe the conditions of the eyeball requiring its excision, and the method of performing the operation. 6. Give the treatment suitable to penetrating wounds of the elbow-joint, and the possible results in an unfavourable case. Candidates were required to answer at least four, including one of the first two, out of the six questions. The following were the questions on the Principles and Practice of Medicine, viz.:—1. Describe a case of acute pneumonia in the adult; giving the causes, symptoms, and physical signs of the different stages, and the sequelæ of the disease. 2. What are the various parasites found in the human body? Describe them, give their habitat, and the usual treatment. 3. Give the indications and counterindications for the employment of opium and its preparations. State the constitution and average dose of the following pharmacopœial preparations:—Acidum nitrohydrochloricum dilutum, confectio opii, decoctum aloes compositum, pilula conii composita, pilula hydrargyri subchloridi composita, pulvis kino compositus.

CLEANSING THE CERVIX UTERI.—M. Pajot observes that everyone who has to do with the diseases of women is aware of the difficulty there is in cleansing the uterine orifice by completely removing the adherent, viscous, and tenacious mucus which characterises certain forms of uterine catarrh. He has for some years past in vain asked the chemists for an inoffensive substance which, being miscible and emulsive with the mucus, might serve the purpose of cleansing the orifice and the *culs-de-sacs*. After trying various substances himself, he has hit upon a very simple and efficacious procedure. A pencil of charpie is soaked in a raw and fresh yolk of an egg, and after it has been allowed to remain for a short time in contact with the mucus, some water is injected once or twice through the speculum, the charpie being well turned about the while. After the water has been let to pass away again, and the cervix has been dried, the whole of the secretion in question will be found to have been removed.—*Annales de Gynécologie*, July.

GERMAN MEDICAL STUDENTS.—The following are the numbers of the medical students who have during the last session entered at the universities at which medicine is taught in the German language:—Vienna, 820; Würzburg, 548; Leipsic, 428; Dorpat, 353; Munich, 347; Berlin, 263; Greifswald, 218; Graz, 211; Zürich, 197; Strasburg, 191; Erlangen, 161; Breslau, 160; Tübingen, 157; Bern, 151; Königsberg, 148; Bonn, 123; Göttingen, 123; Marburg, 122; Freiburg, 120; Halle, 112; Heidelberg, 87; Giessen, 84; Basel, 82; Jena, 75; Innsbruck, 69; Kiel, 64; Rostock, 36. Austria with her three universities has almost as many medical students as Germany with her twenty. Berlin stands only fourth among these last in point of numbers, and Bonn twelfth. Halle has most surprisingly decreased in numbers, and Griefswald far surpasses it, now standing in the fifth place. Prof. Leyden having been called from Strasburg to fill Prof. Traube's post at Berlin, his place is to be supplied by Prof. Nothnägel, of Jena.—*Allg. Liter. Bericht.*, June 22.

BROWN-SÉQUARD'S LECTURES.—We have been favoured with the following note on the subject of Dr. Brown-Séquard's first lecture:—A large and distinguished gathering of physicians and surgeons met together to listen to Dr. Brown-Séquard's lecture on Monday afternoon (24th). The lecturer was warmly greeted, and his lecture was listened to throughout with the greatest interest. He began by stating the generally accepted views as to the causation of paralysis, and then stated his own inability to accept these views, as not being borne out by clinical facts; and he expressed a hope that he should be able to induce others to see that the "new" views were the result of wrongly drawn conclusions, from observations which could, and ought to be, differently interpreted. There were two points on which he would especially touch. First, that paralysis depends on the cessation of function of that part of the brain where the disease exists. If the disease exists in the psycho-motor tract, the function of that part would be destroyed. Facts constantly meet one, which contradict this view: for instance, in ordinary cases of hemiplegia, how various the lesions which produce this form of disease! Disease, in fact, in almost any part of the hemisphere might produce hemiplegia. The second point was that paralysis was not constant in disease of the brain, not even in cases of actual destruction of parts of the brain. Whole tracts might be removed, and no paralysis occur. Disease frequently occurred in places not recognised either as centres of motion or as conductors for the transmission of the will to the muscles; and paralysis sometimes occurred, and sometimes not. These views would not in any way prevent his accepting the usual symptoms diagnostic of the seat of a lesion. Irritations of the cortical substance of the brain were also very inconstant in their results: they produced not only the so-called proper movements, but a variety of other phenomena which were not anticipated. After the application of a hot iron, secondary changes were produced in the posterior part of the lateral column of the cord. Disease here is known to produce convulsions or permanent rigidity, but these parts are certainly not employed to convey the will to the muscles. Disease in the central parts of the brain produced paralysis, but Vulpian had recorded cases in which the anterior parts of the medulla and crura cerebri were nearly destroyed, and yet no trace of paralysis existed. One patient walked the day before death. If, then, paralysis is not the result of loss of function, how is it produced? What is the mode of its production? Firstly, there can be no doubt that very few nerve-fibres are sufficient to perform all the movements which the will may require: many special facts show that a smaller number of fibres really suffice than is generally believed. Secondly, it may be

asserted that one half of the brain is sufficient to convey the will to the two sides of the body. The question would naturally be asked then, Why do paralyses so often occur, if so few fibres and one half of the brain suffice to carry out the orders of the will? Disease in the brain is the same as on a mucous membrane or elsewhere—it produces irritation, and this is conveyed through all the possible connecting channels; there is therefore a greater chance of disease in the brain giving rise to visible symptoms, because of the very great number of channels by which the irritation can be conveyed. In this respect it differs from disease elsewhere, because there are fewer channels for communication, and because the brain in itself is more excitable than other organs. Paralysis results from irritation conveyed from a diseased or injured part of the brain to other parts of the nervous centres; and special paralyses are not the result of irritation of any localised collections of nerve-cells, but rather of individual cells scattered about; hence certain parts of the brain can be destroyed or injured without necessarily destroying or interfering even with the special functions said to reside in these parts. And just as irritation, say of the pneumogastric nerve, may produce two different results, so with the brain. We may have two sets of symptoms—one resulting from an increased inhibitory influence on certain nerve-cells, causing convulsions and epilepsy; the other in a decreased control, ending in paralysis.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Inquirer.—Consult "Guide to Printing and Publishing," published by Messrs. W. and L. Collingridge, *City Press* Office, 120, Aldersgate-street, London.

Vera.—The employment of doctors and the consumption of drugs is greater, without doubt, in America than in any country in the world. Every State Legislature has chartered medical colleges for the education of young persons in medicine and surgery. That supply may equal demand, there are homœopathic as well as allopathic colleges; and not only these, but botanic, hydropathic, etc. In some of the states the laws make no distinction, and not even a diploma from any college is required; still there is, no doubt, a certain degree of prejudice in favour of something like a regular medical education, and especially a regular diploma. As a rule, the American physician does everything and attends to every call. In large towns there may be specialities. In the country, he is apothecary as well as surgeon, physician, dentist, and accoucheur. No profession in America is more devoted, or makes more sacrifices in the way of duty, we believe, than this of medicine; but much irregularity and uncertainty has, unfortunately, hitherto attended it.

A Pupil.—Take this from "Guesses at Truth":—"The difference between desultory reading and a course of study may be aptly illustrated by comparing the former to a number of mirrors set in a straight line, so that every one of them reflects a different object; and the latter to the same mirrors so skilfully arranged as to perpetuate one set of objects in an endless series of reflections."

Leo.—In France the Company of Barbers was formed in 1096. The French bath-keepers, who pretended to much medical knowledge by preparing medicated baths suited to different diseases and constitutions, and also by previously preparing the body by laxatives and venesection, shared with the barbers for a long period the practice of the healing art.

Statistics.—A noted Frenchman calls statistics "the science of natural, social, and political facts expressed in numerical terms." A German says that "history is statistics in movement, statistics are history at rest." A Scotchman describes them as "the means of determining and augmenting the sum of happiness which a nation enjoys." Napoleon bestowed upon statistics the denomination of "the budget of things," and proclaimed that they are "the art of making the inventory of a country," while Goethe said of them, that "if figures do not govern the world, at all events they show us how it is governed." The word "statistics" was invented in 1748 by Professor Achenwall, of Göttingen.

Old.—It is nowadays somewhat difficult to draw any certain line between a congress and a conference. In theory, however, a congress has the power of deciding and concluding, while a conference can only discuss and prepare.

Duelling.—Mr. Heaviside, an eminent London surgeon fifty years ago, in the course of a trial is said to have asserted the right of a surgeon to accompany persons who were going deliberately to fight a duel. He was rebuked by the judge, and told that he rendered himself liable as an accomplice. Dr. Maurice Corr's paper in *Macmillan's Magazine* for February, 1874, gives some notion of what a surgeon might venture to do forty years ago in Ireland. Dr. Corr, in the course of his "Reminiscences of Duelling in Ireland," gives particulars of not fewer than ten cases in which he had been present. Whilst stating that parties were rarely hit at *nine* yards, that danger began at *twelve* yards, and that shots at *fifteen* yards were often fatal, he describes a duel at Bagnères, in the Hautes Pyrénées, fatal at fifteen yards. At the second case mentioned, he was present accidentally during his apprenticeship to Sir Philip Crampton. In the third case he was present as professional attendant of both combatants. The duel related to gambling transactions, and whilst the parties were aiming their second shots at each other, Dr. Corr called on them to lower their pistols, and the quarrel was made up. In the fourth case, Dr. Corr attended as surgeon to Mr. Kinsella, who was shot through the lower part of the neck from right to left, and was in great danger from hæmorrhage. In a fifth case, between two newspaper editors, after two shots had been fired, Dr. Corr "ventured to suggest a settlement," as enough had been done to satisfy the honour of both gentlemen, whose quarrel was a mere matter of pen and paper. In the sixth case, between Captain Nolan and Mr Browne, the captain, who was crippled with rheumatism and attended professionally by Dr. Corr, was obliged to be carried in a chair to the ground. Nevertheless, at a second shot, he would have shot his adversary through the liver, were it not that Browne's elbow was firmly supported on the right hip, after the mode known as the "Kerry safeguard." Thus the ball struck the forearm, ran up it, and was stopped at the elbow. In a seventh case, there was a missfire at the first shot, and the seconds pronounced the parties' honour to be satisfied. In the eighth case, the doctor was arrested on the ground as one of the principals, and was taken to the police-office, but procured bail in time to allow him to be present at the duel, where, after five shots apiece without a hit, the seconds withdrew their principals. In each of the ninth and tenth cases recorded, one of the principals showed the white feather, and preferred a horsewhipping to the chance of a bullet. The last case noted was one in which Dr. Corr noticed the great courage and coolness of his client, one of the combatants, who yet committed suicide soon afterwards rather than face the stigma of being jilted by a lady. Dr. Corr hopes, as we do, that the fine old Celtic sentiments of honour and bravery will continue to animate the national heart; but we would suggest that brave men of honour are as slow of giving offence as quick at resenting it when offered, and that the necessity for frequent duels cannot exist amongst people who have the refinement and consideration and coolness, as well as the courage of gentlemen.

Surgeons for the War in the East.

A correspondent writes that—"I see it stated in the *Daily News* of the 22nd inst. that great satisfaction was produced at Belgrade by the arrival of two English surgeons there. I had a letter from a friend last night, dated Belgrade, which was of course written before the arrival of these surgeons, and in it he says, 'If you hear of any young surgeon wanting practice in operations, etc., he ought to come out here. I was particularly told this morning that any English surgeon would be gladly welcomed and immediately employed by the Government.' In another letter I had from him a few days since he says, 'I have done a little work in the hospital, and I have written praying that an English ambulance might be got up. The want is dreadful.'"

The Doctor in Abyssinia.

"Whilst invalids of all classes daily flocked to the camp of the Europeans for medical assistance, applications were not wanting from the Palace in proof of the reputation acquired. One of the princesses royal was treated for a sprained foot. Divers respectable duennas of the royal kitchen, who had been severely scalded, were also treated with success, when they had been given over by the body-physician, at whose merciless hands the sobbing patients had been plastered over with honey and soot; and a mutton-bone was extracted from the throat of a page, where it had been firmly wedged for three days. But the cure which elicited the most unqualified and universal amazement was that of a favourite Baalomaal, who, labouring under a fit of apoplexy, which had deprived him of animation, was suddenly revived by venesection, after native treatment had been tried in vain, and preparations were already commencing for his interment. Medicine, in fact, now engrossed the entire of the royal attention. Phials and drugs without number were sent to the tent with a request that they might be so labelled as to admit of the proper dose being administered to patients labouring under complaints, for the removal of which they were respectively adapted. No subterfuge that ingenuity could devise was left untried by which to augment the already ample stock of pills on hand."

Treatment of Wine.

In the *Wine Trade Review* of July 15 we find the following account of a method of treating wine, patented by Dr. Thudichum:—

"The features of novelty of this invention are as follows:—The inventor ascertains the amount of sulphuric acid contained in the wine by chemical analysis in the manner well known in science. He then adds to the wine a quantity of tartrate of barium in the state of a very fine powder, or in the state of a freshly made precipitate; or he adds to the wine a quantity of tartaric acid first, and a quantity of hydrated caustic baryta dissolved in a minimum of hot water afterwards, sufficient in each case to precipitate nearly all the sulphuric acid, and a portion of the potash, and agitates the mixture in an apparatus which he has invented for that purpose. After the lapse of a few days, he racks, decants, filters, or otherwise separates the clear wine from the precipitate. He then allows the wine to repose in a cool place for some time to enable it to deposit any surplus of tartar or bitartrate of potassium which it may contain. When clear, the wine is tested to prove that all the impurities have been removed, and that not a trace of the agents employed in this removal has remained in the wine, excepting alone a small portion of tartaric acid. And he declares the effect of his discovery and invention to be that the wine treated by this process is much improved in taste and flavour, that its colour is riper, and that it matures much better than wine not so treated, and that

it has therefore a much greater money value than the impure wine containing the said impurities. And he further declares that by this method the ordinary processes of fining wines by the blood of oxen and sheep, by whites of the eggs of birds, or by cows' milk, or by Spanish earth (so called), or by isinglass or gelatine, or by dextrine and sulphurous acid or the fumes of sulphur burnt—all of which, though fining the wine, leave some of their soluble ingredients in the wine, and compromise its quality—are made unnecessary and superfluous. And he further declares that by these processes the wines treated by them are made much more wholesome than they are in their ordinary impure state, and that therefore his discovery and invention will not only be of advantage to persons using it for profit, but will be of public utility."

It is a fact, unfortunately, that the introduction of any poisonous substance into the practice of art or industry is always followed by cases of poisoning, either by mischance or design. Photography has rendered cyanide of potassium a common poison; and the misuse of carbolic acid (an agent for the preservation of life from pestilence) is often a cause of death. Still more are we bound to be cautious when it is proposed to use poisonous substances in the preparation of aliment. In order to carry out this proceeding, the quantity of sulphuric acid in the wine must first be ascertained; after it, tests must be similarly employed; and these are proceedings hardly to be entrusted to a wine merchant or his men, or any persons not trained as scientific chemists. For our own part, we should prefer for common use the old-fashioned finings of eggs and isinglass, and the use of the brimstone-match, on the score of safety, to the new process, unless guarded by a volumetric analysis in skilled hands. The promulgation of such processes cannot be good for the wine trade.

COMMUNICATIONS have been received from—

Dr. Alexander, Liverpool; Dr. C. Oaton, Newcastle, Staffs.; The Secretary of the Local Government Board; Dr. T. Savage, Birmingham; Dr. Buzzard, London; The Secretary of Apothecaries' Hall, London; Dr. Druitt, London; Dr. Duggeon, Glasgow; Dr. W. Irvine, Liverpool; Dr. Carter, Liverpool; Mr. Baxter, Kennington; Dr. Vincent Harris, London; The Secretary of the Hospital Saturday Fund; Mr. G. S. Wells, Ventnor; The Secretary of the Harvey Tercentenary Memorial Fund; Dr. C. Hanofield Jones, London; Dr. Edis, London; Mr. George Brown, London; Mr. J. Chatto, London; Mr. T. M. Stone, London.

BOOKS AND PAMPHLETS RECEIVED—

Report of a Drawing-Room Conference on Boarding Out Pauper Children—A. B. Judson, M.D., On the Cause of Rotation in Lateral Curvature of the Spine—Drs. Bucknill and Clouston, On Asyluma for Drunkards, and the Relations of Drink and Insanity—Ziemssen's Cyclopædia of the Practice of Medicine, vol. xi.: Diseases of the Peripheral Cerebro-Spinal Nerves—D. Hanbury, F.R.S., Science Papers, chiefly Pharmacological and Botanical—Balmanno Squire, M.B., on Port-Wine Mark and its Obliteration without Scar.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—The Shield—Nature—Philadelphia Medical Times—New York Medical Journal—Live-Stock Journal—Sunday Press and Mirror of the Times—Morningside Mirror—American Practitioner—Leisure Hour—Sunday at Home.

APPOINTMENTS FOR THE WEEK.

July 29. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

31. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

August 1. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

2. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

3. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

4. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 22, 1876.

BIRTHS.

Births of Boys, 1219; Girls, 1114; Total, 2333.
Average of 10 corresponding years 1866-75, 2121·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1010	868	1878
Average of the ten years 1866-75	799·3	727·1	1526·4
Average corrected to increased population ...	...	...	1633
Deaths of people aged 80 and upwards ...	...	...	44

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	7	2	2	...	1	...	80
North	751729	1	2	6	4	2	2	3	...	120
Central ...	834369	...	2	3	...	5	...	1	1	30
East	639111	...	6	3	2	5	1	4	2	112
South	967692	7	11	16	2	15	...	3	2	115
Total	3254260	8	24	35	10	29	3	12	5	457

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·000 in.
Mean temperature	70·5°
Highest point of thermometer	94·0°
Lowest point of thermometer	51·6°
Mean dew-point temperature	57·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 22, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending July 22.	Deaths Registered during the week ending July 22.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2333	1878	94·0	51·6	70·5	21·39	0·00	0·00
Brighton	100632	42·7	55	29	79·2	54·7	64·8	18·23	0·00	0·00
Portsmouth ...	124867	27·8	70	52	...	...	...	...	...	...
Norwich	83430	11·2	50	23	83·0	51·0	63·7	17·61	0·00	0·00
Plymouth	72230	51·8	83	31	84·0	57·0	68·0	20·00	0·00	0·00
Bristol	199539	44·8	150	93	96·2	52·8	71·8	22·12	0·00	0·00
Wolverhampton ...	72549	21·4	44	22	92·8	49·2	66·8	19·34	0·28	0·71
Birmingham ...	371839	44·3	283	134	89·6	52·2	65·8	18·78	0·02	0·05
Leicester	113581	35·5	77	53	93·2	51·2	67·9	19·94	0·03	0·08
Nottingham ...	93627	46·9	62	41	92·2	48·1	66·7	19·28	0·00	0·00
Liverpool	521544	100·1	372	239	84·8	51·5	61·6	16·45	0·00	0·00
Manchester ...	357917	83·4	263	190	95·0	52·8	66·5	19·17	0·43	0·09
Salford	138425	26·8	131	82	93·0	49·0	63·5	17·50	0·00	0·00
Oldham	88609	19·0	66	43	...	...	...	...	...	...
Bradford	173723	24·1	112	47	87·6	53·0	66·0	18·89	0·00	0·00
Leeds	291580	13·5	233	179	93·0	53·0	66·8	19·34	0·00	0·00
Sheffield	274914	14·0	200	115	92·7	50·0	67·4	19·66	0·25	0·63
Hull	136933	37·7	126	72	87·0	51·0	63·6	17·56	0·54	1·37
Sunderland ...	108343	32·8	74	39	90·0	55·0	61·4	18·00	0·04	0·10
Newcastle-on-Tyne	139929	26·1	110	70	...	...	...	...	...	...
Edinburgh	215136	51·3	144	76	...	...	...	...	...	...
Glasgow	545144	90·4	467	271	81·5	50·4	61·8	16·56	0·38	0·97
Dublin	314666	31·3	170	119	92·3	40·8	63·6	17·56	0·00	0·00
Total of 28 Towns in United Kingdm	8028595	37·7	5628	3898	96·2	40·8	65·9	18·83	0·10	0·25

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·00 in. The highest was 30·21 in. at the beginning of the week, and the lowest 29·78 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON CANCER OF THE ŒSOPHAGUS: BASED ON 100 FATAL CASES.

DELIVERED AT THE LONDON HOSPITAL MEDICAL COLLEGE, MAY 10 AND 17, 1876.

By MORELL MACKENZIE, M.D. Lond.

[Reported by Dr. GORDON HOLMES.]

(*Concluded from page* 83.)

Treatment.—In dealing with cancer of the œsophagus we have no satisfactory task. The opinion of Rokitansky,(a) based on the frequent appearance of certain cicatrices in the œsophagus, that cancer is often cured, is opposed to all experience. As a rule, little good can be done in the way of treatment, and care must be taken to avoid doing harm. Great judgment is required in knowing when to use and when to withhold the bougie, for whilst death may be accelerated by its improper use, life may often be prolonged by its judicious employment. In doubtful cases it is best not to interfere, and the effects of mechanical treatment must always be carefully watched. If ulceration exist, as it generally does in epithelioma, the commonest kind of cancer-instruments certainly should not be employed. The presence of ulceration is often shown by the expectoration being slightly tinged with blood, or by the point of the bougie being slightly smeared with it. If, however, the disease consist mainly of growth—especially if it be of a scirrhous character—the closure of the œsophageal canal may be retarded by the use of bougies.

Directly cancer is suspected, the food should be most carefully selected. Milk is the most valuable aliment, and, on account of its highly nutritious and entirely unirritating character, should be regarded as the staple article of diet. Beef-tea, mutton broth, turtle soup (free, of course, from pepper or salt), eggs, arrowroot, or thin, soft farinaceous food, may be given; but stimulants should, if possible, be avoided, as they irritate the diseased surface. It rarely happens that the œsophageal pump or feeding-bottle can be advantageously employed, as, if the stricture be so tight that fluid cannot be swallowed, an instrument can seldom or never be passed. Fistulous communication is rarely established between the œsophagus and trachea in cases of cancer of the gullet until the stricture is absolutely impermeable. It is when a fistula extends from the air-passages to the œsophagus that the œsophageal feeding-bottle is so extremely valuable. The patient must, as far as possible, be kept free from pain, and rest at night insured. Subcutaneous injections of morphia offer the most suitable means of effecting this end. In cold weather the apartments should be kept warm, all the conditions of the patient tending to lower his bodily temperature. As the disease advances, absolute aphagia is established, and the patient must then be fed by nutritive and stimulating enemata. Instead of the large liquid enemata which are commonly employed, it is better to use the semi-solid compounds of Leube, who has shown how greatly rectal digestion is assisted by the presence of pancreas. The formula which I have found most useful is the following:—Beef, mutton, or chicken, 4 oz.; pancreas,(b) 2 oz.; fat, 1 oz.; brandy, 2 drachms; water, 3 oz. These ingredients mixed together will measure about six ounces. The meat, sweetbread, and fat must be first passed through a mincing machine. It is often desirable to add five or ten drops of laudanum to the enema, which should not be administered *more than once in the twenty-four hours*. The rectum should be washed out twice a week with warm water, three or four hours before giving the nutritive injection. It is necessary to use an enema-pipe with a bore of half an inch, otherwise the nutritious mass will not pass.

Realising the localised character of epithelioma, its comparative chronicity, and feeble tendency to infect the system, the question as to the propriety of opening some part of the alimentary canal below the seat of the stricture naturally comes under consideration.

Œsophagotomy has been performed five times on account of cancer of the œsophagus, and twice to relieve a stricture caused by a tumour of the thyroid gland. In all these cases the operation has proved fatal, though it has frequently succeeded (in nineteen out of twenty-three instances) when performed for the removal of a foreign body. The cases in which the operation was performed on account of cancer are those of Watson,(c) Lavacherie,(d) Willet,(e) Billroth,(f) Bruns,(g) and Evans. In this last instance, which has till now remained unpublished, the patient was under my care in the Hospital for Diseases of the Throat. The following are the notes of the case:—Emma B., aged forty-three, was admitted into the Hospital in August, 1866, suffering from cancer of the upper third of the œsophagus. The dysphagia rapidly increased, and a few weeks later, when she was sinking, she urgently begged to be operated on. Œsophagotomy was performed by Mr. Evans on the left side. Considerable difficulty was experienced in finding the gullet, but it was finally opened without injuring the recurrent nerve. Food was injected into the stomach, but the patient sank from collapse fifty hours after the operation. Whether surgeons of the future will be encouraged by Billroth's experiments of removing a portion of the œsophagus in dogs, to excise the growth while it appears localised, remains to be proved.

In 1849, Sédillot first proposed and executed gastrotomy with the view of feeding the patient directly through the stomach; but in cases of œsophageal disease the operation has, as far as I am aware, invariably terminated fatally. The following case occurred in my own experience:—Eliza L., aged forty-two, applied at the Hospital for Diseases of the Throat in October, 1867, on account of extreme dysphagia. The case was diagnosed to be one of scirrhus of the lower end of the œsophagus. The usual symptoms of malignant disease of the gullet—progressive emaciation, intense debility, and increasing dysphagia—soon indicated the hopeless character of the case. When, however, the patient had been quite unable to swallow even liquids for nine days, she begged to have any operation performed that might possibly prolong her life for a few days. Under these circumstances, at the end of November, I opened the stomach in the usual way. The patient sank thirty-six hours after the operation. In sixteen cases which I have collected (see Table on next page), in which the operation has been performed for cancer, decided peritonitis was produced in two instances only, whilst in two others there were slight traces of inflammation.

In the last case, the patient, J. L., a man aged forty-seven, first consulted me on November 7, the symptoms being only of six weeks' duration. In spite of constitutional and careful mechanical treatment, the dysphagia rapidly increased, and on December 12—the patient having been unable to swallow anything for nine days—I requested Mr. Heath to perform gastrotomy. The nutrition of the patient was at the time almost unimpaired, in fact there was a large amount of adipose tissue in the usual situations. The only unfavourable symptom was weakness of the heart's action, the pulse being barely perceptible at the wrist. Ether, however, was satisfactorily administered by Mr. Clover, and the operation completed without any difficulty by Mr. Heath, the stomach being sewn to the edges of the wound before its cavity was opened. The patient, however, never showed any signs of rallying, and died the next day about twenty hours after the operation. No trace of peritonitis could be discovered at the post-mortem.

The table suggests that had the operation been performed earlier, the most common cause of death—exhaustion—would have been much less influential. On the other hand, the almost entire absence of peritonitis in all but two of the recorded instances of gastrotomy, to which Mr. Durham (h) in his table of nine cases has called attention, may have been due to a want of power of reaction resulting from the operation having been performed when the patient was *in articulo mortis*. If the operation were done earlier, the effects of the shock would be less, and the reparative power greater, but the disposition to peritonitis would also be increased. He would be a

(a) "Lehrbuch d. Pathol. Anatom.," iii. Bd., p. 131.

(b) Butchers sell the thyroid and thymus glands of the calf, as well as the pancreas, under the common name of sweetbread, calling the former, however, "throat sweetbread," the latter "stomach sweetbread." It need not be observed that it is necessary to obtain the true pancreas.

(c) "Two Cases of Œsophagotomy," etc. David W. Cheever, M.D. Boston, 1867.

(d) Huetsmann, Berlin, 1849.

(e) *St. Bartholomew's Hospital Reports*, 1868.

(f) *Wiener Medizinische Wochenschrift*, No. 56, 1870.

(g) *Deutsche Klinik*, No. 58, 1859. (N.B. All these cases are contained in Professor Koenig's interesting article "Die Krankheiten des unteren Theiles," etc., in the "Handbuch der Allgemeinen und Speciellen Chirurgie" of v. Pitha and Billroth. Erlangen, 1872.)

(h) "Holmes's System of Surgery," second edition, vol. ii., page 546.

bold and confident surgeon who would operate before the real nature of the disease was placed beyond a doubt by the extremity to which the patient was reduced. Cases, apparently the most favourable for the operation, have been known to recover without operative measures beyond the occasional passage of a bougie.(i)

No. of case.	Date.	Operator	Sex.	Age.	Form of cancer.	Lived after operation.	Cause of death, etc.	Reference.
1	1849	Sédillot	M.	52	Epithelioma	15 hours	Exhaustion; slight peritonitis	Contrib. à la Chirurgie, t. ii., p. 484.
2	1853	Sédillot	M.	58	Cancer	10 days	Exhaustion; peritonitis	*Op. cit.*, t. ii., p. 494.
3	1854	E. Feuger	M.	55	Cancerous tumour	58 hours	Exhaustion; no peritonitis	Archiv. f. Path. Anat. u. Phys., B. vi., p. 350.
4	1858	Cooper Forster	M.	47	Epithelioma	44 hours	Exhaustion; no peritonitis.	Guy's Hosp. Rep., vol. iv. p. 13.
5	1860	Sydney Jones	F.	44	Epithelioma	36 hours	Exhaustion; no peritonitis	Trans. Path. Soc., vol. xi., p. 401.
6	1866	T. B. Curling	M.	57	Epithelioma	32 hours	Exhaustion; no peritonitis	Lond. Hosp. Rep., vol. iii., p. 218.
7	1866	Sydney Jones	M.	61	Epithelioma	12 days	Broncho-pneumonia; no peritonitis	Lancet, vol. ii. 1866, p. 665.
8	1867	M. Mackenzie	F.	42	Scirrhus	36 hours	Exhaustion	Now first published.
9	1868	A. E. Durham	M.	70	Epithelioma	16 hours	Exhaustion; no peritonitis	Guy's Hosp. Rep., vol. xiv., p. 195.
10	1869	John Lowe	F.	51	Scirrhus	3 days	Clot in aorta; no peri-	Lancet, vol. ii. 1871, p. 119.
11	1872	Thos. Smith	M.	38	Epithelioma	7 days	Peritonitis [tonitis	Lancet, vol. i. 1872, p. 862.
12	1872	Mac Cormac	M.	40	Cancerous stricture	45 hours	Exhaustion; no peritonitis	Do. do.
13	1872	Le Gros Clark	..	..	Epithelioma	6 days	Exhaustion; slight peritonitis	Do. do.
14	1874	A. Jacobi	F.	54	Scirrhus	10 days	Septicæmia	New York Med. Jour., 1874.
15	1875	Sydney Jones	M.	67	Cancerous growth	40 days	Bronchitis	Lancet, vol. i. 1875, p. 678.
16	1875	C. Heath	M.	48	Epithelioma	20 hours	Exhaustion	Now first published.

FORTY-FOURTH MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
HELD IN SHEFFIELD, AUGUST 1, 2, 3, AND 4, 1876.

PRESIDENT'S ADDRESS.

By M. MARTIN DE BARTOLOMÉ, M.D.,
Senior Physician to the Sheffield Infirmary, etc.

GENTLEMEN,—Permit me, in the first place, to thank you most sincerely for the elevated position which, by your kindness, and not through my own merits, I have now the honour to occupy.

A late President described the "British Medical Association" as "the largest association of medical men ever voluntarily banded together for the general good of the profession."

To be the President of this unique institution is an honour to which any man may honestly aspire, and even anxiously covet; but, believe me, gentlemen, it is one which my most selfish anticipations never once led me to expect. And when I call to mind the distinguished men who have preceded me, I almost tremble at my audacity in accepting so important and responsible a trust; and the only excuse I can offer you is my desire to justify your confidence, by devoting such means as are within my reach to your service, and to the advancement of the noble profession to which we all have the honour to belong, and in this I feel encouraged by the conviction that you will accept "the will for the deed," and kindly overlook my shortcomings. The melancholy and unfortunate circumstances which have led to the present meeting of the Association being held in Sheffield, are so well known to all here present, and are so universally deplored, that it would be but an evidence of bad taste were I to refer to them further than to assure you that it was the suddenness of the emergency which finally decided me to overlook all other considerations, as well as my own deficiencies, and, yielding to the solicitations of kind, and, I fear, too partial friends, climb the giddy height. In the next place, gentlemen, I beg to tender you, not only in my own name, but in the name of my professional brethren in this town and neighbourhood, and even in that of the inhabitants of this grimy and busy hive of industry, a warm and hearty welcome.

(i) *London Hospital Reports*, vol. iv., page 56. Case by Mr. Hutchinson, in which gastrotomy was proposed to be performed.

The presidential addresses have steadily, and in an almost geometrical progression, increased in bulk and importance; and have frequently been very successful displays of eloquence and historical research. An ordinary man, therefore, suddenly placed in my present position, cannot attempt anything like competition with his predecessors without the risk—nay, I may almost say the certainty—of failure staring him fully in the face. I shall therefore limit my task within easy range; and bearing in mind that we are assembled in the very hotbed of limited liabilities, occupy only a portion of your attention, without usurping to myself that time which, I am sure, you may turn to more profitable account.

It has now become almost the rule for the President of the Association, inspired, as it were, by "the genius loci," to descant upon the merits of the town wherein the Association is actually assembled, to sing the praises of some of its notable citizens, past or present, or to describe in full detail its industries, its position, or its characteristic features. Nor should this practice be too hastily condemned; for it possesses the great recommendation that, if *judiciously* acted upon, it trenches upon no "vested rights"; it does not interfere with the especial addresses, carefully prepared by dint of labour and patient study, by eminent men appointed for the purpose beforehand, and whose essays constitute a most important part of the purposes for which the Association holds its annual meeting. In the present instance the temptation is irresistible to plunge at once into a disquisition of the diseases more especially attendant upon some of the staple trades of this district; but the fear of "stealing" somebody else's "thunder" imposes silence upon me. I shall follow the example of the gentlemen to whom I have alluded; but I shall do so only so far as briefly to call your attention to the character of this picturesque, though dirty, neighbourhood, to its natural wealth and industrial pursuits, and to the changes which have taken place, within my knowledge and observation, in its staple manufactures, in the social condition of its inhabitants, and in the type of disease.

The country around Sheffield cannot easily be surpassed, either for the beauty and variety of its scenery, or for the mineral wealth hidden beneath its surface. Within a radius of a score of miles we have the most striking contrast between highly cultivated agricultural land, and monotonous, yet lovely, moorlands, teeming with grouse and other game. Within this circuit is enclosed the beautifully wooded district so graphically described in the opening chapters of "Ivanhoe," and here we find such interesting ruins as Sheffield Manor, once the prison of the lovely Mary, Queen of Scots; Roche Abbey, Conisborough Castle, Haddon Hall, and many others;

as well as more modern structures, such as Chatsworth, the peerless Palace of the Peak; Wentworth Wood House, and Wharncliffe. In this circle are likewise situated some of the most productive iron and coal mines in England, together with some of the most ancient lead mines, some of which were extensively worked by the Romans, and, though neglected for generations past, have been again reopened within my knowledge, and are at present in full and, I trust, remunerative activity.

In the various branches of the Sheffield trade, grinding-stones are extensively used, and this to a greater extent than is generally supposed, for their destruction by frequent dressing is very rapid; but the quarries from which they are extracted appear exhaustless, and fully equal to the demands likely to be made upon them for an indefinite length of time. Clay, particularly fire-clay, is indispensable for furnace-building; and Nature, as if solicitous that nothing essential to the success of this Cyclopean region should be wanting, has furnished several varieties with abundant liberality. Nay, more, pulverised ganister is necessary for smelting purposes; and this, again, Nature yields in such abundance that, after the local wants are provided for, thousands of tons are annually sent, at remunerative prices, to other districts not so favoured, and even exported to foreign countries. Building-stone of the finest quality is also found in great profusion, and the stone of which the Houses of Parliament are built was quarried, and in great measure wrought, within twelve miles of Sheffield.

The various streams which meander over the irregular surface formerly furnished the whole motive power required to work the numerous grotesque grinding-wheels so capriciously sprinkled upon their banks; but in this important office they have, to a great extent, been supplanted by the more certain and more controllable steam-power, and much of the grinding is in consequence done in the town itself. Even at the present day the country is plentifully covered by trees; but it must have been incomparably more so in former ages; and, as some of the handicrafts carried on in this locality could not dispense with charcoal, the forests, before the introduction of coke, must have constituted a very important source of revenue. At the present day coke has very largely taken the place of charcoal; and this, perhaps, explains the transformation of so many forests into agricultural lands, for the produce of which there is now greater demand.

The situation of Sheffield is, I think, one calculated to insure as high a state of health as in any town in the kingdom. It spreads over many undulating hills, varying in height, according to the able report of our Medical Officer of Health, Dr. Griffiths, "from 120 to 1300 feet above the mean sea-level"; and these undulations must necessarily assist in draining the surface of the soil into the different watercourses. The hill-sides were dotted, when first I made acquaintance with them, by numerous pretty little gardens, which the working-men of the period took great pride in keeping in the neatest and most productive order; and which, in my opinion, played a most important part in the social and moral condition of the labouring population of this hard-working district. When, for example, trade was "slack," and men worked "short-time," they filled up their compulsory leisure by paying extra attention to their gardens; and such was the zest with which they devoted themselves to horticulture and floriculture, that it was a common thing to meet them early and late (without neglecting their work) going to or returning from their favourite pastime, loaded with the fruits of their industry. I shall not easily forget the keen spirit of rivalry I have more than once seen displayed upon their grimy, honest features, when, upon meeting one another, they have opened their respective bundles by the roadside and compared their contents, vociferously contesting their merits all the while. So earnest were the artisans of that time in the pursuit of this innocent pleasure, that it was no unusual thing for them to spend whole nights, and for long periods consecutively, in watching their little plot of ground, lest some midnight marauder should destroy their chance of competing for the coveted prize at the flower or fruit show—for those were, indeed, the days of gigantic gooseberries and monstrous roots of celery.

These gardens are now, alas! swept off the face of the neighbourhood by the unquenchable thirst for building sites; and their humble cultivators have, I fear, been driven to waste their leisure hours in less innocent and less productive amusements.

Man's bliss consists of trifles such as these, and I cannot help regretting the destruction of these little oases in the desert of a working-man's precarious existence; and I would respectfully yet earnestly suggest to philanthropic capitalists the propriety of replacing them by new ones in some convenient locality accessible by rail, for, as one of our most feeling English poets says:—

> "Spontaneous joys, where nature has its play,
> The soul adopts and owns their first-born sway;
> Lightly they frolic o'er the vacant mind,
> Unenvied, unmolested, unconfined."

The borough of Sheffield is intersected by five different watercourses, all of which may be seen at once from a spot, by no means the highest in the neighbourhood, not more than three miles from this building. These streams and the irregularities of the soil are so favourable for surface-drainage, that man, until a recent period, has trusted altogether to these natural advantages, without duly considering that surface-drainage unaided by engineering skill, while it removes nuisances from one locality, very frequently deposits them upon another in perhaps an aggravated form. Within a comparatively recent period, however, a regular system of connected drainage has been adopted in the borough, which, under the able management of our medical officer of health and his coadjutors, bids fair to be of very essential service to the town and its surroundings.

When this Association, then the Provincial Medical Association, last met in Sheffield, upon July 31, 1845, just thirty-one years ago, the town occupied less than one-fourth of its present area; it contained less than one-third of its present population, and represented a very infinitesimal portion of its present wealth; and it was entirely devoid of the numerous beautiful and elegantly appointed villas and pleasure-grounds which now so lavishly surround it upon almost every side. The working population were pent up within the narrow limits of the town itself, and the various branches of the cutlery and other trades were carried on in small, ill-contrived, and inconvenient premises, and the various manufactured articles came together for the first time only when collected in the warehouse of the factor. But nowadays all this is changed: large and commodious buildings, in many instances of colossal dimensions, have been erected both by companies and by individuals who employ large capitals, and "the little maister" of former epochs is almost a thing of the past. Everyone who can do so gets out of the town; and the result of this thinning of the urban population has been a most wonderful improvement in the health of the district.

From remote antiquity, Sheffield appears to have been celebrated for its cutlery; and Chaucer, speaking of the burly miller in the Reve's Tale, tells us—

> "A Sheffeld thwitel bar he in his hose,
> Round was his face and camois was his nose."

The Sheffield whittle of ancient times was, I believe, what is now called a case- or sheath-knife, "rough and ready," and in all probability would have borne but a degrading comparison in point of workmanship with the highly finished and more expensive knives now made by some of our first-rate cutlers, and particularly with those wonderful monuments to human patience and ingenuity exhibited in Rodgers' show-rooms; but I dare say it was more useful and serviceable than these latter, in spite of their hundreds of blades and ruinous cost of production; at all events, it was doubtless the best of its kind at the time, and had already made its mark in the world sufficiently deep to attract Chaucer's attention.

The whittle is not, I am glad to say, the only local production of this fertile workshop immortalised by poets. The "spotted heft" and the "Wadsley flat back" have also engaged the attention of the Muse, for Mather, a local poet, sings—

> "A baskitful for a shillin,
> To mak em, we are willin;
> For flathacks and spotted hefts we daily mun be sellin,
> Or swap em for red herrings arh bellies to be fillin."

There can be no doubt that the manufacture of cutlery has been the staple trade of Sheffield for many ages, and that, in all probability, it will continue to flourish in this locality for generations yet to come, in spite of all competition, both foreign and domestic.

On visiting the cutlery works, you cannot fail to be struck with the effects produced both upon the manufactured goods and upon the artificers who make them, by the system of divided labour so universally adopted in the cutlery and other trades. By the inflexible rules which guide this division of

labour, a man is rigorously kept to one kind of work only, so that, for instance, in the making of an ordinary one-blade knife, twelve "hands" are employed, while the number of men taking part in the making of a fair sportsman's knife is no less than twenty-one; counting in both cases after the strips of steel are ready for the forger. By this constant practice, each man making but one piece of a knife, perfection is doubtless attained, and you will be surprised to see the rapidity and precision with which a workman forges an unlimited number of the piece he is accustomed to forge without taking any measurements, but guided solely by his eye; yet, so perfectly do these pieces resemble one another, that you can distinguish no difference between them. The same remarks as to the accuracy of the work apply to the grinder, and, indeed, to any other workman concerned in making the various parts constituting a pocket-knife. The most wonderful part, however, of the whole process is the final putting together of the various pieces; for, although they have been made by the larger number of men I have already mentioned, in separate workshops and without the slightest concert with one another, the "fitter" has no difficulty, taking the various parts almost at random, and with but very little filing, in uniting them into perfect knives identical in shape, size, and, indeed, in every respect. The only exception to some of the preceding remarks is to be found in the making of the scales, each of which must be accurately shaped to a pattern.

So far, we only see the advantages of the division of labour, but the system is not, in my opinion, free from objections; for I understand that if you take a man thus accustomed to one particular kind of work and set him to a different job, he feels nearly as awkward as a raw novice would do. By this you will perceive that the division of labour, while it undoubtedly produces more perfect, and perhaps cheaper, work, at the same time deteriorates the workman by turning him into a mere machine; thus rendering him less capable of varied employment by narrowing the scope of his mental faculties and crippling the adaptability of his muscles and other physical agents. This truth appears to be recognised by the different branches of the trade, if we are to judge by the severe manner in which apprenticeships are regulated.

The manufacture of files is another industry which has rendered Sheffield famous for ages past, and which is still carried on almost with undiminished vigour; for, although file-cutting machines are used to a certain extent, yet I believe that files cut by hand are preferred by the workmen who use them, as being superior to those cut by machinery, even beyond the difference of their cost. Men, women, and children of tender ages are employed in large numbers in this locality in cutting files of all descriptions and sizes, from the diminutive little things less than an inch in length, a dozen of which weigh but an ounce, and are principally used by watchmakers, to the gigantic specimens employed in filing hot iron, eighteen to twenty inches in length, and weighing fourteen pounds each. The hammer used in cutting files varies in weight from a few ounces to fourteen pounds, according to the description of file to be cut with it. File-cutting is a most interesting process; and it is surprising to see the accuracy of the work, compared with the rough tools used in producing it, and the apparently careless manner in which the chisel, guided by the touch, is struck with just the requisite amount of force, while the operator joins in conversation and participates in the boisterous mirth around, or is, perhaps, looking at any other object but his work: to him the touch is indeed a sense; but here again we must admit that "practice makes perfect."

The manufacture of saws has likewise reached a very high state of perfection in this district, and several firms have attained very great distinction in both home and foreign competition. Rectilineal saws are made from the finest to the coarsest toothing, and of all sizes, from the piercing saws, weighing but half an ounce to the dozen, to the pit-saws, eight feet long and sixteen pounds in weight each. Circular saws are also made of almost all sizes. Of the smallest, used for cutting metals and pearl, a dozen weigh but an ounce and a half; while the largest, six feet in diameter, weigh three hundredweights each.

It is useless to waste your time further in illustrating, as I might do, the excellence of all the other tools made here, whose name is legion,—but "*ex uno disce omnes.*"

In process of time, Sheffield became celebrated for its silver and silver-plated goods, and for a long period "the Sheffield plate" stood unrivalled in the market. The Sheffield plate was produced in a very simple but very ingenious manner; two blocks of different metals and of different thickness, the thicker one of copper called "an ingot," the thinner of an alloy of silver called "a plate," were soldered together and passed successively several times between two powerful steel rollers, subject to very great pressure, until the twin-plate was expanded to the requisite extent and reduced to the desired thickness. The blocks, as I have said, were of different thickness, the copper ingot being several times thicker than the silver plate, but, so accurate had been the degree of ductility and expansibility been ascertained, that the relative thickness of the metals always stood in the original proportion; and, when the metals had been expanded to the requisite extent of surface, the baser metal was generally found covered by the silver to a most uniform degree. In the progressive march of improvement, "the Sheffield plate" has been superseded by the more perfect and convenient process of electro-plating, which doubtless possesses many advantages over the old process; the principal of which being that it offers greater facilities to the exercise of fancy and caprice in the shape and ornamentation of the design, because, as in electro-plating the silver is deposited upon the goods after they are, so to speak, finished, the seams and solderings, as well as the irregularities of the borders and ornaments, are all equally covered by the deposit of the precious metal.

I must not omit to mention among the productions for which Sheffield is justly celebrated the various purposes to which Britannia metal, German silver, and other alloys of that class have been adapted, such as forks, spoons, teapots, and similar things, because the beauty of their designs and the excellent quality of the metal entitle them to some brief notice. A late friend of mine engaged in the trade once told me that the metal produced by his firm was of such good quality that the "smashers" were in the constant habit of buying forks and spoons of his make by twos and threes for the purpose of turning them into counterfeit coin. And our witty friend, Mr. Punch, in a recent number of his amusing periodical, represents a publican telling a customer that he would not so much regret the loss of his pots, if he had not to take them again across the counter in the shape of counterfeit coin.

I may here observe in passing, as regards the designs of Sheffield goods, that the principal firms were formerly in the habit of keeping able designers of their own, to whom they paid very handsome salaries, and whose designs they guarded with the most jealous reserve; but, since the establishment of our most successful school of art, a greater degree of liberality has been displayed by our manufacturers, and there exists now, I am happy to say, a kinder and less reserved reciprocity between them.

The greatest addition which has been made to the manufactures of this town is as regards heavy iron and steel castings. Fire-stoves, gas- and water-pipes, and other castings in steel, iron, pig-metal, and sow-metal, have long formed an important part of the trade of Sheffield and the surrounding district, and the original Southwark-bridge was, I believe, cast at Rotherham; but it is comparatively recently that the making of railway tires, springs, axles, and buffers, and still more recently the rolling of armour-plates for ships and fortifications, and the castings of heavy ordnance have been introduced amongst us; and these changes and additions have caused a rapid increase in our population. The population of old Sheffield could not supply the rapidly increasing want of brawny arms caused by the rapidly increasing development of this new industry, and consequently, as the demand invariably creates the supply, thousands and tens of thousands of robust and athletic men responded to the call, both from the "Black Country" and from almost all parts of the agricultural districts; and, as a natural result, the population of Sheffield may be said not only to have increased numerically, but to have improved in physical quality also.

The rolling of armour-plates has here been brought, I believe, to the greatest state of perfection; and you will have an opportunity afforded you, through the kindness of Messrs. Cammel and Co., of seeing the process of making one of those monster plates, but I cannot tell you beforehand either the size or shape, as these depend upon the particular part of the ship for which at the time the plate is wanted. But whether it be large or small, you will see sufficient to feel astonished, if you see it for the first time, at the precision and certainty with which enormous masses of metal, either in a state of incandescence or perfectly cold, are controlled and directed, and finally brought into proper shape and adapted to one

another, by the most powerful, accurate, and delicate machinery—the whole planned and executed by man's irresistible intellect, seconded by healthy human muscles. Well might Hamlet exclaim, "O, what a thing is man!"

Pugnacity—however much the assertion may grieve the members of the Peace Society—pugnacity appears to me to be that quality which, for a wise purpose, no doubt, has been most lavishly distributed throughout the whole creation; and while we find one being distinguished from another by some attribute or peculiarity not common to all, very little observation will enable us to perceive that, whether animal, bird, fish, reptile, or insect, all animated beings can and do fight, after a fashion. It was not to be expected that the armour-plates should be allowed to have it all their own way; had it been so, Messrs. Cammel and Co. and Messrs John Brown and Co. might have been classed amongst the foremost champions of peace. It was soon discovered that, if ships could be made invulnerable, an enemy's vessel could, unmolested, commit almost any atrocity without danger to herself, except such as might result from direct impact against another ship; artillerists, therefore, set their wits to work, and the "Woolwich Infant" and other "pets" of this kind were the offspring.

Messrs. Thomas Firth and Sons have for a considerable time been engaged in casting the blocks required for the titanic artillery of the present day, as well as other large steel castings. They, also, have made arrangements to show the members of the Association the whole of the process, and even to illustrate it by casting one of those large cores.

Where the present mad competition between the might to offend and the strength to resist the attack is to end, it were difficult to predict; but of this much we may be certain—Sheffield will prove herself equal to her mission, and so long as the contest last, and even the day after, she will continue, while nations are fools enough to pay for it, to supply the means both of attack and defence, the bane and the antidote, with the most perfect impartiality, thus endeavouring to balance the account much after the manner of the Newcastle apothecary, who

> "If he hurled
> A few score mortals from the world,
> He made amends by bringing others into 't."

Having mentioned the names of two or three Sheffield firms, I think it only an act of justice to state that I believe there is not a single manufacturer or firm in the whole district who will not, with characteristic liberality, be glad to show the gentlemen here present everything that may be shown; but, as the stay of the Association in Sheffield is limited, and we have a good deal of work cut out for us to do, the acting committee have impartially selected such of the manufactories as are considered typical of the process to be witnessed.

This hasty and imperfect sketch of Sheffield may, perhaps, be considered still more incomplete, by some of my hearers, if I omit altogether names of general or local celebrity in the paths of literature or art; but let me assure you, gentlemen, that the omission is not caused by the lack of materials, but simply by my desire not to tire you by a long discourse at the very beginning of our task. Francis Chantrey, James Montgomery, Ebenezer Elliott, Rhodes, Hunter, and many others I could name, need no eulogy at my hands; and delicacy forbids me to name the several living philanthropic Sheffielders who honour themselves, as much as they benefit their native town, by their splendid munificence; and, unless I am very much mistaken in the opinion I entertain of these gentlemen, they will be the first to applaud my reticence.

The type of disease in this locality has undergone considerable change for the better since I first knew anything of it; and this beneficial change has been produced, in my opinion, by a variety of causes.

First and foremost, we must place the supply of water, which now is constant, abundant, and of first-rate quality, from the extensive reservoirs of the Sheffield Water Company, whose collecting surface consists mainly of moorland; whereas, thirty years ago, the supply of water was intermittent in so far as the Water Company was concerned, and the remainder of the water consumed was to a great extent derived from pumps, wells, and other receptacles, too often contaminated by offensive matters, from the surface, from cesspools, and even from graveyards. Now, according to Dr. Griffiths' able report, the water-supply within the borough amounts to twenty-one gallons daily for each person. This unlimited supply of pure water, together with the reduced price of soap, have gradually introduced greater cleanliness among the people generally, and a consequent diminution and mitigation of disease. This favourable change has also been promoted by the improved and daily improving system of connected drainage, the closing of the graveyards within the town, the opening of wider and consequently better ventilated streets, and the visible improvement, small though this is, in the construction of dwellings for the working-men and for the poor.

The artisan population has acquired, or perhaps imported from their former residences, a taste for country life, which their high wages, in many instances almost incredible, enable them to gratify; and in this way, also, the improved sanitary condition of the borough may perhaps be accounted for.

The general type of disease has progressively become less adynamic; the common epidemic fevers, which not unfrequently visit us, have not of late required the extremely stimulating treatment of former times, nor have they diffused themselves so universally or with their wonted rapidity.

So much, gentlemen, for Sheffield and its belongings; let me now say a few words, as impressively as I can, upon a subject which, like the postscript to a lady's letter, contains the very pith and marrow of this crude address, and is of the most vital importance to the community at large. It is one upon which I hope you will, before this important annual gathering is brought to a close, express your opinion calmly, emphatically, fearlessly, and in unmistakable terms. I mean the appointment and removal of medical officers of health.

No man who has had an opportunity of observing and comparing what a town or district was before the appointment of medical officers of health, and what it has become since, can have failed to be struck with the improvement which, generally speaking, has characterised the change. I do not mean to assert that all appointments have been equally judicious, or that there is no instance of failure; but I do say that, if such exist, as possibly they do, they have not come within my notice; and that, even if we grant their existence in rare, isolated instances, the exception but proves the rule, and throws the almost uniform success of the system into bolder prominence; and the only cause for surprise is that so much has been accomplished in so short a time, for we must candidly admit that we are a highly conservative people, and take a great deal of time thoroughly to uproot our long-cherished prejudices.

The appointment of medical officers of health is a step in the right direction; and if proper judgment be exercised in the selection of men for the office, and they are placed in the independent position which the honest discharge of their duties imperatively demands, they are, in my opinion, destined to change ere long the character of disease throughout the whole nation, and, to use an Irishism, *to save the lives of generations yet unborn*.

But, gentlemen, let us speak plainly. To insure the efficiency of the medical officer of health, we must secure his independence, and he must be protected against petty tyranny and ignorant caprice; in short, gentlemen, he must be protected against local influences. No officer of health ought, in my opinion, to be appointed or dismissed without the concurrence of the Local Government Board; and I think it would be still more satisfactory if the Local Government Board took the whole business upon itself, both the appointment and the dismissal, as well as the remuneration of the officer, and retained within its grasp the power of moving an officer from one district to another, and of thus avoiding the total loss of the services of a good man, who, through exceptional circumstances, might have become unsuitable to one locality, but yet be a very desirable officer for another. In this way also a cheering prospect of promotion and reward might be made to brighten the gloom and monotony of certain districts: but the principal advantage would result from the medical officer's conviction that his character and his bread were protected against the arbitrary and irresponsible self-sufficiency of certain jacks in brief authority, who, while apparently discharging a public duty, may in reality be only gratifying a private pique, originating perhaps in the conscientious, though impolitic, interference of the medical officer of health with a favourite, though noxious, cesspool or pigsty.

And now, gentlemen, allow me to thank you once more, not only for having given me the opportunity of addressing you, but for the very courteous and patient manner in which you have listened to my long and perhaps uninteresting remarks.

ADDRESS IN MEDICINE.

By EDWARD H. SIEVEKING, M.D., F.R.C.P.,
Physician-Extraordinary to Her Majesty the Queen; Physician-in-Ordinary to H.R.H. the Prince of Wales; Physician to St. Mary's Hospital; etc.

A CERTAIN noble lady was asked by her daughter-in-law for advice, as to the best method to be pursued in educating her children. The reply recommended "a little wholesome neglect." This apparently paradoxical suggestion was not intended to imply that her ladyship undervalued systematic training and education, but that she trusted much to the natural tendencies of growth and development, to bring out the latent forces, provided they were guided by superior knowledge and intellect into their proper channels. The answer was a protest against pedantry, and the Procrustean bed of the pedagogue, which in former times, as now, too commonly seeks to establish uniformity of level and appearance, regardless of the impulses of nature.

A trim garden in the Louis Quatorze style causes us to admire the ingenuity of the gardener, who, by his shears, would compel the bushes and trees to assume any fantastic shapes that his fancy led him to determine upon; but the lover of nature finds in his productions no food for imagination or for the cravings of the heart, for he feels that the same labour and time bestowed upon developing the glories and harmonies of colour, form, and perspective, would have better served to raise him from the mean and grovelling, to that which is exalted and eternal.

That which excites the admiration of foreigners in our country and constitution, and runs counter to so many preconceived notions of the fitness of things, imbibed by men who have been educated under a different *régime*, lies really in "the little wholesome neglect" that the Briton has enjoyed ever since he has acquired an historical name. He has been allowed to grow; or rather, in spite of frequent attempts to curb and stunt him, he has learned to know his strength and to assert his independence. It is not appropriate that I should, in this place, dwell upon any question of the political development of our country; but the preceding remarks suggest themselves forcibly to anyone who, on an occasion like the present, casts his eye back upon the features that mark the growth and expansion of the body, an integral part of the commonwealth, to which we, the medical men of Great Britain, belong.

As a profession, we have enjoyed but little of the fostering care of parliaments, of corporations, of universities. What they have done for us has rarely been owing to their spontaneous action, but has been mainly due to that *vis a tergo* which Lord Palmerston, in a different sphere, demanded, when any great measure of public utility was urged upon him. Our efforts and success will be none the less, if we occasionally, while taking breath in our race, look back to examine our previous course—to know the sloughs in which we have floundered, the pitfalls we have escaped, to obtain a clear view of the goal that shines before us, in an ever brightening and broadening light.

A great future lies before us. No Utopian vision of fantastic delights, no weird dream of golden joys and boundless felicity; but a prospect that forces upon us the conviction that we are entering upon a field of wider duties, of greater service to our fellow-men, of a nearer approach to the fulfilment of our highest destiny, as members of a Christian commonwealth.

Many who are now honouring me with their attention may think that so much remains to be done by the profession, that they may be disposed to regard lightly the labours and achievements of the past. But those whose memory, like my own, can bring before them the events of the last forty years, and who can realise to themselves the state of the medical profession in our island at the earlier part of the present century, will form a different estimate. Most of the labourers who have brought about what I cannot but call our present hopeful condition, have passed away. But it is right and fitting, and in accordance with the spirit in which these addresses were originally established, that our gratitude, while it is not unmindful of what we owe to our contemporaries, should follow those who have gone before, with loving hearts.

At the commencement of the nineteenth century the medical profession was still in a chaotic state in Great Britain and Ireland. Its detractors denied that it occupied a scientific status; and in spite of the eminence of some of the heroes of our calling, we could scarcely ignore the trade-mark which was conspicuous on its documents. In vain have I sought for any evidence of corporate professional feeling in the earlier history of British medicine. Great names—ay, and greater than Italy, Germany, or France can boast of—illumine our roll of distinguished citizens; but how many of them had to lay the foundation of their medical knowledge in foreign schools, because the means were wanting at home to acquire the alphabet of their profession!

Linacre, the founder of the Royal College of Physicians, studied at Bologna and Padua, where he took his degree of Doctor of Medicine; Caius studied physic under Montanus, and dissected with Vesalius, at Padua, where he graduated; Harvey, to whom the whole world bows in reverent admiration, learned his profession under Fabricius ab Aquapendente, Minadous, and Casserius, and took his degree at the same university. Leyden, Heidelberg, Avignon, Paris, Montpelier, are some of the many foreign universities, which, as we learn from Dr. Monk's erudite "Roll of the College of Physicians," claim as their *alumni* most of the eminent medical men belonging to the sixteenth, seventeenth, and even far into the eighteenth centuries. These men did not, as is well and wisely done by physicians and surgeons of the present day, go abroad to compare foreign with home experiences, and to perfect a professional education of which the foundation had been laid in their own schools and universities, but they undertook the risk and fatigue of travel, which in their days was no slight matter, to acquire knowledge which was unattainable in their own country.

I have in vain sought for early evidences of medical teaching in England, or especially in the English universities, before the beginning of the sixteenth century. Nicolas of Farnham, and John of Gaddesden, who treated Edward III., when he had the small-pox, by wrapping him up in a scarlet cloth, and discovered the method of distilling fresh from salt water, appear to have been the first exceptions to the rule that our princes brought over their medical attendants from abroad. Nicolas de Farnham (as we are told by Matthew of Paris),(a) who was elected in 1241 to the see of Durham, had been rector in arts at Paris, and afterwards practised medicine at Bologna. He became pre-eminently distinguished for, and obtained great favour by, his skill. The king and queen, Henry III. and his consort, by the advice of some learned men, and expressly at the instance of Otto the legate, the Bishop of Carlisle, and some other of the King's secret advisers, summoned Nicolas to take charge of their souls and bodies, and to be their familiar counsellor; in which office he conducted himself well and prudently till he was elected to the said episcopal dignity.

The first medical lectures of which I can find any record were delivered in Oxford by a foreigner of the name of Andrew Alazard,(b) who had graduated at Montpelier, and was appointed by the chancellor and proctors to lecture on medicine, and to explain, from tables of his own, *Avicenna de Pulsibus*.

So little, however, was the science of medicine appreciated in Oxford during the sixteenth century, that the University admitted, about 1550, Simon Ludford, originally a Franciscan friar, and subsequently an apothecary in London, and afterwards David Langston, a coppersmith—two ignorant, unlettered, and incompetent persons—to the honours of a baccalaureate in medicine. The visitors of the University, on being applied to by the College of Physicians (*Caio Præsidente*), interdicted the University from a repetition of their licence, and provided that a certain course of study should be followed by each candidate previously to his incorporation.(c) The utter neglect of medicine by the highest educational bodies in the realm was not redeemed by any supplementary efforts on the part of others. The Barber-Surgeons, who were incorporated by letters patent from Edward IV. in 1461,(d) and whose functions were of the most limited nature, were the only representatives of the general practitioner of the present day, until the Corporation of Barber-Surgeons was dissolved in the 18th of George II. At this date the Surgeons, who seceded from the barbers, were incorporated, but they were not endowed with a charter till the beginning of the present century. The Apothecaries, as a mere trading company, were founded in 1606 by James I., but they exercised no influence

(a) Bohn's edition, vol. i., p. 231.
(b) See art. A. Wood, "Hist. and Antiq. Oxon.," vol. i., p. 239.
(c) Dr. Monk's "Roll of the College of Physicians," vol. i., p. 59.
(d) Maitland's "History of London," 1775.

on the profession of medicine till Parliament, in 1815, conferred upon them powers which they have since wisely exercised and developed.

Valuable as have been the services of the College of Physicians in giving a local habitation and a name to medicine, and in holding a royal ægis over many great men of science, neither this corporation, nor the Barber-Surgeons, nor, at a later period, the College of Surgeons, could be regarded as representing or acting with the body of medical practitioners, or as aiding the social or scientific status of the great body of the sons of Æsculapius in England, whose numbers were gradually swelling into many legions. The College of Physicians—may a devoted son be permitted to say as much without an approach to disrespect—failed to recognise the grand opportunity offered to them in the early part of the present century, of taking the entire management and discipline of the medical profession into their own hands, and the consequence was that a City company bravely came to the rescue. All honour to the Hall in Blackfriars! The master and wardens of the Apothecaries' Company rose to the dignity of the occasion; and what they have done, since 1815, for the promotion of the best interests of the medical profession, deserves not only a bare allusion, but our most cordial acknowledgments.

But jealousies and bickerings continued, and the different branches of a great profession could not even now claim any of the various institutions existing throughout the country as representing their first interests. The clouds surrounded us more and more, and appeared increasingly gloomy, when an acute observer might observe a silver streak in the west, heralding the dawn of a brighter era. The dawn of a new life was seen over Worcester—a life which *we* are beginning to realise in all its capacities, and of which meetings like the present are the partial fulfilment of early promise.

Among the many events which, in the recent development of our profession, appear to me to be most characteristic, both from their mode of origin and the significance of their bearing upon the spirit of the times, as upon the future of our corporate and scientific growth, there are especially three, to which I would crave your present attention, in order that, on the one hand, we may recognise the deep obligations which we owe to our predecessors; that, on the other, we may seek to derive from past experience the lessons that should guide us and our successors in our future career. The three events to which my introductory remarks may have already turned your thoughts have especial reference to what appear to me the chief phases of our advancement as the followers of a beneficent and learned calling—viz., our relations to each other and to the State; our relations to the science of medicine; and our relations to education.

The *first event* was inaugurated on July 17, 1832, when Dr. Hastings induced fifty gentlemen of the medical profession to assemble, under the presidency of Dr. Johnstone of Birmingham, in the board-room of the Worcester Infirmary. On that occasion, Dr. Hastings delivered an address which was pregnant with all the great consequences to which the Provincial Medical and Surgical Association has since led. Allow me to recall his own words, as published afterwards in the first volume of the *Transactions* of the Association, which appeared in 1833. "I congratulate you, gentlemen," he said, "that the day for forming a Provincial Medical and Surgical Association has at length arrived—an association which, I trust, is destined to exercise no inconsiderable influence on the future of medical science. Feeling, as I have done, the disadvantages under which the prosecutors of medicine resident in English provincial towns have laboured, in consequence of the want of any system of co-operation, by which their separate exertions for the promotion of our knowledge of the healing art may be so united as to render them more influential and more extensively useful, I cannot but hail the day—*hunc lætum medicis diem*—as one of peculiar promise, as one likely to lead to the most important results."

You, gentlemen, know as well, and better than I do, how far these prognostications have been realised. Three hundred members at once rallied round Dr. Hastings, and the best proof that he had only become the happy expositor of a widespread feeling of the necessity for harmonious co-operation for great common ends, has been afforded by the progressive adhesion of medical men from all parts of the country to the programme he laid down. Very valuable contributions to literature (medical, surgical, hygienic, biographical) appeared, first in the *Transactions*, and subsequently, in 1840, in the *Provincial Medical and Surgical Journal*, edited for the Association by Drs. Hennis Green and Streeter. In the meantime, the interest in the Association had spread to the metropolis, and the particularism (to use a favourite continental term) which very properly belonged to the Association at its outset, was abandoned; the jealousy between the provinces and London yielded to the imperative feeling of brotherhood which unites us all; and, in 1853, according to a resolution adopted at the meeting held in Oxford in the previous July, the *Provincial Medical and Surgical Journal* appeared, under the editorship of Dr. (now Sir John) Cormack, as the *Association Medical Journal*. It was now placed in the hands of the subscribers every week, instead of, as previously, once a fortnight. The change was effected, not without some opposition on the part of those who, fearing too radical changes, doubted the soundness of the Oxford decision; but, as the editor observes in his opening remarks to the new series, it was "a strong declaration of the necessity which the progress of events has imposed on the Association of pursuing that line of duty which had hitherto been acted upon with that augmented vigour which a wider sphere of action required—a vigour which could only be effectively developed by greater frequency of publication, and by the possession of a literary and scientific centre in London, where editorial resources are more abundant, more varied, and more easily available than in any other city in the world."

From that time the arterial pulses that beat throughout the kingdom acted synchronously and rhythmically with the heart; a sympathetic centre had been found, which tranquillised or warded off local disturbances in the circulation, and our body politic insured a renewal of life, which,

"Broadening down from precedent to precedent,"

promised, as it still promises, ever richer and more abundant fruit. There may and must be differences of opinion as to many of the questions that have agitated the Association during the last twenty-three years, and will continue to do so, unless the worst of all events—stagnation—were to ensue: but whatever the shortcomings may be that can fairly be laid to our charge, I question whether any profession has ever done more in so brief a space of time to regenerate itself, to show a more healthful activity, or to produce more beneficial and enduring results. Those results, whether we refer to the expansion, the increased and unselfish energy of our corporations, to the Act of 1858, with the consequent formation of the Medical Council, the publication of a national "Pharmacopœia," and the recognition of State medicine, to speak only of a few salient features, take their root essentially in our Association. Their very mention refutes the accusation which has been heard from time to time, that medical men showed some of the worst features of trades-unionism. The great leaders to whom we have given our willing adhesion have universally looked to the improved education of the profession, the diffusion of its benefits among our countrymen, the prevention of disease, and the physical and moral advancement of the nation, as their guiding principles. They have put a Christian interpretation upon the Hippocratic oath, and have not hesitated to make personal and corporate sacrifices where the good of the community appears to demand them. There has even been a tendency to self-depreciation occasionally, which was not justified by the circumstances, nor was it compatible with that healthy frame of mind which should urge on to higher achievements. But those who have a personal experience of things as they were thirty years ago, can scarcely hesitate to admit that, in all aspects in which our profession can be regarded in relation to our fellow-citizens, it occupies a better position now than then. Much has been said about our political status. I am not one of those who consider Parliamentary honours undesirable for members of the medical profession who possess a patrimony sufficient to enable them to disregard the emoluments of practice, or who have realised a competency by the ordinary routine; but, while circumstances are never likely to allow this number to be very large, I hold that, speaking broadly, the political arena, in its usual limited sense, is not the one for which our education or our sympathies generally most fit us. The medical man is so trained to look at and examine the questions that present themselves to him in all their aspects, that he can scarcely make a good party man. Besides, we are exempt from serving on juries, and from filling many of those useful and honourable civic posts which help to educate the rising politician. We give much unpaid or

underpaid work of another kind as our quota to the treasury of the commonwealth; and the time may come, nay, I would trust that it is not far distant, when some of the most distinguished, zealous, and far-sighted of our brethren may be called to a higher position in our Sovereign's councils than has yet been the case; not for the mere vulgar gratification of a personal ambition, but because there are many questions that come more and more into the foreground, upon which it is desirable that individuals who have received that medical training which can alone qualify them to advise should publicly exercise a power and a responsibility which shall develope, extend, and strengthen the health of the nation.

Those who are prejudiced against the view that medical men have a capacity for becoming "rulers of men," have only to look to our vast colonial possessions to learn that the training of the physician qualifies him for posts of the highest and most responsible character. Can we believe that, in crossing the Atlantic, the Pacific, or the Indian Oceans, a transmutation takes place of a baser to a nobler metal, and that a man who can worthily rise to the highest places in other hemispheres is incompetent to give wise counsel and to carry strong and beneficent measures while he is in contact with his native soil?

It is not without significance, as to the influence which the question as to the nation's health is exerting upon the public mind, when we find a Prime Minister putting hygiene and its bloodless victories on a level with the sanguinary achievements of generals and admirals. Mr. Disraeli,(e) on November 9, 1875, said: "I believe that a policy that diminishes the death-rate of a great nation is a feat as considerable as any of those decisive battles of the world that generally decide nothing." Whatever our politics, it appears that here we have the indications of a policy upon which "Whig and Tory all agree"; but it is the first time that the principle underlying it has been announced as guiding the action of a First Lord of the Treasury. We draw a good augury from it. Echoing his leader's sentiments, Mr. Crose, on the same occasion, dwelt upon the duties devolving upon the City authorities, "to rid the City of all those plague-spots which have spread disease and misery throughout the whole metropolis"; and he told them that their powers "rightly employed, would be the means of conferring a great benefit on the community at large." Post-prandial effusions may not have all the dignity of official statements; still, assuming that the proverb *In vino veritas* applies to ministers not less than to ordinary mortals, we may indulge in the hope that, although the speakers might be unwilling to carry out their argument to its legitimate conclusions, they recognise the great principle for which we are contending.

In small and scattered communities the want of sanitary supervision does not immediately make itself felt; though, with our present knowledge, it is manifest that legislators grievously neglect their duty, if they do not in the infancy of townships and states take those steps which shall render it unnecessary, with their growth, to regret early *laches*. With our present and increasing population, with all the peculiar demands made upon every fibre of the individual, it is especially the duty of governments to see that labour and life be economised, which means that health be made a State question.

Whether it would be wise to seek the establishment of a distinct Ministry of Health and Medicine; whether we should try to secure for the best men among us seats on her Majesty's Privy Council; or under what other form the medical interests of the country could be best administered—it would be out of place to discuss here. The members of the Association have better opportunities of ventilating such details. But of this I feel assured, that the time will soon be at hand when, in some way or other, greater power must be put into the hands of physicians, in order to secure the most perfect development of hygienic measures for our country.(f) I conceive that I should have neglected a duty which this occasion imposes upon me, had I failed to indicate one, if not the main, direction which our associate labours should continue to take. The coryphæi of medicine in all times have had vague presentiments on this subject; but, from the celebrated work "On Airs, Waters, and Places," which Hippocrates published about 400 years before Christ,(g) to the remarkable and interesting volume "On the Civilisation of England," which appeared two thousand two hundred and fifty-seven years later,(h) mankind and their growth are represented rather as the creatures than the controllers of circumstance; whereas I hold that it is our duty to rise superior to the physical world, so that we may compel it to obey us. If we are to subdue the earth and have dominion over it, we must first seek thoroughly to acquaint ourselves with those supreme laws under which the Creator has placed us; but the very essence of all science, civilisation, and medical power runs counter to those fatalistic views which the weakness of human nature has so often made paramount; and which, out of harmony with all intellectual and spiritual progress, constitute man the torpid and abject slave, rather than the loving and obedient child, anxious to realise the high destiny to which he is called in this and other worlds.

The members of the Association have ever shown that they took large views of the duties of medicine in regard to man in his relations to nature. The very first volume of *Transactions*, published under the auspices of Dr. Hastings, contains no less than three valuable articles on medical topography: the first, on the furthest south-western extremity of Britain, by Dr. Forbes; the second, on Bristol, by Drs. Carrick and Symonds; the third, by Dr. Kenrick, on Stourport. Willingly would I dwell upon these, and many other similar productions by their successors in the same field, no less than upon the numerous evidences I might lay before you of the influence exercised by the Association upon the development of medicine in the various directions to which I have alluded: this would be impossible within the limits assigned to me. I may, however, be permitted to avail myself of this opportunity of inquiring whether the members of our Association have continued to take that interest in medical topography which appears especially to have attracted its earlier members. We may hope for valuable information on the subject in connexion with the locality in which we have to-day met, and with the extraordinary development of certain branches of manufacture for which Sheffield is famous. I would suggest that medical topography, comprising as it does the geology, water-supply, temperature, and sanitary statistics of a district, is especially a subject worthy of our annual meetings. The researches that it involves demand much labour, probably more directly useful to the community than to the inquirer who undertakes it; and I venture to ask whether it might not well constitute a subject to which every year a portion of our available balance might be allotted for the remuneration of an acknowledged worker in this branch of science? We should thus gradually accumulate a valuable amount of information, which would serve as a beacon and a guide to future inquirers. Could not the Council of the Association be empowered to select one or more members residing in the town where each successive annual meeting is to be held, to devote themselves specially to this work, and to present their report at the meeting? It appears to me that the duties we owe to one another and to the State would here find a fitting expression, while at the same time we should be attending to the call of medical science, our relations to which embrace the second topic, to which in my opening remarks I invited your attention.

Allow me to advert again to a fact which not unfittingly connects these two branches of my inquiry. It is, that medical topography first enlisted the interest and established the reputation of a name whose bearer afterwards did more for the advancement of scientific medicine in this country, and towards securing its recognition at home and abroad, than any other of the great men who have belonged to our ranks. I allude to one, now no more—unselfish, honest, brave, a Bayard of medicine, "*sans peur et sans reproche*"—the author of the first article on Medical Topography in the first volume of the *Transactions* of the Association—Dr. (afterwards Sir John) Forbes. Would that he were still amongst us, to see that his labours and his sacrifices were not wasted! Having won his spurs in the literary field which the Association opened for him, Forbes commenced his career as a provincial physician; he terminated it as a regenerator of medical science, and may almost be said to have succumbed, after a great and abiding victory, as a martyr to the truth which he loved above all things.

(e) See *Times* report of the Lord Mayor's banquet at Guildhall.

(f) Since these remarks were penned, Mr. Gladstone, in an address of great eloquence, delivered at the London Hospital Medical School, has dwelt on the same topic, and has drawn attention to the increasing importance of medicine and the medical profession. "That profession," he said, "presented a future of the highest interest. There was in that future the probability that it would gain increased influence, greater as compared with other professions." (See *Times*, Friday, July 14, 1876.)

(g) Hippocrates is supposed to have been born in 460 before Christ. It is scarcely a poetical licence to assume that this work was composed when he was sixty years of age.

(h) Mr. Buckle's work appeared in 1857.

The *second event* of modern times, on which I beg your leave to dwell for a brief space, as specially connected, in my estimate, with the advancement of scientific medicine in England, is closely associated with the name of Sir John Forbes; from 1836, when he resided at Chichester, to 1846, when he had long been a denizen of Old Burlington-street, editor of the *British and Foreign Medical Review*, of which it would be difficult to speak too highly, whether we consider its literary merits, its thorough honesty and impartiality, or its grand and cosmopolitan scientific breadth.

The October number of 1846 concluded the editorial labours of Forbes; and in the parting summary which he presents to the reader, of his work in connexion with the journal, the editor, among other reasons, mentions the diminished sale, which he attributes in part to an article which he had published, and of which he acknowledged himself the author, in the January number of the same year. It is this article to which I venture to assign the maternity of a new era of the medical profession in its scientific position in her Majesty's dominions. It was entitled "Homœopathy, Allopathy, and Young Physic."

This article was essentially a protest against the polypharmacy of the day; and a summons to the practitioner seriously to consider and studiously to examine the resources and the methods of treatment at his command. It was, without intending to be so, an amplification of the Hippocratic views so ably propounded by our departed friend, Dr. Warburton Begbie, at our last annual assembly, as to the physician's duties in the face of his great enemy—Disease. Though most of the arguments used by Forbes were as old as the hills, his boldness in bringing them forward at this particular time which he selected startled the profession like a thunderclap, and the author was subjected to much animadversion and misrepresentation.

Thirty years have gone by, and I may assume that few among my present audience are familiar with the article in question; or if they are, that they would hesitate to subscribe to most of the doctrines with which Forbes shook the withering tree of routine. Thirty years ago great agitation prevailed in the profession, owing to the warmth with which many members of the upper classes of the community received and supported Hahnemannian tenets and practice: the hostility which the article aroused was due to its being represented by its cavillers as favouring those views. I am not one of those who can subscribe to the ancient doctrine that in all diseases we find a *vis conservatrix* or *medicatrix*, inherent in the system of the patient, which has simply to be allowed her own way to lead the patient to a happy release from his malady. There is, according to my observation, no less a *vis destructrix*,(i) which has to be met boldly and decisively. But modern English medicine paid too exclusive attention to the latter, while it ignored the former; it placed its trust in the *armamentarium pharmaceuticum* to an extent which we, of the present day, neither follow nor applaud. The trade spirit also had some part in these aberrations; hence it was but natural, as the laity discovered that they might put aside the customary six bottles a day, in addition to the pill at night and the draught in the morning, sent in (and charged for) by the family attendant, without necessarily becoming a unit in the Registrar's death-list, that they often attributed a cure, which we know the *vis medicatrix* is capable of effecting in many cases, when aided by a suitable regimen, to an infinitesimal dose of sepia, pulsatilla, or nux.

In an ancient work on Medicine, published in 1559, the author, Mr. Bullein,(k) introduces two friends, discussing the merits of their physicians; one says, that being very ill, he had called in three physicians at once, to the astonishment of the other, who fears that his purse would scarcely suffice for the discharge of the customary fee. The reply is, that Dr. Diet, Dr. Quiet, and Dr. Merryman had effected a cure, which had cost the patient nothing in the coin of the realm. These three doctors have never been overlooked with impunity, as some of the most valuable contributions to the literature of the present generation testify. It is, however, not to be denied that, when Forbes's article roused the indignation of his opponents, the elements in treatment which they allegorically represent had given place almost entirely to what was termed heroic methods. Bleeding from the jugular vein and temporal artery, large and repeated doses of mercurial and antimonial preparations, constant venesection and leeching, were in daily use; and it was not to be wondered at, that as physiology and pathology came to be more thoroughly studied, the difficulty of finding a satisfactory reply to an inquiry why these things were done should arrest the thoughtful practitioner. Homœopathy gave him a rude shake, and he found it necessary to unlearn much and to retrace his steps, so as to recover the true path of nature. But it was only on the principle, *fas est et ab hoste doceri*. Forbes made himself the spokesman of many, who, by the support they rendered him, showed that while they recognised this error, they were as far as he was from regarding homœopathy as a development of science. Listen to what he says. After analysing other evidence in favour of homœopathy, he very carefully reviews "An Inquiry into the Homœopathic Practice of Medicine," by Dr. Henderson, a professor of medicine in the University of Edinburgh, who had become a convert to Hahnemannian doctrine, Forbes remarks upon the cases he reports, and the deductions he adopts: "Men capable of admitting cases of this kind as evidence—and we could extract fifty from Dr. Henderson's book much feebler than this—are demonstrably disqualified to treat of things which demand for their handling the stern logic of a masculine mind." Forbes sums up the results of his entire inquiry into the value of homœopathy in the following words: "If, for the sake of argument, we were to admit that homœopathy were partially true, and therefore that it might fairly be received as one of the recognised methods of treating disease, it would appear to us, according to our present light, to be very unfortunate if this were done. The guiding principles of homœopathy appear to us to be of that character which must render its exercise very injurious to medicine as a branch of science. Based as it is on mere extrinsic secondary phenomena or symptoms, and exclusively engaged in the search for and adaptation of specific remedies to such phenomena, we cannot but regard it as calculated to destroy all scientific progress in medicine, and to degrade the minds of those who practise it. Its direct tendency seems to be that of severing medicine from the sciences and establishing it as a mere art, and thus converting physicians from philosophers to artisans. Of course if, by such a conversion, diseases were to be better treated, and more speedily and frequently cured, it would not only be absurd, but transcendently wicked so to sacrifice the welfare of humanity for the sake of a scientific phantom; but, as we have said, it is anything but proved that such a result would follow the change, and therefore, until the proof is obtained, it behoves all who regard the prosperity and dignity of true art to resist its progress."

The writer further examines the causes of the success which homœopathy enjoyed in his day, and gives numerous interesting and striking illustrations, which lead him to the conclusion "that the curative powers of nature suffice to explain all the triumphs of homœopathy." He then adduces some of the influences which we, at the present day, certainly do not regard as in any way the special property of the system, and to which Forbes thought they might be fairly ascribed; they are essentially those which Mr. Bullein more than three hundred years ago summarised in the short allegory above recounted.

I have not the slightest desire to revive the controversy on homœopathy; but the preceding remarks and quotations seemed necessary to bring before you an important phase in modern medicine, and, from the slight indications that the time and the place permit me to give, to ask you to realise the strides that the last three decennia have effected in the diffusion of scientific views among the great body of British practitioners. We are approaching so near our own time in the consideration of these matters, that it would be invidious to go into further detail. Many of the great workers in the various fields of observation who achieved the present results are still among us; and, if I mention one or two subjects of inquiry which pertinently indicate the progress that has been made, it is rather by way of illustration and example, than because it is possible to exhaust a subject which might fruitfully occupy entire volumes.

Consider the vague manner in which formerly the influence of air and water was treated; the cosmic, telluric, and atmospheric agencies that were accused of affecting men, without any precision greater than that belonging to dreamland: consider, on the other hand, the rigid investigations that have

(i) "Destructrix" is not a Latin word; "conservator" and "conservatrix" are Ciceronian; "destructor" occurs in Tertullian: but although I have no authority for the use of the word "destructrix," I trust it may, from the context, and in accordance with etymological precedent, be considered justifiable.

(k) "New Boke of Physic," by W. Bullein; 1559. Black letter.

engaged scientific physicians from the days of Snow (whom Dr. Wilson designated in his Harveian oration before the College of Physicians, as "*Nix per æthera notus*," but whose claim to the gratitude of posterity rests much more on his inquiries into the origin of cholera in contaminated water than upon his connexion with anæsthetics): consider the investigations into the causation of disease by impure water, and the brilliant results that have been achieved as regards the influence of that first necessary of life in the origin and propagation of morbid processes: ponder upon the equally important, though as yet, perhaps, not equally decisive investigations that have been made in regard to the aërial germs of disease; the invaluable aid afforded to precise knowledge of morbid processes by microscope and thermometer (instruments unknown to the student of my day); the searching examinations into the operation of medicinal agents; the revelations of the various sources of disease from food contamination and adulteration: and say whether medicine in its totality does not fully deserve the title of a science, and has not already reaped rewards scarcely recognised by the younger generation of medical men, and certainly not appreciated as they deserve by our non-medical contemporaries; rewards such as Forbes and his coadjutors looked for when they challenged their contemporaries to a more reasonable inquiry into the nature and history of disease, and the real value of the various agents at our command for its removal.

And, for practical results to the community at large, look at the increased duration of life wherever the medical man has been listened to; to the enormously increased value of life in the army (in connexion with which question allow me to advert to the loss the nation has but just sustained in the death of that great man, our Associate, Edmund Parkes); to the general reduction of the death-rate; the check put upon the inroads of disease in many noxious trades and occupations; the reduction, nay, almost arrest of mortality in some diseases that under "heroic" treatment more frequently succumbed than recovered—diseases of the head, of the chest, of the abdominal viscera. May we not quote the remarkable revelations with regard to trichiniasis and other parasites as permanent victories? Is it too early yet to speak of what some of us may regard as a victory over the bane of England's youth and early manhood, rheumatic fever, by salicylic acid? Look at the advances of surgery in regard to its conservative labours, its anæsthetics, its antiseptic treatment! Who that scans the changes in medical training and conduct during the last thirty years, can deny that mankind is the better for the more scientific development of medicine, and that the more we encourage true scientific work, the grander will be the beneficial results that we and our descendants may reckon upon?

But while we rejoice over our reminiscences, we must not forget that every step in advance opens out to us a new vista of further and higher responsibilities. Many of the inquiries that have been initiated have not yet been terminated; many results attained by the man of science have not yet found their practical application in daily life. An association can do little directly to promote science. Scientific work is rarely well done by large assemblies. The student works in the quiet laboratory, in the secluded library, or at the bedside of his patient; and though he may be encouraged by the sympathy and approval of his contemporaries, science and its results are and ever will be his chief rewards. But it is our duty as an Association to assist in rendering his results, if not beneficial to the inquirer, at least to his fellow-men, and preventing impediments from being put in his way, that thwart his undertaking, damp his zeal, and enfeeble his powers by the chilling effect of neglect and discouragement. In this direction our Association has already done much. We cannot create the *sollers ingenium*, but we may smooth the difficulties in its path, and assist in securing its recognition by those less competent to judge, and yet willing to benefit by its activity.

It appears to me especially the function of an association like ours to spread the knowledge of scientific results, and to secure their application to society. No true work is barren, but it often remains hidden, because its seed falls on uncongenial soil; and it is our part to see that the particular work of the philosophic physician is duly appreciated by those who rule our commonwealth, partly because we are bound to show our gratitude to the benefactors of our race, and partly because the general public are by no means educated in such a direction as to enable them to appreciate the advantages conferred by medical science. Hence, again, I say that the British Medical Association, if it wishes to deserve well of mankind, is bound to exert itself to secure a more public recognition by the State of the aims of the profession, and to obtain for those calculated to represent them properly a more fitting method of realising them than is at present possible. The recognition of State medicine to a claim for university honours is already a step in the right direction, and shows that some of the educated classes are beginning to appreciate the importance of the questions at issue; but how much yet remains to be done is shown by the apathy, of which we forbear to adduce special instances, evinced so frequently by municipal and other legislative bodies, in regard to measures of vital importance to their own welfare and that of those around them. Here I hold that our Association has a great sphere of action before it; and what we are able to do in this direction must, if my views are just, be mainly realised by the influence we are able to exert on education in schools and universities.

These observations bring me to the consideration of the *third element* in the modern development of our profession, or our relations to education, upon which I crave your indulgence yet a little while.

Nearly a quarter of a century ago, the poor Welsh apothecary, as he was wont facetiously to denominate himself, and to whom all honour is due, conceived the idea of founding an institution which should, besides providing a home for the invalided and impoverished members of the profession, supply a liberal education, at the lowest possible cost compatible with its scope, for the sons of medical men, many of whom were, as foundation-scholars, to receive their training free of all cost. The proposition was warmly received and well supported, so that we may now, in 1876, speak of large and beneficial results. The feeling that animated the supporters of Mr. Propert was doubtless, in the first instance, one of Christian benevolence; but it was also largely based on the desire, now becoming more and more urgent, to give expression to the sense of unity and co-operation pervading the entire profession of medicine. Of course there were some who found fault, and who would have preferred that less money should have been spent upon bricks and mortar; but I must doubt whether any scheme would have commanded similar success that had not been accompanied by the conspicuous and tangible product of such a group of buildings as now adorns the heights to the south of Epsom. The eleemosynary character of the institution has been extended, and its typical feature as a centre of professional harmony has insensibly acquired a firmer hold upon the medical public; but it is now gradually achieving for itself a position in the educational institutions of the country which I apprehend will effect a more wide-spread influence than even its sanguine founder anticipated. And it is right that it should do so.

If we look around at the system of education still prevailing in our country to a large extent, can we admit that it accords with the spirit of the times? and do we not rather find that even now the rules that regulated the Trivium and Quadrivum of the Middle Ages hold good to an extent that would seem incredible in a day of railways, electric telegraphs, and penny postage, were the fact not too patent? The bed of Procrustes is still too much the type of modern education. The mind of our youth, whatever its tendencies or aspirations, is still uniformly sought to be moulded upon one monastic system. The glories of Homer, Demosthenes, Horace, or Tacitus, are still forced upon minds incapable of appreciating them, or are made a preparation for a life in which Nature and Nature's laws, a knowledge of mankind in his various relations to internal and outward circumstances, is the first desideratum. No one is more convinced than I am of the value of a knowledge of the literary and social work of the great nations of antiquity; but the question that I would submit to your careful consideration is, not how great their value, but how much the manner in which these subjects are taught, and the time that is bestowed upon them when the youthful energies should be trained for the work of life, has interfered with our progress as a nation. Under our prevailing system, the highest power that we are endowed with—that of observation and comparison—is forcibly kept down; and even the first requisite of a liberal education, the knowledge of our own language and its marvellous achievements, the power of using and enjoying it to the utmost, is deadened instead of being quickened. At the Epsom College, as is right in an institution which is ruled by medical men, it is sought, so far as it is compatible with the requirements of other scholastic bodies,

to set an example in giving prominence to the teaching of natural science; and the results, small perhaps as yet, are already giving promise of a greater future, and cannot fail to make a wider impress upon our national system of education.

But is it right that we should wait for the slow progress which our small institution may make in public estimation, without taking further steps to secure what, in and out of our profession, is almost universally admitted to be a desirable or necessary object? Can we not do something to secure better education at large, and a more general adoption of principles which we believe to be irrefragable? It would be useless to put such a question if I saw no remedy; but I believe the remedy is at hand, and that it largely depends upon the medical profession, though it is not their immediate function to occupy themselves with educational matters, to cause a gradual and peaceful revolution in the prevailing system.

To do so, however, we must go, not so much to the primary schools, as to those fountain-heads of English education, which put the stamp and die upon what they regard as success, and thus compel all dependent upon their fiat to work as they list. It would be quite impossible now to discuss the history and growth of our universities; but we, as Englishmen, can scarcely admit that they do now, or ever have, taken that position, as teachers of the great body of the nation, which we see aspired to or occupied by continental universities. An university should be, as its name denotes, an *universitas literarum*, and not limit its teaching to one or two disciplines, which, though valuable in themselves, are simply means, not always appropriate, to an end to be attained elsewhere. To my apprehension, an university does not deserve the name, which does not within itself teach the principles and theory of all science, and which adopts a *régime* and habits that exclude from its precincts all whose mental calibre cannot adapt itself to one formula of a classical or mathematical shibboleth, or whose means compel them to enter a professional calling without unnecessary delay. I maintain that *all* members of learned professions ought to enjoy an university training, and that universities which do not allow of their students acquiring the entire theoretic part of their respective professions within their walls, neglect the first duty for which they were called into existence. I will not now speak of any other profession than our own; but, as regards medicine, I conceive that many of the educational difficulties that have been so long under discussion, and that are far from being removed, will disappear when such arrangements are made at our universities that the great body of practitioners can avail themselves of their advantages. In order that this may be possible, it is necessary that a standard of preliminary training be fixed which shall qualify for admission into the university, and that, at the age of eighteen or nineteen, when young man generally put on the cap and gown, they should be permitted to pass at once from the subjects they have been learning at school to those professional studies which the universities ought to be able to teach infinitely better than the small, self-supporting academies of medicine now scattered over the country.

It is no small credit to the energy of the medical schools as they exist, that they have done as much as they have done; but, with the increase of knowledge and the demand made upon the lecturers, it is simply impossible that the latter should keep pace with the times, unless they are exempted from the *res angusta domi*, and are enabled to devote themselves entirely to science. At present, the majority of lectureships are treated simply as stepping-stones to medical practice, and hospital physicians and surgeons pass from one subject to another, not so much by virtue of special qualification as by the all-powerful influence of professional seniority. Something may doubtless be said in favour of our present system of competition; but I would ask whether the balance of argument is not in favour of professorships at our ancient universities, where the increased numbers of *alumni* would render a professorship not only a place of high and laudable ambition, but would make its emoluments worthy of acceptance by those of our body who desire to devote themselves to, and merge themselves entirely in, scientific research. Botany, chemistry, natural philosophy, physiology, anatomy, comparative anatomy, pharmacy, and materia medica, the theory of medicine and surgery—might all be better and more profitably taught at an university than in provincial or metropolitan schools of medicine. The numbers that would flock to our universities if they held out such advantages would render necessary the endowment of more than one professorship for each discipline, and thus a salutary rivalry, without which stagnation would ensue, would be preserved. And if our present university arrangements are insufficient to provide for the two thousand medical students who annually inscribe their names on the registers of our schools, what is there to prevent the establishment of more universities in towns willing to advance the growth of the sciences, and possessed of fewer of those sanitary defects which mar the beauties of Oxford and Cambridge?

It is utterly against my views that an university should belong to a class; and therefore, while I maintain that we physicians and surgeons of England may legitimately labour for the foundation of a new university, which shall embody certain methods and principles, if the older institutions cannot receive us, I should regard the attempt as futile, unless provision were made at once to establish professorships required by all the faculties, so as to insure an influx of ingenuous youth destined for all the various walks of life. Has Germany suffered either by the poverty or the number of its universities? Has that great country not ever been to us a model, both in the manner of teaching and in the achievements of the taught?

I value political independence, honour, and integrity even higher than scientific growth; but, as the former are secured to us, as far as institutions can make them sure, is it not time that we throw some of our superfluous energies into the cultivation and development of the scientific growth of the nation, and emulate our cousins on the other side of the German Ocean in the number and power of our universities, as they are essaying to walk in that path of constitutional freedom which has so long been the Briton's birthright? It is not found in Germany that the transition of a student from one university to another either interrupts his studies or checks his professional career. There is a sufficient understanding among these bodies to allow the thread that was broken at one to be taken up at another, the attendance at one admitting to its equivalent position at the other. The benefits that I would thus confer on medical students would react most beneficially upon the community. Students of medicine would enjoy the advantage of the highest teaching intellect that could be commanded, and they would benefit by that free interchange of thought and opinion which is the characteristic feature of the intercourse at an university between young men treading the different paths of life; they would feel themselves to be, more than they now are, an integral part of the republic of letters, of which an university ought to be the type. But I question whether the gain to the nation would not be even greater than that conferred upon the medical student; for, indirectly, the members of the legal and clerical professions, and that large number of the gentry who visit the universities rather for the purposes of general education than with the view to following a profession in after life, would of necessity interchange opinions with their medical colleagues, and imperceptibly become imbued with a respect for, and a knowledge of, Nature and Nature's laws, which could not but favourably react upon their execution of future duties.

The gulf that even now in England separates the inquirer into God's laws in nature from his "educated" fellow-citizen, could not be more distinctly shown than has been done by the recent discussions on vivisection, in which the non-medical community have thought it right and honest to hurl at us all the opprobria of language from an entire misapprehension of the means, the scope, and object of our researches. Our legislators would rival the enemies of Galileo; if their views had been in the ascendant when Harvey's discoveries were made, we might still be running after the will-o'-the-wisp of an Archæus; and, if our detractors had their way, the progress of science and humanity might even now receive a check that would retard the advancement of civilisation. What but a free interchange of thought and opinion between the most educated of the rising generation can prevent the recurrence of similar bathos?

One of the great obstacles to the diffusion of sanitary knowledge, and of a due appreciation of the unselfish labours of physicians, consists in the ignorance which still prevails so largely, even among the higher classes, as to their object and scope. The free intercourse of young men of different professions would do much to remove existing prejudices, and to widen the actual amount of knowledge; so that their co-operation in after life would be more certain and effective, from the community of feeling and interest created in them by early association.

The practical question remains, whether our present social constitution admits of the realisation of a plan like that suggested. Does it not resolve itself mainly into one of pecuniary means? The greater demands now made by our examining boards appear to answer this in one direction; while the success attending the establishment of a College like Keble College seems to answer it in another. The present extravagant cost of residence at Oxford and Cambridge, which elicits the groans of many *a paterfamilias*, is shown not to be a necessity; if it were unavoidable, it would be an argument against the admission of the bulk of medical students to the universities which would silence me. There are many who value their university residence rather because it is a proof of their parents having been wealthy, than because they have any superior acquirements to boast of; but I do not think so meanly of the ruling powers as to believe that they would desire to make property the qualification of primary consideration in the test of admission. The heartiness with which the universities have, during the last twenty years, thrown themselves into the great question of educational reform, and given material aid to its intrinsic development, is the best proof that they recognise their high mission. At the same time it may be doubted whether their energies in directing middle-class examination are not somewhat misplaced. We all know one or more benevolent ladies, whose labours for the clothing-clubs, soup-kitchens, visiting and missionary societies of their parish, are unlimited, but whose children are allowed to run wild from want of that home-supervision which their mother's expansive benevolence prevents her from exercising.

Does not *Alma Mater* also tend, with due reverence be it said, to a partial neglect of those duties which lie nearer home, in order that she may acquire the name of an universal foster-mother? At all events, if she has spare energies for the chickens that are wandering about untended and uncared for, she ought surely first to show that her own brood has received the necessary food and protection, and that she has guarded them from becoming the prey of the designing and watchful fox.

Whether our Association can take active steps towards the consummation of what I would fain hope many of my hearers may consider to be a desirable object, is a question that I dare not now dwell upon at large; but I entreat your permission to add a few more words on the subject. I apprehend we have in the first instance to consider, not so much whether it is possible for Oxford or Cambridge to receive our students, as to determine whether it is right and proper that the future generation of medical men shall receive their scientific training at an university or not. If the affirmative be adopted, we may then make our wishes respectfully known to the authorities of the old universities. If they read the signs of the times with our interpretation, we should do well to benefit by the prestige of their ancient names, and it would be a matter of rejoicing that those seats of learning would secure the advantages which it is believed would accrue to them. The alternative of a new foundation in a southern or northern county town would still remain. For my own part, I venture to think that, if you endorse the views I have offered to you, we should more speedily gain our ends if this great Association resolved that a new university, in which the professorial element shall be paramount, is necessary; and proceeded to take such steps as prudent foresight may suggest to secure the realisation of so great an end.

If I have succeeded in obtaining your sympathies, I have little doubt that the ways and means will be forthcoming to enable us to meet what I regard as the summons of the spirit of progress and science, addressed to ourselves and our contemporaries. If you differ from me, I crave your pardon for having taken up your time unnecessarily; but I should scarcely have been true to myself if I had not seized an opportunity, such as the indulgent offer of your Council has given me to-day, of placing before you a summary of the great work that our Association has done, and the still higher objects that I believe it to be destined to achieve. *Salvavi animam meam.*

When I was first invited to deliver this address, I was told that I should meet you at one of the most frequented health-resorts of England, and I naturally asked myself whether I might not appropriately select some topic of general medical interest connected with hygiene, climatology, or balneology, to enlarge upon; but, on review of the past history of our Association and of its influence on our common profession, I could not resist the temptation to take a larger scope, and to ask you whether we are to rest satisfied with what our predecessors have done for us, or whether we should not rather emulate their great endeavours, and seek to place medicine on a higher social, political, and scientific platform. Sloth and stagnation are not to be thought of here, in the very centre of England's manufacturing greatness. Everything that surrounds challenges us with the watchword, "Excelsior!" Modern life is a continuous and hard-fought battle of the intellect. Muscular Christianity is necessary to sustain and invigorate the body; but the training requisite to sustain the mind at its highest point of development is surely, now more than ever, a question of national importance. The workers in brass and iron, no less than the practitioner of medicine, are indebted to science for their greatest achievements.

What say you? Is it possible for the British Medical Association to do more than has yet been done to place science on a footing worthy of an empire upon which the sun never sets? Can this very meeting take steps to inaugurate a new university, in which none shall enter but those who, being well prepared for its curriculum, shall be capable of receiving a training by the highest intellects of the country for ever higher work in all that adorns and elevates life?

I cannot hope to carry all your suffrages with me; but, however our views may differ, I am satisfied that we all agree in our reverence for the great names of the past, and in our desire to tread in the footsteps of those who have led us to the position we now occupy.

That we may more and more be enabled to work with and for the growth, physical and intellectual, of our fellow-men, that we and our children's children may become more and more identified with our country's greatness, has been the wish that has prompted the thoughts which thus imperfectly and fragmentarily I have ventured to lay before you, the members of the British Medical Association.

ORIGINAL COMMUNICATIONS.

CASES OF OBSCURE NERVE DISORDER.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

(*Continued from page 546 of last volume.*)

No. XIX.

Case 1.—Pharyngeal and Laryngeal Hyperæsthesia—Failure of Stimulants and Tonics—Success of Sedatives.

E. S., female, aged twenty-nine, admitted April 1, 1876. Was quite well until June last, when she was confined; had an easy labour. She has been ailing ever since. For six months (from June to December, 1875) she was unable to lie down from fear of suffocation. She had also dysphagia, but not so great as she has had lately. Countenance anxious. Feels very weak, and says her food does not strengthen her at all, although she has a great appetite; bowels open; catamenia regular, not excessive. She has had two children; has never been able to suckle them for more than three or four months. No piles; skin damp; pulse very feeble; nothing amiss in lungs or heart; throat normal. Father died of hernia, mother of dropsy; two brothers and two sisters are alive and well. Ammon. carb. gr. iv., tinct. valerian. ℥j., inf. valerian. ℥j., t.d.; ferri carb. sacch. ℈j., bis die. Ordinary diet; port four ounces.

April 13.—No better. Has great apprehensions of suffocation; is tempery and troublesome, always declaring that she is going to die, that she shall be choked, but she can breathe and swallow well. Pt.

24th.—In much the same state. Pulse very feeble and small; skin moist; lining membrane of larynx over-red; has constantly to keep swallowing all day. Uterus fairly normal; anterior lip pouting, and the lining membrane unduly red, but no discharge. Omittur medicata. Ammon. bromidi gr. x., m. camph. ℥j., ter die.

May 1.—Is stronger; goes down into the garden daily, and makes herself useful in the ward.

8th.—Throat decidedly better; she has none of those distressing attacks now; pulse less weak.

She continued to improve, and left the hospital on 22nd quite recovered.

Case 2.—Highly Neurotic Diathesis—Mesenteric Disease in Childhood—Syncopic Attacks—Loud Mitral Murmur—Chorea—Severe Attacks of Dysphagia and Threatening Suffocation—Nocturnal Incontinence of Urine.

T. L., male, aged fourteen. Up to the age of five or six he is said to have had mesenteric disease and severe diarrhœa; his abdomen was large, and he had much fever. Eight years ago he had the loudest blowing murmur at the apex of the heart that his experienced medical attendant had ever heard. It was so loud that it could be heard before the ear was placed in direct apposition to the chest-wall. So it continued for some years, but as he grew the sound evidently lessened, and about eighteen months ago it had all but entirely disappeared. He had also attacks of cough, invariably cured by digitalis. He had chorea badly four years ago, but it has now ceased. Has had several most severe attacks of nervous dysphagia, most distressing to witness, and not unfrequently difficult to relieve. On one occasion, when all other expedients failed, a few tablespoonfuls of olive oil slowly swallowed relieved the distress and suffocative spasm, and he became calm and fell asleep. One of these seizures occurred just before I saw him. He went to bed looking quite rosy; soon after he was deadly pale with violent palpitation, his heart knocking hard at his chest, and a sense of strangulation in his throat. All the cutaneous surface of his chest and abdomen was hyperæsthetic; he flinched even from percussion of my finger laid on the chest. Urine was clear, neutral, full of sparkling prisms of triple phosphate, not albuminous; specific gravity 1024; nitric acid threw down a cloud of lithates, and caused effervescence. His throat was normal, except that it was a little too red. The pulse was 87, regular, of tolerable force; the heart's sounds were loud, a murmur was occasionally heard with the systole. Ferri carb. sacch. gr. x., bis die; bromidi ammon. gr. v., tinct. cinchon. ʒss., aq. ʒss., ter die; æetheris sulphurici ʒj., tinct. valerian. ʒj., aq. ad ʒiij.—m.; ʒss. p.r.n. at the time of the attacks. When I saw him again, nearly a month later, I was informed that he had been wetting his bed almost ever since his first visit. The throat attacks had been frequent, but very brief; they had been much relieved by the ether and valerian mixture. The throat appeared quite normal, but its hyperæsthetic condition was evidenced by the circumstance that the least particle of skin or grit in his food brought on dysphagia. The attacks were still attended with violent palpitation. The cardiac murmur was scarcely to be heard. His mental attainments were much below those of average lads of his age.

Remarks.—In the first of these two cases there was no indication of any neurotic diathesis; the family seem to have been exempt from any form of nerve disorder. The patient had not suffered from any illness or cause of depression—as rectal or uterine hæmorrhages, or immoderate lactation; she was certainly very feeble on admission. But that her pathological state was not simple debility seems tolerably certain, both from the entire failure of tonic and stimulant measures, including rest, food, and wine, and from the immediate success of a calmative drug. It may be taken as a fact that no visible local change existed which could account for the symptoms. The slight increase of redness in the mucous surface of the affected region was much less than often exists in cases of laryngeal catarrh unattended with any sense of suffocation. The hyperæsthesia—for such it must be considered—depended, I believe, rather on a peripheral nerve derangement than on a central, inasmuch as it showed no tendency to involve other districts. In Case 2 this was not so; the hyperæsthesia had a far wider range, and might almost be termed general. In an interesting case, related by Dr. Habershon in his Lumleian Lectures (*British Medical Journal*, vol. i. 1876, page 497), there was no apparent cause for the disorder, except some fatigue; and, judging from the record, no neurotic diathesis. It seems, therefore, that this neurosis may affect those who are not specially predisposed, and have not undergone any serious wear and tear of the nervous system. The sense of impending suffocation, which existed more or less in all these three cases, indicates, I imagine, predominant affection of the superior laryngeal nerve. By this the motor nerves and muscles were excited to produce closure or semi-closure of the glottis, sufficient in Dr. Habershon's case to render the face livid from arrest of the respiration. The dysphagia seems to me to have been more a subjective sensation than a real muscular spasm. Probably the aryteno-epiglottic mucous folds were intolerant of the passage of ingesta over their surface, but no obstruction seems to have existed. In Case 2, violent palpitation of the heart was a marked feature of the attacks. This as a motor disorder may either be regarded as a reflex result of the sensory, or more probably as an homologous disorder of the cardiac accelerator nerves. Its absence in Case 1, and in Dr. Habershon's, shews that it is no necessary part of the throat pathema. Could an arterial tracing have been taken during the attacks it would have been very valuable. The change in the murmur is an interesting fact; it goes far to prove that there was no organic lesion of the mitral valve. Probably the musculi papillares acted abnormally, preventing the coaptation of the edges of the flaps, and so giving rise for the time to actual incompetency and reflux. In No. 1, the mental state for some time was unsatisfactory, and it was difficult to keep down the suspicion that the disorder was not imaginary, or at least much exaggerated. The result, however—the immediate benefit produced by the bromide,—shews that such suspicion was ill-founded, and that the patient was really labouring under a physical ailment. Throat neuroses are apt to exercise a very depressing effect on the general nervous system. A patient mentioned in my work (p. 548) as suffering from pharyngeal dysæsthesia and lingual neuralgia, described her state as "not feeling ill exactly, but out of spirits and fearful, as I suppose one would feel if a halter were about one's neck." The success of olive oil in Case 2 in soothing the irritability of the throat during a severe paroxysm is very noteworthy, and speaks a word in favour of the old class of "demulcents," now little regarded—perhaps too little. The nocturnal incontinence of urine in Case 2 doubtless depended on a state of the vesical mucous lining like that which occurred in the laryngeal—*i.e.*, on a state of hyperæsthesia, and muscular spasm of the detrusor, and not on paralysis of the sphincter.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

SECOND SERIES OF CASES OF CHOREA.

Case 1.—Bilateral Chorea—Treated unsuccessfully as an Out-patient—Cured after Six Weeks' Treatment in the Hospital.

(Under the care of Dr. SANSOM.)

SUSAN H., aged nine years, was admitted as an out-patient on March 3, 1876.

About six weeks before admission, the patient was said to have been severely frightened, and two or three days after, her movements became irregular and jerky, left limbs being most affected. She was brought to the hospital as an out-patient, choreiform movements being general, but more marked on the left side. No cardiac bruit; no history of rheumatism; family history good; marked anæmia; child rather emaciated. The following mixture was ordered:—℞. Liq. arsenicalis ℥v., mist. ferri carb. ʒij., t.d.s.

She attended as an out-patient for nearly two weeks, but getting worse in spite of treatment, was admitted into the hospital on March 15, 1876.

Absolute rest in bed was enjoined. Heart's action was found to be very irregular, with a thumping first sound, the second pulmonary being accentuated. Therefore tinct. digitalis ℥v. t.d.s. was ordered.

March 20.—Patient slightly better; sleeps well at night; takes food well.

27th.—No marked improvement; heart's action quieter. To take liq. arsenicalis, with ferri carb. sacch., as before.

April 10.—Patient rather worse. Hypodermic injection of hyoscyamine $\frac{1}{150}$ gr. o.n.

19th.—No benefit seems to have been derived from the subcutaneous injection of hyoscyamine. Was now ordered to take ferri oxyd. gr. j. three times a day.

23rd.—Choreic movements disappearing fast; allowed to get up.

25th.—Patient quite convalescent; performs all her actions in an orderly way; co-ordination of all movements perfect; discharged cured on April 27.

It is worthy of note that in this case the temperature throughout was subnormal, being frequently as low as 96°.

Case 2.—General Chorea—Morbus Cordis—Treated unsuccessfully as an Out-patient—Cessation of Choreic Movements under treatment as an In-patient.

(Under the care of Dr. CAYLEY.)

Annie G., aged eleven years, admitted December 4, 1875. The child had been attending as out-patient some weeks before admission; her symptoms remained about the same in spite of treatment during that time.

Patient's family rheumatic. She has had several attacks of acute rheumatism, the last being about six months ago. After a fright, some four or five weeks ago, she became very restless, could not perform her movements without throwing herself into various absurd attitudes, and eventually could not be trusted to hold any breakable goods, for fear of her letting them fall. On examining the chest, the heart's apex-beat was felt outside and below the normal position; there was also a well-marked mitral systolic murmur, heard best at apex, but well conducted into the axilla and to the spine. No other abnormal physical signs. She is a feeble, unhealthy-looking child. Bowels regular; tongue clean; appetite good.

January 1.—Patient has been rapidly improving. Murmur just audible. She looks very much better, her improved regimen not having been without effect.

11th.—Murmur still present, but very faint. All choreiform movements have ceased. Allowed to get up.

19th.—Discharged cured.

Case 3.—Bilateral Chorea—Morbus Cordis—Cured after Four Weeks' Treatment as an In-patient.

(Under the care Dr. CAYLEY.)

Ada B., aged six years and a half, admitted February 22, 1876. The patient some two or three years ago complained much at odd times of pains in her joints, but has not had any well-marked attack of acute rheumatism so far as the mother knows. Has never had scarlatina. For some months past she has been in the habit of shrugging her shoulders and making grimaces when looked at, and recently she has been "continually on the move." She is a fairly-nourished, well-proportioned child, with no very anæmic aspect.

Examination of the thoracic viscera revealed a well-marked rough murmur, systolic in rhythm, audible over præcordial region, but whose point of intensity was at the apex: it was also conducted well into the axilla, and was just audible at the back. Apex-beat about two inches below nipple in nipple line—action heaving and diffused. At the pulmonary orifice a totally different murmur could be heard—soft, musical, and higher pitched; it was continued for some seconds after the systolic mitral murmur and after the second pulmonary sound, being post-systolic as regards time. No clubbing of fingers or lividity of surface. Absolute rest in bed was enjoined, and she was ordered to take tinct. digitalis ℥v., vin. ferri ʒss., t.d.s. It should be stated that this patient had been attending for some six weeks as out-patient, and was only admitted on the failure of the usual remedies employed in the treatment of chorea.

February 29.—Pulmonary murmur has disappeared; other physical signs as before; patient's health better in other respects. The right fundus is somewhat hyperæmic; the disc very irregular in outline, and is bounded by a quantity of a dark-greyish material on the outer side. The left fundus, with the exception of slight congestion, normal. Liq. arsenicalis ℥iij., vin. ferri ʒss., t.d.s.

March 7.—Movements now performed in a quiet, orderly way. Allowed to get up.

17th.—Discharged, cured of the chorea.

Case 4.—Bilateral Chorea—Morbus Cordis—Treated unsuccessfully as an Out-patient—Cured after Two Weeks' Treatment as an In-patient.

(Under the care of Dr. WOODMAN.)

Eliza S. C., aged six years, was admitted an in-patient January 17, after attending as an out-patient some weeks without any improvement in symptoms. The history obtained then was as follows:—She is one of a family of five, the others being perfectly healthy. An uncle on the paternal side died from cardiac disease following an attack of acute rheumatism. The patient was well with the exception of measles till five years of age, when she had an attack of acute rheumatism which confined her to bed for some six weeks or two months; she has never been quite well since. About two months ago she began to throw her limbs about and move the muscles of her face in such a queer way that the mother's attention was arrested. At first the child was scolded, but getting worse the mother attributed it to "pride and obstinacy," and chastised her accordingly; but in spite of all her chiding the child got worse, and was then brought to the hospital.

On admission, she was suffering from well-marked bilateral chorea; also slight hypertrophy of left ventricle, and mitral regurgitation evidenced by a well-marked systolic apex-murmur. No change revealed by an ophthalmoscopic examination. Liq. arsenicalis ℥iij., vin. ferri ʒss., t.d.s., was ordered, and absolute rest in bed.

January 20.—Patient expresses herself as feeling better, but during the day she vomited several times. Bowels constipated. Ol. ricini ʒss., acid. hydrocy. ℥ij., mist. efferv. ʒss., 4tis horis.

21st.—Bowels freely open. Vomiting has not ceased; it has a bilious character.

22nd.—Vomiting less urgent. Patient appears exhausted by the violent straining. Choreiform movements have disappeared in great measure.

23rd.—Very much better; has not vomited since yesterday morning. Has taken plenty of fluid food since. Effervescing mixture discontinued.

25th.—Cardiac physical signs as before. No chorea. Tinct. digital. ℥iij. t.d.s.

27th.—Patient allowed to get up. Vin. ferri ʒij. t.d.s.

30th.—Patient discharged to Croydon, cured.

Case 5.—Irregular Chorea—Cured as an In-patient after Treatment as an Out-patient had failed.

(Under the care of Dr. SANSOM.)

Mary McG., admitted February 3, 1876.

Patient has attended here on several occasions for six years, having suffered on and off during that time with chorea attacks. As far as can be made out, the disease has always evidenced itself in the same way—viz., choreiform movements of the muscles of the head, tongue, and right leg, other regional muscles being exempt. She has several brothers and sisters, but they have never in any way been affected with chorea. No cause is assigned by the mother for the appearance of the disease in this child. No cardiac disease. The child is well nourished, and apparently well cared for. Having attended some months as out-patient without very marked improvement, she was admitted into the wards February 3, 1876. Absolute rest in bed. Liq. arsenicalis ℥iij. c. mist. cinchon. hydrocb. ʒss., t.d.s.

February 5.—An ophthalmoscopic examination revealed in the eye the vessels considerably dilated, also convexity of the disc; the whole image is enshrouded in great obscurity, and the retina is hyperæmic. A clear image can be obtained of the right fundus, which is slightly congested, but not so marked as in the left. The veins look black at the margin of the disc, and then suddenly fade away on entering the area of the disc.

7th.—Patient rapidly improving.

15th.—Choreic movements have left. She can now dress and feed herself without assistance. Sleeps quietly, and is more cheerful. Allowed to get up. No congestion of fundus.

March 9.—Discharged cured.

[For the notes of the above cases we are indebted to the House-Surgeon, Mr. Needham.]

Owens College.—Mr. Samuel Messenger Bradley, F.R.C.S., has been appointed Lecturer on Practical Surgery at the Owens College, Manchester, the Professorship of Surgery being retained by Mr. E. Lund, F.R.C.S., who had previously held this office conjointly with the late Mr. George Southam.

The Apothecaries' Hall of Ireland.—At the annual meeting of the Council of this body, held in pursuance of the statute of incorporation on August 1, 1876, the following were duly elected as office-bearers for the ensuing year:—*Governor:* Jerome O'Flaherty, L.R.C.S.I. *Deputy-Governor:* James Shaw, M.R.C.S. Edin. *Directors and Examiners:* Edward Howard Boland, M.D.; Thomas Collins, M.R.C.S. Edin.; John Evans; Arthur Harvey; Charles Holmes, M.D.; Charles H. Leet, M.D.; Charles F. Moore, M.D.; Robert Montgomery, M.R.C.S. Edin.; Henry P. Nolan, M.D.; Edward J. O'Neill, M.D.; George B. Owens, M.D.; John Ryan, M.D.; George Wyse, M.D. *Examiners in Arts:* John William Moore, M.D. Dub., ex-Sch. Trin. Coll., Dub.; Edward W. Collins, M.D. Dub. *Representative on the General Medical Council:* Charles Henry Leet, M.D.

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SATURDAY, AUGUST 5, 1876.

THE PRESIDENTIAL ADDRESS TO THE BRITISH MEDICAL ASSOCIATION.

In his Address to the British Medical Association, the President remarked that when the Association last met in Sheffield, just thirty-one years ago, "the town occupied less than one-fourth of its present area, it contained less than one-third of its present population, and it represented a very infinitesimal portion of its present wealth" and power. He might have dwelt also on the not less remarkable growth of the Association itself in importance and power since 1845. Then, as the "Provincial Medical Association," it was comparatively a very insignificant body, while now the "British Medical Association" has with truth, though in not very happy terms, been described as being "the largest association of medical men ever voluntarily banded together for the general good of the profession,"—a body to the presidency of which any man may be proud to be appointed. And as it has grown in strength and power, and has increased in efficiency and perfectness of organisation, changes have gradually taken place in the arrangements for its annual meetings that have made the task of delivering a Presidential Address at once more and less onerous and difficult. The great principle of division of labour rules here as in every other organisation of men; and the appointment of special orators in Medicine, Surgery, and other departments, enables the President to feel that any attempt on his part to give a review of the progress of medical science as a whole would be unnecessary and superfluous. But, on the other hand, the President may feel rather perplexed, lest, in choosing a subject upon which to address his audience, he should light on one especially dealt with in the Address in Medicine or Surgery, or in some other of the Addresses-in-chief. Avoiding that danger, the President might, at Sheffield, have most naturally and fittingly addressed his audience on the effects of the trades of the place on the workmen employed in them; and Dr. De Bartolomé confessed that the temptation "to plunge at once into a disquisition on the diseases more especially attendant upon some of the staple trades of the district" was almost irresistible; but there is to be a grand field-day in the Section of Medicine on this subject, and so he refrained, lest he should "steal some one else's thunder," and fell back on what he spoke of as having become almost a rule for the President on these occasions,—viz., that "he should descant upon the merits of the town wherein the Association was actually assembled, should sing the praises of some of its notable citizens, past or present, or should describe, in full detail, its industries, its position, or its characteristic features." In accordance with the programme thus laid down, the President, in his interesting and instructive Address, gave a brief description of the character of Sheffield and its neighbourhood, of its natural wealth and industrial pursuits, and of the changes that, within his knowledge, have taken place in its chief manufactures, in the social condition of its inhabitants, and in the type of its diseases. To much of his Address we need not allude here, but not a little of interest medically will be found in it. Sheffield is by nature well and happily situated. It "spreads over many undulating hills, varying in height from 120 to 1300 feet above the sea-level," and the borough is intersected by five different watercourses; and, circumstances being so favourable for surface-drainage, the natural advantages were, of course, it may be said, trusted to entirely as the hill-sides gradually became clothed with houses instead of gardens, and the population year by year became more dense. "Within a comparatively recent period," however, a regular system of connected drainage has been adopted; large, commodious, and in many instances magnificent, buildings have taken the place of the former small, ill-contrived, and inconvenient workshops and premises; and "everyone who can gets out of the town," so that the urban population is thinned; and in consequence of all these changes "there has been a most wonderful improvement in the health of the district." The inhabitants have also benefited physically by immigration. When heavy iron and steel castings came to be manufactured in the town, it was found that "the population of old Sheffield could not supply the rapidly increasing want of brawny arms caused by the rapidly increasing development of the new industry," and consequently "thousands and tens of thousands of robust and athletic men responded to the call, both from the 'Black Country' and from almost all parts of the agricultural districts, and, as a natural result, the population of Sheffield may be said not only to have increased numerically, but to have improved in physical quality also."

The system of "division of labour" is carried out to the extreme in the trades of Sheffield; and Dr. De Bartolomé's observations on this subject afford an interesting illustration of the truth of Mr. Gladstone's remarks, to which we drew attention a fortnight ago, on "the besetting hazard in the division of labour in the industrial world." The President pointed to the objections attendant on the system: the men attain to a wonderful precision and perfection of work in what they are accustomed to labour at, but "if you take," he said, "a man thus accustomed to one particular kind of work, and set him to a different job, he feels nearly as awkward as a raw novice would. By this you will perceive that the division of labour, while it undoubtedly produces more perfect, and perhaps cheaper, work, at the same time deteriorates the workman by turning him into a mere machine; thus rendering him less capable of varied employment by narrowing the scope of his mental faculties, and crippling the adaptability of his muscles and other physical organs."

Dr. De Bartolomé is of opinion that the type of disease in the district has of late years become gradually less adynamic. "The common epidemic fevers, which not unfrequently visit us, have not of late required the extremely stimulating treatment of former times, nor have they diffused themselves so universally, or with their wonted rapidity"; and this change

for the better he attributes, and no doubt most justly, in part to the taste the artisans have acquired for country life, which their high wages enable them to gratify, but mainly to the supply of water, "which is constant, abundant, and of first-rate quality," to "the improved and daily improving system of connected drainage, the closing of the graveyards within the town, the opening of wider and consequently better ventilated streets, and the visible improvement, small though it be, in the construction of dwellings for the working-men and for the poor." Other cities and towns should surely take encouragement from this most instructive part of the Address to work out energetically similar reforms, and gain like happy improvements in their sanitary condition. Dr. De Bartolomé closes his Address with some very pertinent remarks on the appointment and removal of medical officers of health. We agree with him in thinking that "if proper judgment be exercised in the selection of men as medical officers of health, and they are placed in the independent position which the honest discharge of their duties imperatively demands, they are destined to change ere long the character of disease throughout the whole nation," and we think that it would be well that no medical officer of health should be appointed or dismissed without the concurrence of the Local Government Board. But we are not prepared at present to support the opinion that "it would be still more satisfactory if the Local Government Board took the whole business upon itself, both the appointment and dismissal, as well as the remuneration of the officer, and retained within its grasp the power of removing an officer from one district to another, and of thus avoiding the total loss of the services of a good man, who, through exceptional circumstances, might have become unsuitable to one locality, but yet a very desirable officer for another." Under an ideally perfect Local Government Board such an arrangement might be highly desirable and satisfactory, but so far the administration of the Public Health Act by the Local Government Board has been anything but such as to inspire confidence, or to make us willing to place a larger power and trust in its hands.

THE ADDRESS IN MEDICINE.

Dr. Sieveking, in the able and remarkable Address in Medicine which he delivered to the members of the British Medical Association, spoke of the future of medicine and of the medical profession in a like spirit to that which animated Mr. Gladstone in his late address to the students of the London Hospital Medical School. It will be remembered that Mr. Gladstone declared his conviction that the medical profession presents a future of the highest interest, and that there was in that future the probability that it would gain increased influence—greater in proportion than other professions would. And similarly Dr. Sieveking declared that a great future lies before us—"a prospect that forces upon us the conviction that we are entering upon a field of wider duties, of greater service to our fellow-men, of a nearer approach to the fulfilment of our highest destiny, as members of a Christian commonwealth." But he thinks that we should not forget the gratitude due to the labours and achievements of the past, and that our efforts and success will be none the less if we now and then pause in our onward race to "look back to examine our previous course; to know the sloughs in which we have foundered, the pitfalls we have escaped, and to obtain a clear view of the goal that shines before us, in a brightening and broadening light." "As a profession," he observed, "we have enjoyed but little of the fostering care of parliaments, of corporations, and of universities. What they have done for us has rarely been owing to their spontaneous action, but has been mainly due to that *vis a tergo* which Lord Palmerston, in a different sphere, demanded when any great measure of public utility was urged upon him." Great Britain was much later than many other countries in making provision for medical teaching; so that though "great names—ay, and greater than Italy, Germany, or France can boast of—illumine our roll of distinguished citizens," very many of them "had to lay the foundation of their medical knowledge in foreign schools, because the means were wanting at home to acquire the alphabet of their profession"; and Padua, Leyden, Heidelberg, Avignon, Paris, and Montpelier are only some of the foreign universities that "claim as their *alumni* most of the eminent medical men belonging to the sixteenth, seventeenth, and even far into the eighteenth centuries." And the neglect of medicine by the highest educational bodies in the kingdom was not atoned for by any efforts by others. The Surgeons did not obtain a charter till 1800; and the Apothecaries, founded as a trading company in 1606, exercised no influence on the profession of medicine till 1815. At that date, the College of Physicians having failed to recognise the greatness and importance of the opportunity then offered them of taking into their own hands the management and discipline of the medical profession, the Society of Apothecaries' came to the rescue, and Parliament conferred upon them the powers which they have since then so wisely and well exercised for the best interests of the profession. Not long after that the dawn of a brighter era of development and progress became slowly visible, and among the many events which in the recent development of the profession appeared to Dr. Sieveking to be "most characteristic, both from their mode of origin and the significance of their bearing upon the spirit of the times, as upon the future of our corporate and scientific growth," he selects three as having special reference to what appear to him "the chief phases of our advancement as the followers of a learned and beneficent calling—viz., our relations to each other and to the State; our relations to the science of medicine; and our relations to education."

"The *first event* was inaugurated on July 17, 1832," when Dr. Hastings succeeded in forming at Worcester the "Provincial Medical and Surgical Association." The Association grew and developed, and Dr. Sieveking becomes eloquent as he describes how it and its journal ceased to be provincial, and the jealousy between the provinces and London yielded to the imperative feeling of brotherhood which united us all. "From that time," he says, "the arterial pulses that beat throughout the kingdom acted synchronously and rhythmically with the heart; a sympathetic centre had been found, which tranquillised or warded off local disturbances in the circulation, and our body politic insured a renewal of life, which,

'Broadening down from precedent to precedent,'

promised, as it still promises, even richer and more abundant fruit." And the orator goes on to say there may and, indeed, must be differences of opinion as to many of the questions that have agitated the Association during the last twenty-three years, "but whatever the shortcomings may be that can fairly be laid to our charge, I question whether any profession has ever done more in so brief a space of time to regenerate itself, to show a more healthful activity, or to produce more beneficial and enduring results. Those results, whether we refer to the expansion, the increased and unselfish energy of our corporations, to the Act of 1858, with the consequent formation of the Medical Council, the publication of a national Pharmacopœia, and the recognition of State medicine, to speak only of a few salient features, take their root essentially in our Association." We fear that we have hardly credited the Association with such pervading and powerful influence; but the Association is a great and most useful power now, and there is a considerable substratum of truth in Dr. Sieveking's fervid statement; and we do not feel at all bound to criticise in any grudging or narrow spirit the utterances of a man addressing the Association itself. We cannot afford time or space to notice all that Dr. Sieveking speaks of under the heading of

"Event No. 1," but he touches on the desirability and fitness of medical men to become legislators and "rulers of men," and leaves it to the Association to consider "whether it would be wise to seek the establishment of a distinct Ministry of Health and Medicine; whether we should try to secure for the best men among us seats in her Majesty's Privy Council; or under what other form the medical interests of the country could best be considered," contenting himself with stating, on this point, that he "feels assured that the time will soon be at hand, when, in some way or other, greater power must be put into the hands of physicians, in order to secure the most perfect development of hygienic measures for our country." We most heartily hope, for the good of our country, that his assurance is well founded.

The *second event* of modern times that Dr. Sieveking selected for comment is the publication, in the *British and Foreign Medical Review*, of Sir John Forbes's article, entitled, "Homœopathy, Allopathy, and Young Physic." It "was essentially a protest against the polypharmacy of the day, and a summons to the practitioner seriously to consider and studiously to examine the resources and the methods of treatment at his command." Though the arguments used were, in reality, "old as the hills," and most of the doctrines such as few would now hesitate to subscribe to, yet the publication of the article then "startled the profession like a thunderclap," and "shook the withering tree of routine." While laying bare the falsity, errors, and absurdities of homœopathy, it showed also the dangers and mischief of the heroic methods of treatment, and drew attention anew to the curative powers of nature, and the value of "Dr. Diet, Dr. Quiet, and Dr. Merryman." Thus Forbes and his coadjutors "challenged their contemporaries to a more reasonable inquiry into the nature and history of disease, and the real value of the various agents at our command for its removal." And in consequence of the more scientific development of medicine, what practical results have accrued to the community at large! "Look at the increased duration of life wherever the medical man has been listened to; to the enormously increased value of life in the army; to the general reduction of the death-rate; the check put upon the inroads of disease in many noxious trades and occupations; the reduction—nay, almost the arrest—of mortality in some diseases that, under 'heroic' treatment more frequently succumbed than recovered—diseases of the head, of the chest, of the abdominal viscera."

But "every step in advance opens out to us a new vista of further and higher responsibilities." And one of the main duties of the Association is to assist the student of science; to help "in rendering his results, if not beneficial to the inquirer, at least beneficial to his fellow-men, and in preventing impediments from being put in his way, that thwart his undertakings, damp his zeal, and enfeeble his powers by the chilling effect of neglect and disappointment." Dr. Sieveking also is of opinion that it is especially the function of such an association as that which he was addressing "to spread the knowledge of scientific results, and to secure their application to society"; and its possible work in this direction must be "mainly realised by the influence it may be able to exert on education in schools and universities."

This brings him to "the *third element* in the modern development of our profession, or our relations to education," and, as an introduction to this part of his address, he speaks in terms of just and high approval of the large and liberal education now given at Epsom College, that is "gradually achieving for itself a position in the educational institutions of the country, which will, he apprehends, effect a more widespread influence than even its sanguine founder anticipated." We can but very briefly notice this portion of Dr. Sieveking's address, but he criticises severely the shortcomings of the English universities, and contends that *all* members of learned professions ought to enjoy a university training; and that universities which do not make such provision that *all* their students can acquire the entire theoretic part of their respective professions within their walls, neglect the first duty for which they were called into existence. He conceives "that many of the educational difficulties that have been so long under discussion, and that are far from being removed, will disappear when such arrangements are made at our universities that the great body of practitioners can avail themselves of their advantages. In order that this may be possible, it is necessary that a standard of preliminary training be fixed which shall qualify for admission into the university, and that, at the age of eighteen or nineteen, when young men generally put on the cap and gown, they should be permitted to pass at once from the subjects they have been learning at school to those professional studies which the universities ought to be able to teach infinitely better than the small self-supporting academies of medicine now scattered over the country." Whether or not it is right and proper that the future generation of medical men shall receive their scientific training at a university; and whether this, if desirable, shall be obtained at the old universities or by means of the establishment of a new—not a class—university, he commends to the consideration of the Association.

Many people will, no doubt, dissent from some of Dr. Sieveking's views and utterances; but no one will deny his address the praise of being very able, thoughtful, and eminently suggestive.

THE CONTAGIOUS DISEASES ACTS BEFORE PARLIAMENT.

On Wednesday, the 19th ult., there came on for discussion the now annual motion for the repeal of the Contagious Diseases Acts. It was varied, upon this occasion, by a proposal for a Select Committee, but this was ultimately withdrawn, and the original proposal negatived.

The grounds advanced for the abolition of these Acts were, as usual, their failure to do what they were expected to do as regards the health of soldiers and sailors, their iniquity morally, and their interference with personal freedom. On the first ground we shall not now descant. It is a remarkable illustration of the well-known saying, that you can do anything with figures. Here are a given set of statistics, which, by a little manipulation, are made to represent either antagonistic side as the better one; and when this is the case it is perhaps better, if possible, to do without figures at all, and to search for some other line of argument. To our thinking this is not far to seek. We find it in the universal consensus of opinion of those who have had to do with their practical working. Everywhere we find naval and military officers agreeing as to the improved health of the troops under their care where the Contagious Diseases Acts are enforced. Everywhere, too, we have testimony to the improved physical condition of the women themselves; that is to say, where hospitals were formerly too small to admit of the mass of disease needing medical aid and attention, those beds are now more than half empty. Where formerly the women admitted were masses of loathsome disease, the cases now seen are comparatively mild, and the constitutional effects not nearly so violent as heretofore. Nothing could be more striking than the condition of the two sides of the Lock Hospital here in London after the Contagious Diseases Acts had had time to come into full working order. On the Government side of the house the cases were comparatively slight,—nothing very serious was to be seen; but the fearful masses of disease on the civil side were almost beyond description.

One favourite and stock argument is, that the remedy for the untoward state of things admitted to exist should be left

to charitable action, as are most other things of the kind in this country. But it is plain that this kind of action has altogether failed heretofore, and there is no reason to suppose that it will be otherwise in the future. The agitation against these Acts is not now a thing of yesterday; it has been carried on for long years. The opponents of the Acts have spent money freely in circulating hideous literature and in holding meetings we are well-nigh ashamed to read of; but what have they done to remedy the state of things the Acts were intended to meet? Now, we are free to admit that had they set to work to institute lock hospitals—say in such a place as Liverpool,—to have worked these in such a way as to improve both the bodily and moral health of their unfortunate inmates, and in this way distinctly to have shown that good organisation and active cheerful exertion could effect as much as the Contagious Diseases Acts, they would have inflicted a blow well-nigh mortal on these Acts. But they have not done so. They have contented themselves with holding meetings, usually in places far remote from the scenes of the working of these Acts, and among people who had no means of judging as to the accuracy of the statements made to them. The missions to the districts under the Acts soon ceased.

But the truth is that no voluntary system can succeed—in many districts, at least. We have now before us a pamphlet by Mr. Lowndes, of Liverpool, which we regret was not published earlier. In it he deals with the condition of our earliest seaport as regards venereal diseases, and the statements made are very far from pleasing. From the inquiry we have personally made into the condition of that town, as well as from the statements made by Mr. Lowndes, we can truly assert that the condition of many parts of Liverpool is most deplorable. Yet there is a Lock Hospital, or department of the Royal Infirmary, where there are many female beds constantly untenanted. It requires a law to compel such women to come in—nay, more, when they are in, there is no means of keeping them in. Willingly they will not apply until they are absolutely compelled by pain or illness to do so. Many will leave the moment they feel better. None, except those who have had some practical acquaintance with the management of the class, or of the body most closely allied to them—namely, female convicts,—can have any conception of the difficulty of managing such wild, unruly creatures. Often they have been brought up from infancy to the lives they now lead; to them virtue and morality are not even names. They have never been controlled in their impulses; restraint to them takes the shape of a policeman. In the ward the same characteristics break out; the cause of one may be espoused by half a dozen, and be followed by a general exodus. Each of the recalcitrants may be in even a more dangerous condition than on admission, being better able to propagate disease with less suffering to themselves. It is only when such patients can be kept in due restraint, when unwearying and untiring efforts are made for their moral welfare, that we can have much hope in reclamation or repression.

With all this the restraining influence of these Acts must be kept in view. It is said that this is not so, but that they encourage clandestine prostitution. We are quite sure this is not the case—indeed, that it is the reverse of the truth,—and that in places where clandestine prostitution was common it has almost disappeared under their influence. The risk to the women is too great.

Again we say the *onus probandi* lies now with the opponents of these Acts. By evidence which to all moderate and unbiased minds is irrefragable they have been proved to have done a certain amount of good. Let the opponents of the Acts not confine themselves to traversing the arguments of the supporters of them. Let them show what voluntary effort can do in producing equivalent results.

THE WEEK.

TOPICS OF THE DAY.

At Bow-street, last week, a woman was summoned, at the instance of the Board of Works, on a charge of unlawfully exposing her child, aged six, while suffering from an infectious fever. It appeared that the defendant's child was admitted into the London Fever Hospital, Liverpool-street, suffering from scarlet fever. She was desired not to remove the child, but one day when she came to see him she took him as far as the door of the ward, and, before anyone could prevent her, she ran out of the building with the boy. The doorkeeper stopped her, but she created a scene, and caused a large sympathising crowd to collect. The doorkeeper dispersed the crowd by announcing the case to be one of scarlet fever, but the defendant succeeded in getting the child into a cab. Medical evidence was called to show that the child when taken away was in an infectious state. The magistrate said he considered the case fully made out, but, taking into consideration the humble state of the defendant, he would mitigate the penalty from £5 to £1 10s., which, with the costs, would amount to £2 11s. 6d.

Latest accounts from India state that the 1st Battalion 25th Regiment, stationed at Fyzabad, is suffering severely from sickness. The regiment landed from England last November, and ever since its arrival at Fyzabad, usually regarded as a most healthy station, it has suffered severely. There are now nearly a hundred men in hospital, most of them suffering from fever. It was remarked on the regiment landing what a number of boys were to be seen in the ranks, and this is, no doubt, the cause of the large amount of sickness now existing. We hear that it is proposed to shorten considerably the term of service which line regiments are now called upon to spend in India. The new idea is, that each regiment should be absent from home about five, or at the outside six years, instead of twelve, as is now the case. From a sanitary point of view we are inclined to think that the proposed change would be most beneficial, and one which would go a long way towards reducing the present rate of invaliding, whilst there is no doubt that it would act favourably in rendering the service more popular amongst the lower classes than is the case at present.

The following petition to the President of the Local Government Board has been laid before the medical profession in Liverpool for signature:—"We, the undersigned medical practitioners in Liverpool, feeling deeply the importance of securing for the town the services of the most highly qualified man as Medical Officer of Health for this borough, beg to draw the attention of the Local Government Board to the manner in which the recent appointment of Deputy Medical Officer of Health has been made by the Town Council. We consider the action of the Town Council objectionable on the following grounds: first, the appointment appears to have been determined by private considerations rather than with a due regard to the public interest; second, the usual means of securing the services of the most highly qualified person for the office having been departed from (the Town Council having elected one of their own members without advertising, or giving other candidates the opportunity of applying), we hope the Local Government Board will refuse to sanction an appointment made in a way so completely at variance with public interests."

Last Saturday, at the Brentford Petty Sessions, three dairymen were summoned under the Adulteration Act for unlawfully refusing to supply an inspector under the Act with milk exposed for sale, after he had tendered the money for it, and stated that he wanted it for analysis. From the evidence of the inspector and his assistant it appeared that they met the

first defendant, Mumford, about eight o'clock in the morning delivering milk, and asked to be supplied with a pint. Defendant had two cans—a large one and a small one; the inspector wished to have his supply from the large can, but defendant refused to supply him from that. Mumford stated that he supplied the inspector with a pint from the small can, after which he said he would not have that, and wanted it from the churn-can, and he refused to supply him from that as it was not for sale. The evidence against the next defendant, Pearce, was very similar to the foregoing, but his excuse was that the inspector asked for a pint of milk when he had only about a pint himself, and was actually obliged to purchase a quart afterwards to finish serving his customers. The evidence in the case of the last defendant, Finch, went to show that the inspector, after being told at the house that there was no milk for sale, proceeded up a yard at the back of the premises, where he saw in a kitchen or scullery a can containing what he believed to be milk, but which was contended to be washings of cans not intended for sale, and on asking to be supplied with that, the contents of the can were thrown over him and his assistant by defendant's wife. A former conviction was proved against Mumford, who had been fined £10 for adulterating his milk to the extent of 45 per cent., and he was now fined £5 or two months. Pearce was fined 20s. or fourteen days, and the summons against Finch was dismissed, as the Bench held that there was no exposure for sale.

A new infirmary for the Greenwich Union was completed and opened last week. The building has been erected on a site of about three acres at the rear of the workhouse, and is capable of accommodating 250 patients.

A deputation from the Society of Arts recently waited upon the Metropolitan Board of Works, to present a memorial, which set forth: "That the protection of public health from typhoid fever, and other diseases, demands that an amending Act of Parliament be passed as soon as possible to secure that all house-drains connected with public sewers in the metropolis, and towns having an urban authority, should be placed under the inspection and control of local sanitary authorities, who shall be bound to see to the effective construction and due maintenance of all such house-drains, pipes, and connexions. Provisions having this object in view exist in the Act constituting the Commissioners of Sewers in the City of London, in the Metropolis Management Act, 1855, and in the Public Health Act, 1875, but practically they seem scarcely sufficient for the purpose. That plans of such drains and connexions be deposited in the charge of the respective local authorities who shall be bound to exhibit them, and supply copies of them to the public on payment of a moderate fee. That the owners of houses be compelled by law to send to the respective local authorities, within a specified time after the passing of the Act, plans of all house-drains on an appointed scale." Sir Henry Cole, on behalf of the deputation, said the object sought to be attained was the suppression of typhoid fever in the metropolis. He lived in a neighbourhood (Kensington) where it was chronic, and the rating of the district was four or five times as much as it was twenty years ago. The district, he said, was under the control of the Vestry, and he had no complaint to make against that body. After a lively discussion the memorial was referred to the Works and General Purposes Committee for consideration and report. As might be expected, the Vestry of Kensington have replied to the charge brought against the district, and at their last meeting they passed a resolution to the effect "That the statement made by Sir Henry Cole to the Metropolitan Board of Works, that typhoid fever is chronic in South Kensington, has no foundation in fact; for no death has occurred from that cause in South Kensington during the present year, and the Medical Officer of Health of the parish is unacquainted with any cases of illness from the same disease." In reply, Sir Henry Cole points out that the fact of no death having occurred is no proof that typhoid has not existed. We wish the Society of Arts every success in this last crusade against disease, which they have undertaken, more especially as it appears to be their intention to petition the Local Government Board to take steps on the subject over the whole country.

Recent information received from India by telegram would appear to point out that the hill stations of that country are losing their character as sanitary resorts. Last year cholera raged at Simla, and some weeks ago it appeared dangerously at Darjeeling. Now it has broken out at Murree, apparently in a violent form, and the troops stationed there have accordingly been moved into camp.

On Tuesday last a deputation from the Sanitary Institute of Great Britain waited upon the President of the Local Government Board to urge him to pass the Pollution of Rivers Bill, and to introduce clauses of a more stringent nature. Mr. Sclater-Booth acknowledged the support of this deputation in favour of the Government Bill, and said it must not be supposed, because the discussion of this measure had occupied a very small space in the public journals, that it had not received a great deal of attention from members of Parliament on both sides of the House. The deputation would readily perceive that the passing of the measure, though it would not achieve all they desired, would be a very great stride in the direction they wished to proceed, but he feared the present prospects of the session were not in favour of its becoming law. They had little time before them, but he was not without hope that it would be possible to pass this measure. At all events, it would not be from any lack of exertion on his part if they should fail in doing so.

Dr. B. W. Richardson's proposal for a "City of Health," mooted by him in the autumn of last year, is about to be tried practically. A site has been secured on the coast of Sussex, where the sanitary city will be laid out, and in due time erected. Dr. Richardson has given his countenance to the scheme, and will supervise the sanitary arrangements; while Mr. Frank E. Thicke will be responsible for the architectural details. All classes of society will anxiously look forward for a report of the results obtained in this model town.

The President of the Local Government Board has had brought under his notice the recent dismissal of Dr. Deville by the Harrogate Improvement Commissioners, for reading a paper before the Yorkshire Association of Medical Officers of Health, having a special reference to watering-places; and we are glad to find that the President's decision is that the Sanitary Authority at Harrogate were not justified in giving notice to Dr. Deville of their intention to dismiss him.

Dr. Corfield, Medical Officer of Health, at the last meeting of the St. George's, Hanover-square, Board of Works, remarked, in reference to the statements made as to the prevalence of scarlet fever in the parish, that he could say it had never been so free from that disease as it then was.

We are happy to report that Sir William Fergusson has continued to improve in health and strength; so that on the 2nd inst. he was able to leave London for his residence in Scotland. Dr. Arthur Farre also, we are glad to say, makes excellent progress towards perfect recovery. He has had the pleasure of making a change from his bed to a chair; and it is expected that in a week or ten days he will be able to enjoy a drive in the open air.

MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The annual meeting of the Medico-Psychological Association was held in the hall of the College of Physicians on Friday, July 28, under the presidency of Dr. Parsey, of Warwick;

Dr. Duncan, of Dublin, the President of last year, resigning the chair. Dr. Fielding Blandford was elected President of the Association for 1877. There was a very large attendance of members. Dr. Parsey delivered an address in regard to the provision which, he thought, ought to be made for the chronic insane at present crowding the wards of our county asylums. He spoke in high terms of the Scotch system of boarding out the chronic and harmless cases in private houses, and recommended its adoption in the rural counties of England among the cottages of the English, within a fixed radius from each county asylum, supervision and general management being conducted by the committee and officers of the asylum. The arrangements for supervision he considered the weak point of the Scotch lunatic colonies. For the urban districts of England he recommended asylums of different grades of elaboration in structure and management, with facilities for interchange of patients within the same districts. In the discussion which followed, Dr. Bucknill took occasion to refer to the charges which had lately been made against the management of American asylums. While he did not defend all American asylums or all medical officers, he asserted most strongly, from his personal observation, that a spirit of humanity prevailed in a large number of those institutions, and that, as a body, their medical superintendents were men of great ability, zeal, and kindness. The Association then, on the motion of Dr. Bucknill, seconded by Dr. Clouston, passed a resolution of sympathy with their brethren engaged in the arduous and difficult duty of the treatment of the insane in America, who have been unjustly accused of inhumanity and ignorance. Dr. Clouston read a paper on "Attendants on the Insane," advocating a systematic professional training being given them, which led to an animated discussion. Dr. Lalor, of Dublin, read a paper on the "Education of the Insane." Dr. Hack Tuke, in connexion with this paper, gave an account of a recent report of the Committee of the Charity Organisation Society on the subject of making provision for the education of the chronic harmless insane, the idiotic, and imbeciles, by the State. The Association then, on the motion of Dr. Hack Tuke, came to a resolution supporting generally the recent proceedings of the Charity Organisation Society in regard to this matter. The Association appointed a Statistical Committee to extend the present tables of the Association, Dr. Lockhart Robertson, Dr. Maudsley, etc., being among the members.

HEALTH OF LONDON.

The Registrar-General's returns for the week ended the 22nd ult. show that in London during that period 2333 births and 1878 deaths were registered. Allowing for increase of population, the births exceeded by 63, and the deaths by 245, the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the three previous weeks had been equal to 17·6, 19·8, and 22·1 per 1000, further rose the week before last to 28·1. The 1878 deaths included 8 from small-pox, 24 from measles, 35 from scarlet fever, 10 from diphtheria, 29 from whooping-cough, 20 from different forms of fever, and 457 from diarrhœa; thus to the seven principal diseases of the zymotic class 583 deaths were referred, against 245 and 373 in the two preceding weeks. These 583 deaths were 117 above the corrected average number from the same diseases in the corresponding week of the last ten years, and were equal to an annual rate of 8·7 per 1000. The fatal cases of measles, scarlet fever, and whooping-cough were again proportionally most numerous in South London. The annual rate of mortality per 1000, according to the most recent weekly returns, was—in Calcutta, 22; Bombay, 27; Madras, 34; Paris, 24; Brussels, 26; Amsterdam, 20; Rotterdam, 26; the Hague, 23; Copenhagen, 25; Stockholm, 34; Christiania, 15; Berlin, 45; Hamburg, 28; Munich, 35; Vienna, 23; Buda-Pesth, 46; Rome, 26; Naples, 28; Turin, 22; Alexandria, 39; New York, 32; Brooklyn, 28; and Boston, 23. Diarrhœa caused 364 deaths in Berlin, and 141 in New York.

CLINICAL EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

At the recent pass examination for the diploma of membership of the Royal College of Surgeons, many very interesting clinical cases were submitted to the candidates, and of these we subjoin a short list, which will no doubt be read with interest by teachers and pupils. The cases are selected indiscriminately from the various metropolitan hospitals, viz.:—
1. Aged seventeen; exostosis of right femur, lower end. 2. Aged twenty-five; acute necrosis of right humerus. 3. Aged seventy-seven; palmar ganglion extending to forearm. 4. Aged sixty-one; epithelioma linguæ. 5. Aged thirty-one; growth in right orbit and nose. 6. Aged seven; disease of left elbow-joint. 7. Aged seventy-six; cancer in right axilla, ulcerated. 8. Aged eighteen; left inguinal hernia. 9. Aged twenty-eight; lichen and scabies. 10. Aged twenty-six; eruption on chest, etc. (tinea versicolor). 11. Aged nineteen; necrosis of lower end of right femur. 12. Aged fifty-six; necrosis of cranial bones. 13. Aged fifty-three; results of injury to ankle, deformity. 14. Simple fracture of left first metacarpal bone. 15. Aged fifty-three; eczema on face. 16. Ingninal hernia and varicocele. 17. Strumous disease of elbow. 18. Aged eighteen; lumbar abscess. 19. Aged nineteen; anchylosis of shoulder-joint.

ADDITIONAL WATER-SUPPLY FOR HASTINGS.

On the 28th ult., the Mayor of Hastings laid the foundation-stone of a new pumping station, which the Town Council of the above borough have decided to erect immediately, at Buckshole, from whence a large portion of the present water-supply of the borough is derived. The Council are also engaged in sinking additional wells at Buckshole and at Ecclesbourne; and when these, together with the new pumping station, are completed, we may hope that the water-supply of Hastings will be very materially improved. The best evidence of the justice of the stricture we have felt it our duty to pass on the present water-supply of this favourite health-resort is the anxiety which the Town Council are now exhibiting to improve the service.

THE HEALTH OF THE ST. GILES' DISTRICT.

The annual report of the Medical Officer of Health for the St. Giles' District for the year 1875 has just been published, from which we learn that the death-rate of the district last year was considerably below the average of the preceding ten years. Last year the death-rate was 23·63 per 1000, whilst the average death-rate for the preceding ten years was 26·87 per 1000. This result is doubtless due to the careful carrying out of the recommendations of the Medical Officer of Health. It is gratifying to observe that not a single death from small-pox occurred in the district during the year.

THE CHARGE AGAINST A HERBALIST OF ATTEMPTING TO PROCURE ABORTION.

The Plymouth herbalist who was recently committed to take his trial on a charge of supplying a noxious drug to a pregnant woman, for the purpose of procuring abortion, as reported in the *Medical Times and Gazette* of July 22, was tried last week at the Plymouth Sessions; but in the absence of corroborative evidence he was acquitted. The Recorder remarked that the case was a very suspicious one, and a very proper one for inquiry, but as the woman's evidence could not be depended on, the prisoner must be discharged. He had no doubt that a great deal of mischief was done by those who kept herbalists' shops, and it was necessary that their proceedings should be carefully watched.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE annual general meeting of the Society of Medical Officers of Health was held on July 12, when the following officers were elected for the year ensuing:—*President:* Dr. G. Buchanan. *Vice-Presidents:* Dr. F. Bond, Dr. T. O. Dudfield, Dr. C. M. Tidy. *Treasurer:* Mr. J. Liddle. *Secretaries:* Dr. J. N. Vinen, Dr. W. H. Corfield. *Council:* Dr. J. Adams, Dr. A. W. Barclay, Dr. C. O. Baylis, Mr. E. L. Jacob, Mr. H. Leach, Mr. S. R. Lovett, Dr. C. W. Philpot, Dr. J. J. Rygate, Mr. G. P. D. Thomas, Dr. J. W. Tripe, Dr. J. Whitmore, Dr. W. T. G. Woodforde.

PARLIAMENTARY. — WATER-SUPPLY — POLLUTION OF RIVERS — CHARGE AGAINST A MEDICAL MAN—BATH WORKHOUSE INFIRMARY—ARMY MEDICAL REPORTS—MEASLES IN FIJI.

IN the House of Commons, on Friday, July 28,

Mr. Brown drew attention to the impure and deficient supply of water; as also to the polluted condition of the water-supply for domestic purposes in some of the rural parts of the country.

Mr. Sclater-Booth, in reply, said that his attention had undoubtedly been directed to the polluted condition of the water-supply in some rural districts of the country—first, by the great distress occasioned by the water famine in 1874; secondly, by the constant reports he had received as to the mischief arising from the inadequate supply of water and its polluted condition in some parts of the country; and thirdly, by a deputation of a very influential and important character, introduced by the right hon. gentleman the member for the University of Edinburgh. No Royal Commission was necessary, as already they possessed ample information. To remedy the evils he had passed two Bills through Parliament on the subject, in each of which greater facilities had been given to authorities, both rural and urban, for the supply of water. In 1874 powers were given for the purchase of water rights, and in 1875 those powers were increased; the sanitary authority being enabled to acquire those rights outside his district with a view to conduct water purchased elsewhere within his district. The local authorities were awakening to the importance of the subject, and loans of £16,000 and £31,000 were made in the last two years, and this year they had reached £23,000. These sums were large relatively to the necessities of different localities, some of which required only two or three hundred pounds. He believed the Pollution of Rivers Bill would give pure water to many rural districts.

The Pollution of Rivers Bill passed through committee.

On Tuesday, August 1,

On the report of amendments to the Pollution of Rivers Bill, Dr. Playfair objected to the Bill because it would tend to the advantage of the manufacturers, and the general public would derive no benefit from its provisions. It had been so cut about and altered that all the proposals which could have proved advantageous to the public had been frittered away. It would take away all power in reference to this particular question from the local authorities, and concentrate it in the central department in London, at the same time giving enormous power to the departmental inspectors without providing that they should possess any chemical or other knowledge of a kind necessary to the due performance of the duties attaching to their offices. The majority of his Scotch friends were favourable to the Bill, because the present measure would act most favourably in the interest of the polluters of rivers.

Mr. Sclater-Booth hoped that in the future a good deal of the centralisation complained of would be removed. He agreed that it was desirable that the administration of the Bill should be placed in the hands of the local authorities; but if it was proposed to do so at first there would be a great outcry against it. He denied that the amendments introduced through his agency would have the effect of destroying the original intention of the Bill.

Mr. Gibson moved a new clause (application of the Act to Ireland), which was agreed to.

Clause 2 was struck out. Several amendments were agreed to. The consideration of amendments on this Bill being resumed later on, the report was agreed to.

Dr. Lush asked whether the scheme of the Bath Board of Guardians, by which the duty of supplying wine and brandy to the sick paupers for an annual sum of £30 was imposed on the medical officer, had received his approval.

Mr. Sclater-Booth said that the Guardians had rescinded their resolution on the subject, which was not approved by him.

Mr. Hardy, replying to Mr. Gibson, said that the supply of Army Medical Reports had been stopped on the suggestion of the Army Medical Controller. Copies were now sent to all the general hospital stations, where they would be preserved for consultation.

Mr. Hunt, in reply to Mr. Shaw-Lefevre's inquiry respecting the share of responsibility of the captain and medical officer of her Majesty's ship *Dido* for the introduction of measles into the Fijian Islands, and the consequent lamentable loss of life in those islands, said that he was unable to form any decided conclusion as to the degree in which blame should be apportioned between the naval and colonial officers on the occasion in question. Unfortunately, the captain had omitted to fly the yellow flag on going into the harbour; but he thought the greater responsibility rested on the colonial authority. Both ship-captain and doctor took steps to inform the colonial authorities that measles was on board. But he could not understand how the doctor of the ship was not informed of the great danger attending the introduction of measles among a native population. He could not absolve the doctor nor even the captain from blame, and the Admiralty had written to them to that effect. The mischief seemed to have arisen in a great degree from ignorance rather than inattention or neglect.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE annual meeting of the British Medical Association was begun on Tuesday, August 1, at Sheffield. The circumstances which led to this change of programme from what was announced last year at Edinburgh, must be within the memory of our readers. Carried away by the enthusiastic instance of the late Sir John Cordy Burrows, the authorities of the Association —somewhat prematurely, perhaps—agreed to accept the invitation he brought with him for the Association to meet this year at Brighton, he himself being at the same time made President-elect. He never lived to fill the chair; unfortunately, too, he had not been for some time popular with his brethren in Brighton, who did not seem to be inclined to back him in the reception of the large and influential body over which he had been chosen to preside: so that it was perhaps fortunate that the circumstance of Sir J. Cordy Burrows' death forced the Association authorities to look elsewhere for a place of meeting. Any difficulty was spared by a warm invitation to Sheffield from the members of the profession in the town and district; and to Sheffield it was resolved to come.

It is customary for the local body to indicate whom they would wish to preside over them, and on this occasion the choice fell on an able and worthy representative of the medical profession. Dr. Bartelomé is not only Senior Physician to the Infirmary here, but he is the acknowledged leader of the profession in the district. He is a man of sound sense, upright and accomplished, and well worthy of the position he holds. The zeal with which he has accepted and done the work of his distinguished, though laborious position as President of a great Association has already been well indicated by the interest and share he has taken in the proceedings of the Association with regard to the Vivisection Bill.

Fixed, however, as the meeting was at a comparatively late period, scant time was allowed the local authorities to make those arrangements which become every year more and more necessary, as they become more and more difficult. So many things have to be foreseen and provided for that the duties of the local authorities, under any circumstances, must be heavy, but here at Sheffield they have been exceptionally so. Only earnest endeavours and unflagging zeal could have carried through the work preliminary to the meeting here; and certainly to make arrangements so perfect as are here to be found reflects the highest credit on the local secretaries, Dr. Keeling and Mr. Arthur Jackson. Their position has been no sinecure, but their work has been well and faithfully performed.

One great difficulty has been that in Sheffield there is no building large enough to contain the Association and all its

belongings. The largest, which takes its name from the staple industry of the place, is Cutlers' Hall, but though this affords ample space for general meetings and such-like, only two sections can find in it their local habitation—these are Medicine and Obstetrics. Over these preside Dr. Chadwick, of Tunbridge Wells; and Dr. Lombe Atthill, of Dublin, respectively. Surgery and Public Health have to find a dwelling more remote; and of these, Public Health, as being more conveniently separated from its neighbours than any other, is housed at the greatest distance from the head-quarters in Cutlers' Hall. The President of the Surgical Section is Mr. Hutchinson, of London, who will undoubtedly lend both sound suggestions and keen criticism to any of the discussions arising in his section. Over Public Health presides Dr. Russell, Medical Officer of Health for Glasgow. His reports we have often referred to with pleasure, showing, as they do, a clear insight into the causation of disease, as well as skill in meeting and grappling with emergencies.

The meeting began with a service in the parish church, and with various meetings of Council; but the real business commenced with the President's Address in the evening. Here the large hall was quite filled, and the address was listened to with marked approbation. Following recent precedent—a precedent which we believe to be both artificial and often likely to be inconvenient—Dr. Bartolomé dealt almost wholly with local topics, such as the health of Sheffield, its peculiar manufactures, and so on; but certain parts of it were more cosmopolitan. But as it is to be found in another column, we need say no more on the subject, at least in this connexion. It was well read, well received, and warmly applauded.

Next followed Dr. Falconer, of Bath, with the report of the Council for the past year. This showed both a favourable prospect and a comforting retrospect, for it found the Association with something over £3000 in hand. Deaths of course had to be recorded, and among these the Council specially referred to the loss of Mr. Southam, of Manchester, Sir J. Cordy Burrows, Dr. Parkes, and Dr. Hughes Bennett.

It may be remembered that last year there was some little difficulty about the admission of female practitioners to the privileges of membership, and it was then arranged that a vote of the Association should be taken, by means of circulars, on the subject. Upwards of 6000 of these were sent out, and more than 4000 were returned: of these 3072 contained a distinct "no"; only 1051 said "yes"—numbers showing tolerably clearly the general opinion of the profession as regards the medical sisterhood.

With respect to the Vivisection Bill, the Council most justly took to the Association the credit of having spared no pains to afford organised means of giving pressure and effect to professional opinion on the subject.

We should be glad to end here, but our position of independent journalists compels us to go a step further. On the agenda of this the first public meeting stood the following:—

"Mr. Lawson Tait (Birmingham) will move the following alterations in, and additions to, the by-laws:—

"1. That By-law 8 read thus—'That the President shall be elected every year at the last general meeting from among the members resident in the district in which the next annual meeting is to be held, and he shall enter, etc.'; and further to read as it now stands.

"2. That By-law 12 shall read—'That the Editor of the *Journal* shall be subject to annual election at a general meeting of the members of the Association; that he shall be remunerated as the Committee of Council think fit; and that he shall be responsible for all that appears in the *Journal*.'

"3. That By-law 13 shall read—'The Secretary of the Association shall be subject to annual election at a general meeting of the members of the Association'; and further as it now stands.

"4. That a by-law shall be inserted to the effect that 'The *Journal* shall be considered the organ of communication between the members of the Association; and that no reasonable communication from any member or members shall be refused admission without the reason of such refusal being communicated to such member or members.'"

This practically amounted to a vote of censure all round, and many appeared at the meeting with the intention of giving the proposer of the resolutions a warm but not quite sympathetic reception. When, however, the time came for the author of the proposed resolutions to come forward, the President read a telegram stating that Mr. Lawson Tait was unavoidably detained in Birmingham by a "case of hæmorrhage." No one appeared in his place, no one urged on the motion; consequently the resolutions had to be publicly, and we trust for ever, dropped. We need to say little more; but surely it would have been the part of a wise and prudent man to have seen that he had a following of sympathisers which would at least have given him a chance of carrying his intended resolutions? and we hold it to be utterly wrong to keep such notices of motion for a length of time before the public, and at the last moment neither to put nor to withdraw them, but to leave them in the lurch at the mercy of an audience apparently hostile to them. The only one which demands notice at our hands is the last. Anyone who knows an atom about journalism knows that such a resolution is sheer nonsense, and mischievous nonsense too. An editor must be an autocrat—he must have absolute control over that for which he is responsible. How that has been managed with regard to the *British Medical Journal* is not for us to say. The body of medical journalists is not a large one, and for our own part we are only doing our duty when we say that we have ever found the staff of the *British Medical Journal* able, honest, and straightforward fellow-workers and competitors.

THE "THUNDERER" DISASTER.

THE progress of such as were not doomed to inevitable death in the first stage has been, we are glad to be in a position to state, more favourable than could have been at first predicted. Since our last week's report there have been four deaths, all in the congestive stage of reaction with meningitic symptoms. Six or eight of those who had fallen into that condition, being in all instances much scalded on the head and neck, all of them more or less in the air-passages, still survive, making a brave fight for life, and all are now steadily improving, although last week their state was as unpromising as that of those who have since perished. It is remarkable that no death has occurred later than the tenth night, since when there has been at first a holding on in the lowest condition of viability, followed by an upward tendency, which has in the majority become established under careful nursing and attention to diet; and no case of gastritic disturbance has occurred. Much of this is fairly attributable to atmospheric condition, a change having occurred on the tenth night, and been maintained since then, the thermometer having sunk from 70° to 60° at night, affording rest and calmness to the excited nervous force which no hypnotics could produce so long as the high summer heat continued. Instead of distressing rolling from side to side, and sinking in their beds, the poor sufferers have lain comparatively undisturbed, and have enjoyed long periods of nocturnal sleep, requiring bland drinks on awakening, and then lapsing again into a soothed state of quietude, to take nourishing food in the early morn, and then to withstand the painful operation of changing the dressings on their wide excoriations, performed, however, not without moanings and screams.

With a heated change of temperature it may be feared that some of these would relapse into their former hopeless condition; but with continuance of the present dry, refreshing state of the atmosphere it may be hoped that for the most part they will yet recover. Of course they may do so in a few cases with contracted limbs and disfigured faces, and one or two in blindness from ulceration of the corneæ—the eyes having been severely scalded by the superheated blast of steam to which they were exposed.

It is very satisfactory to know that of the fifty-eight admitted to hospital so many have been already discharged to their homes to the future care of their families, and that only twenty-one men and one officer remain under treatment.

The list hung up outside the gate for the information of the friends of the sufferers showed, on the morning of the 1st inst., two very dangerously and two dangerously ill, and all the others as "doing well."

There is still great prostration in the four cases marked dangerous, but we may observe that the surgeons specially detailed for service with these men (Messrs. Goodman and Burgess, acting under the orders of Deputy Inspector-General Loney) entertain very strong hopes of their ultimate recovery.

We are informed that several are likely to be discharged in

the course of the next week, and we hope, in our next issue, to be able to report more favourably of those who may remain.

We hail this as a fair result in so terrific a casualty, and as highly creditable to the administration of our largest naval hospital, proving beyond question the advantage of the entire freedom of action there allowed to the energy of our profession; and we trust that the military authorities will not be slow to appreciate the advantages of our naval medical system, which has, we hear, on this occasion received the commendations of the Admiralty.

FROM ABROAD.

Hot-Water Injections in Uterine Hæmorrhage.

Dr. Windelband, at a meeting of the Berlin Medical Society, read a paper bearing the above title (reported in the *Deutsche Med. Woch.* for June 17), descriptive of a practice which, paradoxical as it may appear, he regards as one of great importance and efficacy. His attention was first drawn to the subject on perusing an account extracted from an American journal, in which Dr. Mann described the great benefit he had derived from hot-water injections in two cases of abortion—the pains, which had abated, being again aroused, and the hæmorrhage ceasing. Called himself soon after to a case of abortion at three months, in which plugging, ice, ergot, etc., had in vain been tried to induce pains and check hæmorrhage, he found the cervix uteri much relaxed, and the patient almost in a state of collapse. He resolved to try the injections, and, having introduced the uterine tube of a syringe within the cervix, threw in water at a temperature of 38° or 39° Réaumur (118° to 120° Fahr.). Immediately the hot water gained admission, the cervix began to contract and uterine pains were aroused, and by the time that eight or ten injections had been made, at intervals of five or ten minutes, the whole contents of the uterus had been expelled and the hæmorrhage completely arrested. Encouraged by such success, Dr. Windelband has pursued the same practice in all subsequent abortions of a similar character; and, indeed, in all cases of hæmorrhage connected with uterine relaxation, at whatever period this occurred, as also for the relief of spasmodic pains, and for the excitation of pains when too feeble, he has always availed himself of this stimulant, and has never found any disadvantage result from the practice. He relates two cases of placenta prævia in which the hæmorrhage was permanently arrested.

Dr. Windelband stated that he only brought these few cases before the Society as specimens, assuring it that he had also met with a great number of abortions and deliveries (the latter less numerous than the former) in which severe hæmorrhage was present, in the relief of which he had almost exclusively relied upon this means, without being disappointed, and without having witnessed any subsequent ill effects resulting from it. In cases in which hæmorrhage has resulted from other causes, such as changed position of the organ, chronic inflammation, or uterine fibroma, palliative treatment by this means has proved of great value. He cites the case of a lady, the subject of two intramural uterine fibroids, in whom sudden excitement, mental disturbance, etc., brought on violent attacks of hæmorrhage, by which, owing to the distance at which she lived from medical aid, she was often placed in a dangerous position. But, having the means at hand of using these hot-water injections, she found herself in comparative safety, and could even venture upon long journeys, while formerly she hardly ever dared to leave home. A two years' experience in treating the most varied and violent forms of uterine hæmorrhage has amply proved that in these injections we have a most invaluable and certain means of dealing with these dangerous cases, which is much to be preferred to the employment of cold, astringents, etc., when prompt treatment is required. Plugging during the above period has only been resorted to when, from the suddenness of the occurrence of hæmorrhage, a syringe or suitable apparatus has not been at hand. As far as a limited number of trials show, it seems also that the injections may be used in various conditions of the uterus, which, independently of the existence of hæmorrhage, call for a local stimulating treatment.

As to the mode of procedure, the injections have always been administered by means of a simple irrigator (the patient lying on her back), which enables a continuous and energetic stream to be propelled, the temperature of the water employed commencing at 38° R. (118° Fahr.), and increasing to 41° R. (124° Fahr.), the sensibility of the organs soon adapting themselves to the increased temperature. Not only are the effects soon produced, but they are unaccompanied by any of the unpleasant sensations and the various serious inconveniences that the application of cold so often gives rise to. While the warm injections are agreeable to the feelings of patients, however varying their susceptibility to pain may be, they never induce painful or mischievous reaction.

Dr. Windelband, in conclusion, observes that if it be objected that these results derivable from the warm injections are not in harmony with the well-known effects of warmth in producing relaxation of tissues and dilatation of vessels, attention should be directed to the fact that it is not warmth that is thus applied, but heat, and that we have to do with a contractile organ of very easy excitability. In fact this heat arrests hæmorrhage by stimulating the muscular fibres of the uterus, just in the same manner as the application of cold does so. The enormous contractile action induced by the injections may be judged of by placing the finger within the cervix while they are being administered. That they induce any direct coagulating power upon the bleeding vessels is not to be supposed, as no signs of such power have been observed, and the temperature employed is insufficient for that purpose.

Prof. Révilliod on Croup and Tracheotomy at Geneva.

The French medical societies always expect that persons desirous of becoming members should first submit a paper to their approbation. A committee is appointed to report on this; and if its statement, which usually combines an analysis of the essay in question, be favourable, the writer is admitted as a candidate to be balloted for. Mere admission on money payment, without exhibition of work done as an earnest of more to be done, is unknown among these bodies.

Dr. Révilliod, recently appointed Professor of Clinical Medicine to the new Faculty at Geneva, desirous of being appointed a corresponding member to the Paris Hospital Medical Society, submitted to that body a memoir on "Croup and Tracheotomy as observed at Geneva," upon which M. Cadet de Gassicourt, the reporter of the committee, has delivered in a very favourable report (which is published in the *Union Médicale* for July 25 and 27)—the memoir itself being reserved for publication in the *Transactions* of the Society. The reporter observes that a perusal of the paper has caused some jealousy on the part of the committee at finding their *confrères* at Geneva so much more successful in their tracheotomy cases than are the practitioners of Paris. Prof. Révilliod's paper relates to a period of eight years, during which he has had eighty-seven operations with thirty-eight recoveries—*i.e.*, more than 43 per cent.; while the statistics of the Parisian and French provincial hospitals, taken *en bloc*, only give a mean of 30 per cent. of recoveries.

Croup and diphtheria have, indeed, only appeared as prevalent diseases within the last few years, during which Geneva has so much increased in size; and it is during this period that Dr. Révilliod's opportunities of observing the disease commenced. One statement he makes has surprised the committee—viz., that he has never seen diphtheria propagated in the same house from family to family, in spite of the commingling together so often observed among children. Several children in the same family have been attacked by diphtheria, but in conditions, as regard time and space, opposed to the supposition of contagion. The reporter believes that a very short residence in a Paris hospital would convince the author of the groundlessness of his scepticism as to contagion.

Of the eighty-seven patients operated upon, forty-seven inhabited the town, and forty the country, three only being inmates of the hospital. How rare is the success of the operation in Paris below two years of age is only too well known; but sixteen of the Geneva cases were below that age, and yet six recovered. Dr. Révilliod agrees with the opinion now generally held in France, and which was that finally adopted by Trousseau, that the operation should be performed "at the commencement of the third stage" of the disease. He performs it with the aid only of the bistoury and the canula, rejecting the dilator and other instrumental aids. The reporter admits that the operation should be as simple as possible, as is usually the case now at Paris; but still the dilator in some cases does very good service, and it will not do to bind ourselves down to absolutely the same procedure in

all cases. Although early operation is so advisable, yet when called to cases apparently hopeless, the reporter insists that we should still operate, and operate rapidly. True, resurrections sometimes reward this procedure, but only on the condition that we do not leave the child too soon. We must practise, with tenacity and obstinate perseverance, prolonged insufflation, methodical and rhythmical manipulation of the chest, the application of electricity, and the introduction of curved forceps or feathers—with the object of stimulating the trachea rather than of seizing hold of the false membranes. Dr. Révilliod fully acknowledges these precepts, and fears that he has sometimes abandoned his efforts too soon.

Having spoken of M. Révilliod's essay in warm approval, the reporter next seeks for the explanation why the operation proves so much more successful at Geneva than at Paris, the mode of procedure and the after-treatment being very similar in both towns. It is to be found in three points. 1. The medium within which the operation has been undertaken. Only three of the Swiss operations were performed in hospital, the rest taking place either in the town or its environs; and however much Geneva may have increased, it is in a very different position from Paris with regard to population, agglomerations, and insalubrity from various causes. In Paris, too, the operation is not even performed in the town itself, but in the hospitals, wherein are found accumulated so many circumstances unfavourable to infantile life, and where so many of the children operated upon succumb to secondary affections. 2. The anterior state of health of the subjects of this operation is far more robust in a city like Geneva, and confers a much stronger power of resistance; while in Paris the children of the poor too often have their constitutions undermined by rickets, scrofula, tuberculosis, or syphilis. 3. The children in Paris come under the notice of the physician at far too late a period of the disease, and many are lost who might have been saved, even under all the unfavourable circumstances surrounding them, had they been operated upon earlier. M. Révilliod has been able to obtain access to his cases at a far earlier period.

REVIEWS.

Diseases of Modern Life. By Benjamin W. Richardson, M.D., M.A., F.R.S. Macmillan and Co. 1876. Pp. 520.

So able and ingenious a writer as Dr. B. W. Richardson could scarcely fail to give us a work full of interest and instruction on such a subject as the "Diseases of Modern Life." It was with this expectation we opened the volume, and it is with this belief we close it.

Although this work appeals largely to the general public, it would be a mistake to regard it as exclusively addressed to them; in many of its sections we meet with reflections, facts, and arguments of the greatest interest to the medical profession.

The subject of the book is divided into three parts. In the first part the author deals with the "Phenomena of Disease, Incidental and General"; in the second part with the "Phenomena of Disease, Induced and Special"; and the third part is devoted to a "Summary of Practical Applications."

Dr. Richardson opens with a somewhat optimist view of life. The "cycle of life" involves a happy and charming existence, wherein obedience to natural laws secures health, tranquillity, and contentment, and death is a painless and peaceful end to our labours. "Euthanasia is the sequel of health,—the happy death engrafted on the perfect life."

"When the physician has taught the world how this benign process of nature may be secured, and the world has accepted the lesson, death itself will be practically banished; it will be divested equally of fear, of sorrow, of suffering. It will come as a sleep."

The history of disease, the relations of climate and race to disease, claim a few pages; and then we come to an interesting chapter on "Diseases Antecedent to Birth," which includes a popular account of congenital abnormalities and hereditary proclivities. To this succeeds an excellent and clearly written summary of the causes of disease. The author, after observing that all disease comes from without, classifies diseases into—1. Diseases from causes external and uncontrollable—*e.g.*, the seasons, the atmosphere, temperature, moisture, winds, etc. 2. Diseases from causes external and communicable; here Dr. Richardson protests against the acceptance of the germ theory as explaining satisfactorily the origin and spread of communicable diseases; he prefers the view "that these organic poisonous particles are derived from the secreted fluids of animal bodies themselves." "A person suffering from a communicable disease is producing, by secretion, an organic substance, which, coming into contact with a healthy and susceptible person, in the right way, will reproduce itself and the disease that attends such reproduction." He adds, "I have tried to isolate these organic poisons, and to determine their chemical nature. In one instance I succeeded in separating from the poisonous matter exuded from the peritoneal secretion of a patient labouring under surgical fever, a substance which would give a similar disease to an inferior animal, and would reproduce in the secretion the same virus. I named this substance 'septine,' and I expected it might be again obtained in larger quantities, and be submitted to analysis." We are not surprised to learn that Dr. Richardson has "not hitherto realised this expectation."

He believes that under the influence of external atmospheric conditions and changes induced by nervous shock these infective diseases may arise spontaneously, and afterwards become contagious!

A chapter is devoted to the consideration of diseases incidental to old age and natural decay.

But it is in the second part—that which deals with the "Phenomena of Disease, Induced and Special"—that the author grapples with the real burden of his self-imposed task. Here he ably discusses such topics as the influence of worry and mental strain, the influence of excessive physical exertion, the influence of physical and mental toil combined, and the influence of the passions in the production of disease.

We cordially coincide with Dr. Richardson's observations on the mania for athletic exercises, and the injurious results which spring out of it. He refers to the well-known healthiness of the Jewish race as opposed to the view that longevity and endurance are favoured by great devotion to physical culture. "In no period in the history of this wonderful people since their dispersion do we discover the faintest approach to any system amongst them tending to the studied development of physical capacity." "As a people they have never exhibited what is considered a high physical standard."

As to the manner in which physical strain may exercise a deteriorating influence on the organism, the author is precise and clear, and we especially commend these pages to the consideration of those who are concerned in the education of youth. "The external development," says Dr. Richardson, "is so commonly the covering of an internal and fatal evil, that I venture to affirm there is not in England a trained professional athlete of the age of thirty-five who has been ten years at his calling who is not disabled."

A long chapter is devoted to the development of the author's well-known views as to the action of alcohol. The following paragraph, however, seems to us to savour more of zeal than of accuracy:—"A form of pulmonary consumption is induced by alcohol. This disease, which was first defined and described by myself in 1864, under the name of alcoholic phthisis, or the consumption of drunkards, is specifically alcoholic in its nature, and holds a fair numerical position in the history of consumption." We have had quite unusual opportunities of becoming familiar with phthisis in all its forms, and this "alcoholic phthisis" is unknown us. We will, however, content ourselves by quoting from Dr. Flint's recent work on phthisis. Under the head of treatment, he says, "Of the usefulness of alcoholics given in considerable or large quantity, my studies have furnished striking examples. The instances of recovery, arrest, and slow progress of the disease, and tolerance under their use, are too marked and numerous to be accounted for as mere coincidences."

To the chapter on alcohol and the diseases it induces there succeed chapters on the diseases induced by tobacco, by abuse of narcotics, by unwholesome food, unwholesome air, unhealthy occupations, by idleness, by sleeplessness, by errors in dress.

The last three chapters are devoted to the subjects of disease from imitation and moral contagion, automatic diseases, and the intermarriage of diseases.

It will be seen from the foregoing brief summary that the author goes over a great extent of ground, and touches on very many subjects of great social interest. Of necessity many of these are treated somewhat superficially, and it would perhaps have been more satisfactory, on the whole, if the author had dealt with fewer topics and treated them more exhaustively. Here and there we find statements to which

we should be disposed to take exceptions. For example, Dr. Richardson says (p. 424), "Waiters who are obliged to carry heavy weights up long flights of stairs are subjected more frequently, perhaps, than any other class—now that the days of the pestboy are so nearly ended—to aneurism of the aorta"! We wonder where the author picked up this statement? We have seen many cases of aortic aneuriam, and read of many, but we never happen yet to have heard of a waiter thus afflicted. Soldiers, sailors, grooms, gardeners, out-of-door labourers, blacksmiths, shipwrights; but never yet a waiter!

There is another statement (p. 413) which strikes us as a little surprising—"An amateur flute-player I knew became cyanotic from this exercise; his lips became blue, the surface of the body cold, and the action of his heart irregular. In the tension from holding his breath the right side of the heart was engorged, and a weak closure of the fœtal opening between the right and left auricles gave way"!

We are rejoiced to find the author can speak so well of our own profession. "Medical men," he says, "as a class, are remarkably free from disease when all the details of their lives are taken into consideration. I have not a doubt—and I speak from a large experience of them and their ways—that, taking them for all in all, the members of the Æsculapian fraternity are the cheerfulest and the happiest of any section of the community."

In conclusion, we are glad to observe that this useful work has rapidly reached a second edition. Should it stir up the public mind to taking a more real interest in the discovery of the causes of diseases, and a more serious earnestness in endeavouring to prevent them, Dr. Richardson will have added another to his many brilliant services to medical science and to posterity.

Atlas d'Ophthalmoscopie Médicale et de Cérébroscopie. Par E. Bouchut, Médecin de l'Hôpital des Enfants Malades, etc. Paris: Baillière. 1876. Pp. 148.

Physicians who are working at diseases of the nervous system are now pretty well agreed that the ophthalmoscope is as indispensable in such investigations as is the stethoscope in diseases of the thorax. The author of this Atlas was one of the earliest workers in medical ophthalmoscopy, and was the first, we believe, to direct attention to the ophthalmoscopic appearances to be observed in cases of meningitis. The present volume contains fourteen plates in chromo-lithography, comprising no less than 137 views of the fundus oculi exclusively appertaining to disease coming under the physician's observation. The plates are well executed—a little rough, perhaps, when compared, for example, with those of De Wecker and De Jaeger, but none the worse, we think, for that. Such drawings, however delicately executed, can never be anything but remote approximations to the reality, and it is best that the learner should understand this, and not expect to see precisely what is pictured in a plate. He will thus escape disappointment and perplexity. These are sufficient to show him what to look for, and will lend important aid in the study of a very beautiful and practically useful method of diagnosis. The author's connexion with the Hospital for Sick Children in Paris has given him unusual opportunities for the investigation of tubercular meningitis, and a large number of the drawings are devoted to this subject. It is needless to refer to the extreme value of ophthalmoscopic signs in doubtful cases of this disease. If the mirror has done nothing else, it has shown its value already in teaching us that many more cases of this disease recover than used, in the absence of certain diagnostic features, to be supposed.

Temperature of Roasted Meats.—Prof. Vallin, in relation to the question of the influence of underdone meat in the production of tænia, observes that while the temperature at the surface of roasted meats rises to from 120° C. (245° Fahr.) to 130° C. (260° Fahr.), the sheltered portions and those most distant from the fire may not attain a sufficient temperature to secure the destruction of any parasites that may be accidentally present. He has tried many experiments upon this point, and has found that small thermometers, introduced into the centre of a roasting joint, indicated temperatures varying between 68° C. (152° Fahr.) and 48° C. (120° Fahr.) The temperature of 60° C. (140° Fahr.) does not always kill the trichina. At other central points the temperature was usually from 3° to 5° higher than these minima.—*Gaz. Hebd.*, July 28.

MEDICAL NEWS.

University of London.—The following are lists of candidates who have passed the recent examinations:—

Preliminary Scientific (M.B.) Examination.

First Division.—Atkinson, John Mitford, London Hospital; Balls, James, King's College; Barnes, George Frederic, Melcombe Regis School; Bayes, Frederic Thomas, Guy's Hospital; Booth, Edward Hargrave, private tuition; Bowe, Francis, St. Bartholomew's Hospital; Bull, George Coulson Robins, Epsom College; Chadwick, William Fitton, Owens College; Chisholm, William (B.A. Sydney), University College; Clarke, Ernest, St. Bartholomew's Hospital; Clarke, Walter James, Queen's College, Birmingham; Colquhoun, Daniel, Charing cross Hospital; Cook, Augustus Henry, University College; Cotton, Robert Hammond, B.A., Owens College; Cutfield, Arthur, Epsom College; Dallmeyer, Andrew William, University College; Dalton, Norman, King's College; Dawson, Arthur George, Owens College; Deane, Edwin, St. Thomas's Hospital; Edmonds, Henry, private study; Faulkner, Joseph, St. Bartholomew's Hospital; Feeks, George Ernest, St. Bartholomew's Hospital; Fox, Joseph Tregelles, London Hospital; Fream, William, Royal College of Science, Dublin; Groom, Henry Thomas, St. Bartholomew's Hospital; Hartley, Robert Nightingale, private study; Holberton, Henry Nelson, St. Thomas's Hospital; Honeyburne, Richard, Liverpool Royal Infirmary School of Medicine; Hormazdji, Robert Nesbit, St. Mary's Hospital; Hoyle, William Evans, Owens College, and Christ Church, Oxford; King, David Alexander, St. Bartholomew's Hospital; Kirsopp, Thomas, St. Bartholomew's Hospital; Larmuth, Leopold, Owens College; Lukis, Charles Pardey, St. Bartholomew's Hospital; Macartney, William Norton, Allesley-park College; McDonnell, Denis, King's College; Maguire, Robert, Owens College; Milton, Herbert Meyrick Nelson, St. Thomas's Hospital; Newshelme, Arthur, St. Thomas's Hospital; Nicholson, John Williams, private tuition; Norie, James, University College; Northcott, Arthur, University College; Parkes, Louis Coltman, University College; Paul, James Hugh, private study; Permewan, Arthur Edward, University College; Pratt, Reginald, University College; Rake, Beaven Neave, Guy's Hospital; Sayer, Mark Feetham, University College; Silcock, Thomas Ball, private study; Sisley, Richard, St. George's Hospital; Spicer, Robert Henry Scanes, private study; Sykes, William Ainley, St. Bartholomew's Hospital; Walters, Frederick Rufenacht, St. Thomas's Hospital; Yardley, Robert Blake, University College.

Second Division.—Adams, William Coode, University College; Adolphus, Theodore Frederick Pennington, King's College; Anderson, D. E., University College; Atmaram, Anundrao, University College; Barling, Gilbert Harry, St. Bartholomew's Hospital; Boswell, John Irvine, Guy's Hospital; Burchell, James Ledwick, London Hospital; Buxton, Dudley Wilmot, University College; Chaffey, Wayland Charles, St. Bartholomew's Hospital; Collingwood, David, Liverpool Royal Infirmary School of Medicine; Davidson, John, King's College; Dickinson, Thomas Vincent, St. George's Hospital and private study; Diggle, John Arthur, Owens College and private study; Dingley, Arthur William, University College; Donovan, Denis William, University College; Dummere, Howard Howse, St. George's Hospital; Fenwick, Edwin Hurry, London Hospital; Fielden, William Eckett, Guy's Hospital; Forsbrook, William Henry Russell, Westminster Hospital; Harper, James, University College and St. Bartholomew's Hospital; Hawkins, Walter Robert Thomas, London Hospital; Hodges, Edward James, private study; Hope, William More, University College; Hoskyn, Donald Templeton, University College; Isherwood, Thomas, Owens College and private study; Johnston, Edward Cocks, Queen's College, Birmingham; Marsh, George Ryding, Guy's Hospital; Maudsley, Henry, Giggleswick Grammar School; Milligan, Robert Arthur, Guy's Hospital; Norvill, Frederic Harvey, King's College; Potts, Edward, Queen's College, Birmingham; Rhodes, James Havelock Alexander, Liverpool Royal Infirmary School of Medicine; Smith, Henry, St. Bartholomew's Hospital; Snell, Bernard Joseph, B.A., New College; Stephens, Julian, University College and private study; Stenham, Thomas George, private study; Sutton, Samuel Walter, St. Thomas's Hospital; Wagstaff, Ernest Hamilton, King's College; Walton, Robert Spence, University College; Watkins, Christopher James, University College and private study; Wickham, Walter, St. Bartholomew's Hospital; Williams, Walter Treliving, London Hospital; Wood, Lewis Edmund, St. Thomas's Hospital.

First B.Sc. Examination.

First Division.—Black, Arthur, private study; Bolton, Thomas, University College; Cook, Ernest Henry, Royal College of Science, Dublin; Cotton, Robert Hammond, B.A., Owens College; Cutfield, Arthur, Epsom College; Dallmeyer, Andrew William, University College; Fisher, William, B.A., private study; Fream, William, Royal College of Science, Dublin; Gough, Thomas, private study; Higgin, William Henry, Owens College; Hopkinson, Edward, Owens College; Hoyle, William Evans, Owens College, and Christ Church, Oxford; Mackie, George William, B.A., private study; Major, Henry, B.A., private study; Morley, Henry Forster, B.A., University College; O'Reilly, Michael Francis, St. Joseph's College, Clapham; Owen, John Arthur, private study; Paul, James Hugh, private study; Raby, John Marsden, B.A., Owens College; Sack, Hermann Ludwig Theodor, B.A., private study; Sen, Rajani Kánta, Edinburgh University; Severs, George, private study; Shirley, John, private study; Silcock, Thomas Ball, private study; Smith, George Thomas, private study; Stephens, Julian, University College and private study; Vasey, Thomas Ebenezer, private study; Wills, William Leonard, Owens College; Wright, James Thomas, private study; Yardley, Robert Blake, University College.

Second Division.—Atmaram, Anundrao, University College; Borrah, Bolinarayan, University College; Griffin, Walter Kenneth, University College; Hodges, Edward James, private study; Isherwood, Thomas, Owens College and private study; Knowles, Miles, private study; Larmuth, Leopold, Owens College; Palmer, Walter, University College; Ruocinan, James, private study; Snell, Bernard Joseph, B.A., New College; Trubert, John, St. Joseph's College, Clapham; Turner, Horace William, University School, Hastings, and private study; Ullyett, Henry, private study; Wohlmann, James Beaumont, B.A., private study.

Royal College of Physicians of London.—The following gentlemen were admitted Members on July 27:—

Burrell, Edwin, M.D. Aber., 20, Eidsleigh-street, W.C.
Dixon, Edward Livesey, M.D. St. And., Preston.

Dreschfeld, Julius, M.D. Wurzburg, Manchester.
Holland, Edmund, M.D. Lond., 1, Titchfield-terrace, N.W.
Warner, Francis, M.D. Lond., Birmingham.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 27th ult., viz.:—

Bayly, George Sargent, Launceston, student of University College.
Chawner, Alfred, Ryde, Isle of Wight, of King's College.
Evans, William Morgan, Cardiff, of Guy's Hospital.
James, Joseph Reynallt, Lirhowy, Mon., of the Bristol School.
Johnson, Thomas, Birmingham, of the Birmingham School.
Jones, Thomas, Ningpo, China, of Guy's Hospital.
Kellie, George Jerome, Dunbar, Haddingtonshire, of King's College.
Lewis, Daniel George, Merthyr Tydfil, of University College.
May, Arthur William, Launceston, of King's College.
Metcalf, Peter Herbert, Bungay, Suffolk, of the Leeds School.
Middleton, Charles Frederick, Sydney, New South Wales, of University College.
Nicholson, William Rumney, Burnley, Lancashire, of University College.
Pratt, Walter, Billesdon, Leicestershire, of the Birmingham School.
Price, John, Harrow, of King's College.
Smith, Tom, West Bromwich, of the Birmingham School.
Walker, Hyde Edwards, L.S.A., Balsall, Warwickshire, of the London Hospital.
Webb, John Rheece Wynn, Fairford, Gloucestershire, of St. George's Hospital.

Two candidates passed in Surgery, and, when qualified in Medicine, will be admitted Members of the College; and four candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

The following gentlemen passed on the 28th ult., viz.:—

Blackader, Alexander Dougall, M.D. McGill, Montreal.
Bouton, George Charles, L.S.A., Dinan, France.
Brett, John, North Kensington.
Christian, John, Barrow.
Davies, John, L.S.A., Treorky, South Wales.
Garbutt, John Gilliott, L.S.A., Prince's-square, Bayswater.
Gilbert, Henry Langton, M.D. McGill, Sherbrooke, Canada.
Harris, Arthur Byam, Wootton-under-Edge.
Heald, Robert, Sleaford.
James, Joseph Brindley, Hackney-road.
Lacey, Charles William, Cotes, Loughborough.
Michell, Henry Slyman, Truro.
Norman, Walter, Adelaide, South Australia.
Reynolds, William Percy, Norwood-road.
Richardson, Thomas Arthur, Newport.
Roche, Eugenius Alfred, L.S.A., Sunderland-terrace, W.
Sankey, Herbert Richard Octavius, Cheltenham.
Smith, Ernest Sutton, Stanhope-street, W.
Turner, Edward Beadon, Sussex-gardens, W.

Two candidates passed the examination in Surgery, and, when qualified in Medicine, will be admitted Members of the College; and four candidates were referred to their professional studies for a period of not less than six months.

The following gentlemen passed on the 31st ult., viz.:—

Fell, Thomas Kennedy, L.S.A., Ulverstone.
Gress, Charles, Erith, Kent.
Irving, John Christopher, Dunnington, Spalding.
Jones, David, Llandyssul.
Low, Frank Harrison, L.S.A., M.B. Aberd., Blackheath.
Palmer, Harold Lewis, Haverfordwest.
Pye, Walter, Ealing.
Snell, Edward Arthur, L.S.A., St. Wilfrid's, Richmond-road.
Strover, Walter, L.S.A., Jersey.
Thomas, John Raglan, Llanelly.
Whitsed, John, Sutton St. Edmonds, Lincolnshire.

Five candidates passed the examination in Surgery, and, when qualified in Medicine, will be admitted Members of the College; eight candidates were referred to their professional studies for a period of not less than six months.

The following gentlemen passed on the 1st inst., viz.:—

Clapp, Robert, Teignmouth.
Cumming, Robert Frederick, Exeter.
Dunn, Hugh Percy, Warkworth.
Gaisford, Martin, Ilfracombe.
Gay, Charles Wm. Ebenezer, L.S.A., St. Albans.
Johnson, George Stillingfleet, Savile-row.
Mortimer, John, Exeter.
Packer, William Herbert, L.S.A., Cheltenham.
Perry, Francis Frederick, Hornsey-rise.
Slatter, Oliver Thomas, Chepstow.
Todd, John, L.S.A., Blackheath.
Walker, William, L.S.A., Bath.
Weiss, Hubert Foveaux, Chester-terrace, N.W.

Five candidates passed the examination in Surgery, and, when qualified in Medicine, will be admitted Members of the College; six candidates were referred to their professional studies for a period of not less than six months.

The following gentlemen passed on the 2nd inst., viz.:—

Conolly, Paul Bennett, Somerset-terrace, N.W.
Clark, Frederick, L.S.A., Fenchurch-street.
Duke, Thomas, Kennington-park-road, S.E.
Dutton, Edward George, L.S.A., Hammersmith.
Gibson, William, Middlesbro'-on-Tees.
Griffiths, Gilbert Saunders, L.S.A., York-st., Portman-square.
Hare, Evan Herring, Putney.
Hindle, George, L.S.A., Over-Darwen.
Mears, William Pope, L.S.A., Bromley-by-Bow.
Moullin, Charles William Mansell, Porchester-terrace.
Parkinson, Sidney George, L.S.A., Northampton.
White, Charles Haydon, Tufnell-park, N.
Williams, Alfred Glover, Carmarthen.
Wood, Edward Joshua, Higham.

Four candidates passed in Surgery, and, when qualified in Medicine, will be admitted Members of the College. Six candidates were referred for six months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 27:—

Bain, David Stuart Erskine, The Elms, Newbury.
Bourke, Ulick Joseph, Castlebar, Ireland.
McCarthy, Justin McCullum, Oakengate, Salop.
Moullin, James Alfred Mansell, Porchester-terrace, W.

The following gentlemen also on the same day passed their primary professional examination:—

Andrew, John Edward, Manchester Hospital.
Browne, Henry, St. Bartholomew's Hospital.
Denby, Timothy Curtis, Leeds Hospital.
Harrison, James, St. Bartholomew's Hospital.
Smith, Herbert Arthur, Middlesex Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

FAIRBROTHER, ALEX., M.D., F.R.C.P.—Consulting Physician to the Bristol Royal Infirmary, after twenty years' service as Physician.

SHAW, J. E., M.B.—Assistant-Physician to the Bristol Royal Infirmary, *vice* H. Waldo.

WALDO, H., M.D.—Physician to the Bristol Royal Infirmary, *vice* Alex. Fairbrother.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—John Breakey, M.D., has been promoted to the rank of Fleet Surgeon in her Majesty's Fleet, with seniority of May 24, 1876.

BIRTHS.

DALY.—On July 28, at Kingston Bagpuize, Abingdon, the wife of J. H. Daly, M.R.C.S., L.R.C.P., of a son.

DALZEL.—On July 26, at 40, Kensington-park-gardens, W., the wife of Surgeon-Major W. F. B. Dalzel, M.D., late Bengal Army, of a daughter.

MARRIAGES.

FOOTE—ROBINSON.—On July 12, at Kirk Braddon, Douglas, Isle of Man, Alfred John, eldest son of the late Alfred Foote, M.R.C.S., of Kew, Surrey, to Maggie, eldest daughter of William Robinson, of St. Helen's, Lancashire.

FRIEDMANN—WILSON.—On July 28, at St. Martin's-in-the-Fields, Alfred Friedmann, M.D., of New York, to Alice Mary Elizabeth, only daughter of the late John Wilson, Esq., of 27, Cambridge-street, Hyde-park.

HALLORAN—POWER.—On July 26, at St. Pancras Church, London, Charles E. G. Halloran, of Midland Bank, Uttoxeter, Staffordshire, to Grace Emily, fourth daughter of T. A. Power, M.D., of Burton-crescent, London.

O'FARRELL—MAYHEW.—On August 1, at Trinity Church, Marylebone, George Plunkett O'Farrell, M.A., M.D., second son of Harvard O'Farrell, M.D., F.R.C.S., J.P., of Boyle, to Amy Ida, second daughter of Charles Mayhew, Esq., of Chester-terrace, Regent's-park.

STILWELL—COLLINS.—On August 1, at the parish church, Frederick William, son of the late H. Stilwell, M.D., M.R.C.S., of Hillingdon, to Florence Marion, daughter of the Rev. R. C. W. Collins, of The Grove, Hillingdon.

TAYLOR—PATERSON.—On July 26, at 8, Grosvenor-terrace, Glasgow, the Rev. Walter Rosa Taylor, of Kelvinside Free Church, Glasgow, to Margaret Innes, elder daughter of Joshua Paterson, M.D.

WALSHAM—SPENCER.—On July 26, at St. Bartholomew's, Sydenham, William Johnson Walsham, F.R.C.S. Eng., to Edith Maria, elder daughter of Joseph Huntley Spencer, of High Wickham, Hastings.

WORDSWORTH—COWAN.—On July 27, at St. Mary's Catholic Church, Broughton-street, Edinburgh, Charles Francis Wordsworth, son of the late Samuel Wordsworth, Esq., of Edinburgh, to Georgiana, younger daughter of the late George Cowan, M.D., of Calcutta.

DEATHS.

ALLAN, JOHN ALLAN, son of John Allan, M.D., of 23, Milner-square, N., on July 26, aged 33.

CHAMPNEYS, HENRY LAURENCE, M.R.C.S.E. (Guy's), eldest son of Henry Montagu and Catherine Margaret Champneys, of Hamilton House, Penge, at Cowes, Isle of Wight, after a short illness, on July 26, aged 22.

CLARKE, JAMES HOWARD, M.R.C.S.E., etc., of 23, Gerrard-street, W., at 19, Lisle-street, Leicester-square, on July 30, aged 39.

DAVEY, EDWARD MYHILL, M.R.C.S.E., L.R.C.P. Edin., of Florence Villa, Old Ford-road, Bow, at Eastbourne, on July 29, aged 13.

DUNCAN, ROBERT, M.D., F.R.C.S., at Hanover House, Tunbridge Wells, on July 30, aged 65.

EDWARDS, MARTHA (PATTY), the wife of Henry John Edwards, M.R.C.S., at Teignmouth, Devon.

GOODCHILD, HENRY, youngest son of John Goodchild, M.R.C.S.E., at Heathfield House, Ealing, on July 27.

LATHAM, ROBERT MARTIN, son of Robert Gordon Latham, M.D., at Putney, on August 1, aged 26.

LEADAM, EVELYN JESSIE, the youngest daughter of W. Ward Leadam, M.D., at 80, Gloucester-terrace, W., on July 28, aged 6 months.

LONSDALE, HENRY, M.D., at Rose Hill, Carlisle, on July 23, aged 60.

LYFORD, GERALD CHARLES CECIL, son of the late Henry Giles Lyford, M.D., formerly of Winchester, late of Brighton, at Brighton, on July 31, aged 3 years and 8 months.

MARTYN, SAMUEL, M.D., F.R.C.P., of Clifton, at Woodend, Pertenhall, Kimbolton, the seat of his brother, very suddenly, on July 27, aged 49.

STORRS, MARTHA, widow of the late Robert Storrs, M.R.C.S., of Doncaster, at Great Horton Vicarage, Bradford, on July 31, aged 63.

TATHAM, EDMUND, M.D., at Kendal, Westmoreland, on July 25, aged 80.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BELGRAVE HOSPITAL FOR CHILDREN.—Physician. Candidates must be Members or Fellows of the Royal College of Physicians of London. Applications to the Hon. Secretary not later than August 7.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon, who will be required to be a member of one of the Colleges of Surgeons of Great Britain or Ireland. Testimonials to the Chairman of the Medical Committee not later than August 9. J. Cranmer Gell, Secretary, Committee-room, Temple-row, Birmingham.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Dispenser, who must either be a member of the Pharmaceutical Society or able to produce evidence of having been actively engaged in dispensing for a period of three years. He will be required to attend at the Hospital on week-days from 8.45 a.m. till 6 p.m., and on Sundays at 12.30 p.m. Dinner provided. Salary £70. Applications, with testimonials, not later than Monday, August 7, to J. Cranmer Gell, Secretary, Committee-room, Temple-row, Birmingham.

DAVENTRY UNION.—Medical Practitioner and Public Vaccinator. Salary £25, with extra medical fees for surgical operations, midwifery cases, lunacy reports, and vaccination fees as shall be authorised by the Guardians, and prescribed by the Orders of the Local Government Board. The officer must reside in or near to the district, be duly registered under the Medical Act, 1858, and possess the qualifications required by the said Orders. Applications to Geo. Norman, Clerk to the Guardians, on or before Tuesday, August 8; and candidates to attend personally at the Board-room at Daventry, on the following day at twelve o'clock at noon, with evidences of their qualifications.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar. Salary £100, with permission to practise. Applications to the Resident Medical Officer.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD, E.C.—Physician. Candidates, who must be Fellows or Members of the Royal College of Physicians of England on the day of election, are requested to send in their applications, with testimonial, etc., by Wednesday, August 9, to C. Lowther Kemp, Secretary, etc.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons and Licentiates of the Apothecaries' Company, or be graduates in medicine of some university of the United Kingdom, or possess a diploma from some College of Physicians in the United Kingdom, where examinations are made the test of fitness; must be unmarried, and willing to engage for a period of not less than one year. Salary £85, with board, lodging, and washing. Testimonials to Dr. Luke, Hon. Secretary.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Physician (Out-Department). Candidates must be graduates of a university in the United Kingdom, or if holding a foreign degree only, must be members of the London College of Physicians. Applications, with testimonials, to George Scudamore, Secretary, Lower Seymour-street, Portman-square, W.

SUSSEX COUNTY HOSPITAL.—House-Surgeon. Election by ballot. Candidates must be registered as Members of one of the Colleges of Surgeons of the United Kingdom, and Licentiates of the College of Physicians of London, or of the Society of Apothecaries of London, unmarried, and, when elected, under thirty years of age. Salary £80, and £10 a year from each resident pupil, with board and lodging. Diplomas and testimonials to Lieutenant-General E. F. Bourchier, Secretary, Brighton, not later than August 23.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Daventry Union.—Mr. Charles Bennett has resigned the Second District; area 4694; population 1897; salary £25.

Oswestry Incorporation.—Mr. Robert Broughton has resigned the Ruyton District; area 17,423; population 3863; salary £60.

Thingoe Union.—Mr. F. Marshall has resigned the Eighth District; area 2390; population 578; salary £18.

Worksop Union.—Mr. Charles McCaskie has resigned the Anston District; area 9067; population 2223; salary £25.

APPOINTMENTS.

Alcester Union.—John Martin, L.R.C.P. Edin., L.S.A. Lond., L.F.P.&S. Glasg., and L.M. Edin., to the Workhouse and the Alcester District.

Pontefract Union.—James Edward Wales, L.S.A., to the Fourth District.

Tamworth Union.—David Woods, L.R.C.S. Ire., L.R.C.P. Lond., to the Clifton District.

Totnes Union.—Henry Sandford Johnson, L.K.&Q.C.P. Ire., L.F.P.&S. Glasg., L.M., to the Buckfastleigh District.

THE Lord Lieutenant of the County, the Earl of Brownlow, laid the foundation-stone, on the 27th ult., of the Lincoln New County Hospital.

DR. LONGMORE, Professor of Military Surgery, Lieut.-Col. Brackenbury, R.A., and Major Kemmiss, R.A., have been appointed by the Secretary of State for War as a committee to examine and report upon the field and hospital equipments at the Brussels Exhibition, for which purpose they will shortly thence proceed.

PROFESSORS SIMON AND BÄUMLER.—According to the Petersburg *Med. Woch.* (July 8), the Chair of Surgery at Heidelberg, vacated by Prof. Gustav Simon on account of ill-health, is to be filled by Dr. H. Lossen. The chair in Freiburg, vacated by Prof. Kussmaul, who replaces Prof. Leyden at Strasburg (the successor of Traube at Berlin), will be filled by Prof. Bäumler, well known to many of our London readers.

THE Earl of Dudley, through his solicitor, made an offer last week to the Dudley Town Council of an alteruative scheme of deep drainage to that which the Corporation had under consideration. The acceptance of his lordship's offer would relieve them of the disposal of the sewage after it left the outfalls, and the Council would be held harmless as to law consequences. The subject, after some discussion, was adjourned.

PORTRAIT OF MR. PRESCOTT HEWETT.—Mr. Hewett has consented to sit for his portrait to Mr. Onless. The skill and repute of the artist, and the admirable study he will have in the present President of the Royal College of Surgeons, cannot fail to result in satisfaction to all parties concerned. Although this memorial was initiated at St. George's Hospital upon Mr. Hewett's resignation of the office of Surgeon, the subscription-list (strictly confined to the medical profession) includes most of those who have gained any eminence in the profession.

CORROSIVE SUBLIMATE IN GONORRHŒA.—Founding his trials on a case which he published in 1873, Dr. Bruck, of Buda-Pesth, now recommends this treatment as producing the following results:—1. In the course of six weeks, without any of the complications contingent on the use of injections, the gonorrhœa may be cured, and the means may be resorted to in the hyperæmic stage of the affection. The discharge during the first ten days is remarkably profuse, and then becomes less and less and more serous, the urethral burning being supportable, and the chordee moderate. 2. During the treatment, alcoholic drinks, strong coffee, and highly seasoned foods must be abstained from. 3. Purgatives are also to be avoided, being unnecessary during the use of the sublimate. 4. When much griping pain is produced in the stomach or intestines, the sublimate must be suspended for some days. 5. It is not to be employed when there is heart or lung disease. It is given in the form of pills, one centigramme divided into twenty pills being taken in the course of the first ten days. The next twenty pills contain two centigrammes, and are consumed in half that time, and so on.—*Centralblatt f. Med. Wiss.*, July 1.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Wray C. M.—The facts are these: In 1654 Dr. Prujean resigned the Presidency of the College of Physicians, and, in the absence of Harvey, the College appointed him to the vacant office. This being communicated to him, he came to the assembly, and, returning thanks for the honour proposed to be conferred upon him, begged to be excused from accepting it, being unable, from age and infirmities, to perform the duties; at the same time he respectfully recommended the re-election of Dr. Prujean. The advice was followed, and Prujean was immediately re-installed. It is to this, perhaps, that we must refer the circumstance of Harvey being painted in the robes of the President of the College. The disease which immediately caused Harvey's death is not mentioned by any of his biographers.

Meteorology.—The first attempt to collect and reduce to anything like a systematic form the various prognostications of the weather is to be found, we believe, in the writings of Aristotle and his pupil Theophrastus. Long before their time, indeed, the Egyptians and other Eastern nations

had recorded many facts regarding atmospheric phenomena, but they appear to have considered these only as a branch of astronomy or astrology. Aristotle, in his book "De Meteoris," treats the subject as a separate science.

COMMUNICATIONS have been received from—

The Secretary of the Hospital Saturday Fund; The Registrar of the Royal College of Physicians, London; Dr. Taylor, Santillana; The Registrar of the University of London; The Registrar of Apothecaries' Hall, London; Dr. J. Vinen, London; Viscount Malden, London; Mr. Balmanno Squire, London; The Secretary of St. Bartholomew's Hospital, London; Dr. R. J. Dunglison, Philadelphia; Dr. Rhys Williams, London; The Dean of the Medical School, Owens College, Manchester; Dr. P. Irvine, London; Mr. F. S. Haden, London; Dr. Arding, Wallingford; Mr. C. A. Fox, Stoke Newington; Dr. Tidy, London; Dr. Vincent Harris, London; Dr. Henry Lawson, London; Mr. William Parker, Bath; Dr. J. W. Moore, Dublin; Sir J. Rose Cormack, Paris; Mr. Henry Moaris, London; Dr. Druitt, London; Dr. J. Burney Yeo, London; Mr. R. J. Godler, London; Mr. Nelson C. Dobson, Clifton; Mr. J. Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

The Harveian Oration, 1876, by the late E. A. Parkes, F.R.C.P.—On Tracheotomy, by Pugin Thornton—Statistics of Vaccination, a Report, by John Prior Purvis, M.R.C.S.E.—Health-Resorts of Europe and Africa, by Thos. More Madden, M.D.—The Cause and Treatment of Rickets, by Norman Moore, M.D.—Report of the Sanitary State of the Hackney District (1875), by J. W. Tripe, M.D., L.R.C.P.E.—Pharmacopœia of the East London Children's Hospital, Shadwell—A Contribution to the Investigation of the Therapeutic Actions of Hyoscyamine, by Robert Lawson, M.B. Edin.—San(n)itation, by Clara Vox—Annual Report for St. Giles's District (1875), by Dr. S. R. Lovett, Medical Officer of Health—Annual Report of the Committee of the Manchester and Salford Sanitary Association, 1875—Introduction of the Metrical System into Ophthalmology, by E. Landolt, M.D.—On the Presence of Arsenic, by James Adams, M.D., L.R.C.S.E., etc.—Atlas of Skin Diseases, part 2, by Tilbury Fox, M.D.—Medicinal Plants, part 2, by Bentley and Trimen—Medical Hints to the People of India, by Edward Balfour, L.R.C.S.E.—Cassell's History of India.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—The Shield—Nature—Archives Générales de Médecine—Students' Journal—Monthly Homœopathic Review—Science Gossip—Liverpool Daily Post—Boston Medical and Surgical Journal—Monthly Microscopical Journal—Archivio Clinico—Item, Philadelphia—Richmond and Louisville Medical Journal—Practitioner—Hastings and St. Leonard's Observer—Argus—Obstetrical Journal—Sanitary Journal, Toronto—Druggists' Advertiser, New York—Journal of the National Anti-Compulsory Vaccination League—Diss Express—Veterinarian.

APPOINTMENTS FOR THE WEEK.

August 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

7. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

8. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

9. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

10. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

11. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 29, 1876.

BIRTHS.

Births of Boys, 1165; Girls, 1114; Total, 2279.
Average of 10 corresponding years 1866-75, 2149·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1036	937	1973
Average of the ten years 1866-75	869·7	822·6	1692·3
Average corrected to increased population ...	...	...	1811
Deaths of people aged 80 and upwards ...	...	...	56

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	3	2	10	...	2	...	93
North	751729	...	4	9	4	10	...	2	...	158
Central ...	334369	...	2	3	1	1	1	...	...	35
East	639111	...	2	6	1	12	...	3	...	101
South	967692	7	14	17	1	13	2	7	2	135
Total	3254260	7	28	38	9	46	3	14	2	522

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·800 in.
Mean temperature	63·5°
Highest point of thermometer	87·2°
Lowest point of thermometer	51·3°
Mean dew-point temperature	54·1°
General direction of wind	N., S.W., & W.
Whole amount of rain in the week	0·35 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 29, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending July 29.	Deaths Registered during the week ending July 29.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2279	1973	87·2	51·3	63·5	17·50	0·35	0·89
Brighton	100632	42·7	63	36	76·5	52·7	61·9	16·61	0·02	0·05
Portsmouth ...	124867	27·8	68	57	75·6	54·5	63·3	17·39	0·01	0·03
Norwich	83430	11·2	46	41	81·2	52·5	60·7	15·95	0·91	2·31
Plymouth	72230	51·8	42	17	80·5	55·0	64·6	18·12	0·11	0·28
Bristol	199539	44·8	148	105	81·2	51·3	64·5	18·06	0·23	0·58
Wolverhampton ...	72549	21·4	53	31	81·9	49·4	61·8	16·56	0·61	1·63
Birmingham ...	371839	44·3	299	146	79·2	51·0	61·8	16·56	0·47	1·19
Leicester	113581	35·5	85	69	81·0	52·0	62·4	16·89	0·24	0·61
Nottingham ...	93627	46·9	74	46	81·2	49·0	63·3	17·39	0·51	1·30
Liverpool	521544	100·1	385	252	68·0	50·3	58·0	14·44	1·14	2·90
Manchester ...	357917	83·4	231	200	...	...	...	...	...	...
Salford	138425	26·8	132	76	73·5	45·5	57·8	14·31	1·27	3·23
Oldham	88609	19·0	63	32	...	...	...	...	...	...
Bradford	173723	24·1	112	74	77·0	49·2	60·1	15·62	0·75	1·90
Leeds	291580	13·5	232	189	84·0	49·0	61·5	16·39	0·81	2·06
Sheffield	274914	14·0	216	117	79·5	48·9	60·0	15·56	0·55	1·40
Hull	136933	37·7	96	68	77·0	49·0	59·6	15·34	0·97	2·46
Sunderland ...	108343	32·8	74	55	72·0	49·0	58·4	14·66	1·53	3·89
Newcastle-on-Tyne	139929	26·1	110	65	...	...	...	...	...	...
Edinburgh	215146	51·3	161	74	...	...	...	...	...	...
Glasgow	545144	90·4	369	229	68·3	44·4	56·2	13·44	0·58	1·47
Dublin	314666	31·3	183	114	75·7	41·6	59·5	15·28	1·16	2·95
Total of 23 Towns in United Kingdm	8028595	37·7	5521	4066	87·2	41·6	61·0	16·11	0·65	1·65

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The highest was 30·02 in. on Tuesday morning, and the lowest 29·46 in. on Friday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON CATARACT.

By CHARLES HIGGENS, F.R.C.S.,
Ophthalmic Assistant-Surgeon at Guy's Hospital.

(*Concluded from page 572 of last volume.*)

And now comes the question—What method of extraction are we to follow in the removal of nuclear cataract?

This subject of cataract extraction has developed amongst ophthalmic surgeons a wonderful faculty for the invention of new, and modification of already existing methods. I shall not attempt to describe the various kinds of procedure that have been employed—their name is legion; suffice it to say, however, that a very large proportion of the different forms of extraction in use are remarkable for possessing a distinction without a difference. Much of the confusion appears to have arisen from an anxiety on the part of operators to do something that has not previously been done; so that Mr. A makes a section in a particular manner, of a certain size, and with his favourite knife; he has some successful results, and instantly rushes into print, describing his method of extraction. Now, Mr. B has performed this particular operation for years, and calls it his (B's operation); whilst Mr. C has been accustomed to perform an operation precisely similar to that of Messrs. A and B, but fixes to his method the stamp of C. I shall endeavour to describe to you only the three methods of extraction which were employed in my cases; and allow me to state that, although I should much like to invent a new extraction, I do not as yet see my way to making a section without trespassing on ground already fully occupied. Consequently, there is not the smallest particle of originality in any of the following methods. One, "linear extraction," with upward section, has been already mentioned; but when this method is employed for nuclear, a much larger section is required than for cortical cataract. We must therefore commence our incision very far back in the sclero-corneal margin, or even in the sclerotic, at a point about midway between the horizontal meridian of the cornea and its upper margin, and cut out in a line somewhat below that of the section already described. The section may be made downwards as well as upwards. When it has been completed, a small piece of iris removed, and the capsule lacerated, the cataract should be gently pressed out by means of the curette placed upon the globe near the lower margin of the cornea, if the section have been made upwards; but if the lower section have been employed, we shall find that, after removal of the speculum, we can very easily squeeze out the cataract by pressure with the thumb or finger upon the globe through the upper lid, the lids being meanwhile held open so far only as to allow of the necessary manipulations.

Including the seven cases of cortical cataract already alluded to, thirty-five of my fifty-eight were operated on by linear extraction: in twenty-one the section was made upwards, in fourteen downwards. An iridectomy was performed in every case. One eye was lost, this being in the case of a patient in a late stage of diabetes.

The next method of extraction employed was that by a small flap.

This operation differs from linear extraction only in the form of section made. The patient should be placed in the prone position, and thoroughly anæsthetised. The lids should be kept open by the wire speculum, and the globe fixed by the forceps in precisely the same manner as for linear extraction. The section should be made by passing the long thin extraction knife through the sclero-corneal margin into and across the anterior chamber, and out again at a point on the inner side of the globe corresponding to that of entrance on the outer side.

If the section be made upwards, the points of entrance and exit of the knife should be in a horizontal line, corresponding to the upper margin of a moderately dilated pupil. The knife must be kept parallel to the iris, and made to cut its way out upwards around the corneal margin by a gentle sawing movement. By this means a flap comprising rather less than one-third of the cornea is formed.

A small piece of iris should then be removed, the capsule lacerated, and the cataract pressed out in the same manner as in extraction by a linear section. This section may also be made downwards instead of upwards.

Eight of my cases were operated on by this method: in all the sections were made upwards; in seven the results were excellent, but the remaining eye was entirely lost by suppuration.

The remaining method employed was extraction by an oblique corneal section. The section may be either upwards or downwards, and when made in the latter direction the operation is extremely simple.

The only instruments required are a long straight cataract-knife, a sharp hook, and a curette. No anæsthetic need be given. The patient being placed in the prone position, we hold the lids open and steady the globe with the fingers; then pass the long straight knife through the sclero-corneal junction across the anterior chamber, and out through the other side, the points of entrance and exit of the knife being situated exactly in the horizontal corneal meridian. The knife must be introduced with the cutting edge turned in the direction in which we mean to cut out, no movement of rotation being made after the anterior chamber has been entered; otherwise, the aqueous humour will escape, the iris will fold over the edge of the knife and be wounded.

The incision must be finished by a gentle sawing movement, and should pass obliquely through the cornea, terminating in a line situated about midway between its summit and lower margin.

The section being completed, we lacerate the capsule as already described; then, with the thumb of one hand placed upon the lower lid near its margin, make gentle pressure upon the globe near the lower border of the cornea. By so doing the lens is displaced upwards, and its lower edge brought opposite the incision. It can now be easily squeezed out by placing the forefinger of the other hand upon the upper lid, and making gentle pressure on the globe just above the upper margin of the cornea, counter-pressure being meanwhile kept up by the thumb below. The lids should be held open just sufficiently to enable us to see what we are about.

The bulk of the cataract having escaped, the lids should be allowed to close, and gentle pressure be made upon the globe through the upper lid, from all directions towards the centre of the cornea, so as to bring any cortical substance that may be left into the area of the pupil; the lids should then be opened, and the cortical substance pressed out in the same manner as the more bulky portion of the cataract. If the iris have prolapsed through the wound—as is very likely to be the case—it must be returned with the curette. After the operation has been completed, the pupil should be quite circular and black. It is of the greatest importance in this operation to attend to minute details. We should take care to see that no cortical substance remains in the eye, and that the iris is left in its natural position; otherwise the result is very likely to be marred by adhesion taking place between the margin of the pupil and the incision (anterior synechia), or by iritis setting in and closing the pupil.

In eight eyes extraction was performed by oblique corneal section: in seven the results were excellent; in the eighth the pupil was closed by iritis, but very good vision followed an iridectomy.

The questions we now have to consider are—In what cases should iridectomy be performed? In what cases may we extract cataract without it? and Should our section be made upwards or downwards? And, first, with regard to iridectomy, a piece of iris should be removed—1. In cases where iritis has previously occurred, and adhesions of the iris to the lens capsule exist, and in all cases where the pupil does not dilate readily, even though there be no adhesions. 2. In all cases where the tension of the eyeball is above par. 3. In all cases where the lens is only partially opaque.

The iridectomy may be performed at the same time that the cataract is extracted, or some weeks or months previously. In cases where a very considerable part of the lens is still transparent, or the tension of the eyeball above par, I much prefer to do iridectomy as a preliminary, and to allow a considerable time to elapse before performing extraction.

The advantages gained by performing iridectomy are—1. It gives ample room for the escape of the cataract. 2. It prevents prolapse of the iris after the extraction has been completed. 3. It greatly diminishes the risk of closure of the pupil by subsequent iritis, and if performed some time before the extraction the risk of iritis occurring at all is reduced to a minimum; it also reduces the tension of the globe, if this be above par.

I consider very few cases suited for extraction without

iridectomy, and seldom employ this method. The cases I select are eyes with entirely opaque lenses, active, easily dilatable pupils, and apparently (with the exception of the cataract) healthy in every way, the patients being quiet, imperturbable people, who will bear an operation without flinching, will do exactly what they are told, and never do wrong if they can help it.

The results of extraction without iridectomy are, when entirely successful, all that can be wished: the pupil is circular, active, and central—in fact, the eye looks as if it had never had cataract or been operated on, whilst vision with suitable glasses may be raised to the normal standard. Results such as these are only obtained occasionally. In very many cases prolapse of the iris takes place, and an adhesion to the cornea is formed; or iritis sets in, and the pupil becomes entirely closed. All things considered, extraction of cataract without iridectomy is not a good operation, in spite of the brilliant results obtained in some cases.

I think the best operation is not that which gives the most successful results in a few cases, but that which gives uniformly good results in the greatest number; and therefore—though I do not tie myself to any one method of operating—I prefer sections associated with iridectomy. Between the linear and small flap sections I have no choice, though I have made many more of the former than of the latter.

With regard to the position of the section, I strongly recommend that it should be made downwards. A small flap or linear incision can be made in this direction with much greater facility than upwards, and complications are much less likely to arise. Other advantages of the operation downwards are: the globe does not require to be dragged down whilst making the section; it need only be steadied with the forceps until the point of the knife has emerged on the inner side, when their hold can be let go, and the section finished without fixation of the eyeball.

The section when finished lies fairly before us between the opened lids, and is not hidden by the upper lid as is often the case when it is made upwards; consequently, no assistant is needed to draw the eye downwards while the iridectomy is being performed. And, lastly, we can take out the speculum as soon as the iridectomy has been completed, then lacerate the capsule, and remove the cataract by pressure on the partially closed lids; all occasion for pulling the globe about with forceps, or touching it in any way, being avoided.

Extraction of cataract by a downward section is as safe and simple as any operation on so delicate an organ as the eye can well be. The principal objection that has been urged against extraction with iridectomy downwards is that it causes disfigurement (excepting in the case of young people). I deny that this is an objection. It seems to me simply absurd to suppose that a patient nearly blind, and going down the hill of life, will object to a trifling alteration in the appearance of his eyes, especially when that alteration has to be weighed in the same scale with his chance of sight. So never mind about disfigurement; do your extractions downwards. As far as vision is concerned, I believe that downward sections give results equally as good as those made upwards. I have several times operated by one method on one eye, and by the other on the other eye of the same patient, the result being that vision of the two was about equal.

I shall not, however, go further into this. Fifty-one extractions performed by different methods afford altogether insufficient data upon which to form a decided opinion as to which section gives the best results. What we require are accurate notes of 500 or more cases of each, all by the same operator. We might then come to a definite conclusion. My sole reasons for recommending the downward section are that it is so very easy to make, and that the subsequent steps of the operation are greatly facilitated by its position.

The accidents which may happen during extraction of cataract are—

Premature Escape of Aqueous Humour.—If care be not taken in making the section, the aqueous humour may escape too soon, and the movement of the knife be hampered by the iris folding over its edge; should this happen, it is best to withdraw the knife, and complete the section with scissors, but we may cut on boldly through iris and all without doing any serious damage. The new pupil, however, made by iridectomy performed in this way will be rather irregular, and very probably larger than we wish.

Bleeding into the Anterior Chamber.—In some cases hæmorrhage from the cut iris takes place, to such an extent as to fill the anterior chamber with blood, and hide the cataract from view. If the blood does not flow out easily on placing the curette between the lips of the incision, and making gentle pressure on the cornea, we should not go on fumbling as it were in the dark, but bind the eye up and leave it until the blood has become absorbed. If, however, the capsule has been opened, the lens must be removed, or it may swell, press upon surrounding parts, and set up inflammatory changes, accompanied by increased tension of the globe, which changes may very probably lead to total extinction of vision.

Prolapse of Vitreous Humour.—If undue pressure be exerted on the globe during extraction, the suspensory ligament of the lens may give way, and a prolapse of vitreous follows.

Displacement of the Cataract.—In some cases, on an attempt being made to press out the lens, its suspensory ligament gives way, vitreous escapes, and the cataract, instead of coming forwards into the anterior chamber and escaping by the section, passes backwards into the vitreous chamber.

The two first-mentioned accidents are of no particular moment. The last two should occur but rarely if ordinary care and gentleness be used, especially *if downward sections are made.*

A slight prolapse of vitreous may give rise to no bad results; but should a large quantity escape, more or less damage is pretty certain to follow.

Should either of these accidents occur, we must give up pressing on the eyeball, and remove the cataract as gently and quickly as possible with a scoop or the sharp hook.

The after-treatment of extraction operations is very simple. As soon as the operation has been completed, we place two folds of wet lint upon the closed lids of each eye, and secure them with this bandage which Mr. Dunnage has had made for the purpose. The patient is then put to bed, and all that is needed is to keep the lint constantly wet by dripping water upon the bandage, which is porous, and allows it to soak through on to the lint. If all go on well, there is some smarting for the first twenty-four hours, and then the eye becomes quite comfortable. The lint should be changed a day or two days, after the operation; but on no account should the eye be opened. We need only to look at the outer surface of the lids; if these be quite natural, we may be sure that all is going on well beneath. The patient may get up on the fourth day, but should avoid sitting in draughts, or in any way injuring the eye. If all have gone well up to this point, we can pretty certainly predict a successful result. At the end of a week the operated eye should be carefully opened and examined, and we may try if the patient can count fingers. If the section have healed, and there be no signs of inflammation, the sound eye may be left unbandaged, but must be protected from light by a large green shade. At the end of three weeks the bandage should be omitted from the operated eye, and we may see if it can make out the time on a watch with a $+2\frac{1}{2}$ lens; but the shade must be worn till all signs of vascularity have disappeared. This will usually take some six weeks, or longer, at the end of which time we should carefully test vision, and give suitable convex glasses. We shall find that in most cases the lenses required will be $+2\frac{1}{2}$ for reading or doing near work, and $+3$ for going about. We may, however, discover that vision is more acute with lenses a little stronger or weaker than these, and may in many cases be much improved by the combination of a cylindrical with the spherical lens.

Such is the usual course of events after extraction of cataract; but, instead, we may find that more or less severe pain in and around the eye comes on within the two days immediately succeeding the operation; there is a constant flow of tears, and the edges of the lids become puffy. These symptoms indicate iritis or inversion of the lower lid. We need not open the eye, but simply draw the lower lid down, when we shall soon discover if it is inverted. If such be the case, we must endeavour to keep the lid in its place by a piece of strapping. This failing, we must remove a portion of skin and orbicularis muscle, as is done in other cases of entropion. If the lid be in its proper place, we may be pretty sure that iritis has set in. We should order belladonna lotion to be used instead of water, and it may be applied either hot or iced, whichever appears more grateful to the patient. We should also apply two or three leeches to the temple corresponding to the eye that has been operated on. We should continue the use of the lotion, and keep both eyes bandaged till all watering and pain have subsided, after which the sound one may be

uncovered; but the other must be kept bound up till the increased vascularity has entirely subsided.

Again, we may find on the second or third day after the operation that the eyelids are considerably swollen, and that there is muco-purulent discharge issuing from between them; the patient in most cases complaining of very severe pain, but occasionally being quite free from it. These symptoms indicate suppuration of the cornea, and we may predict pretty certainly that the eye will be lost.

The treatment we should employ is the assiduous use of hot fomentations of belladonna, applied six or eight times daily, the eye being kept bound up with lint soaked in hot belladonna lotion during the intervals.

We should also give quinine and iron, with opium at night, and order a liberal diet with plenty of stimulant.

The conditions which require secondary operation are nearly all of them due to iritis. As previously stated, ten of my cases required such interference. In seven an operation was required for complete closure of the pupil, and in three for obstruction by opaque capsule.

The operations performed in the cases of closed pupil were—iridectomy in five, incision of the iris and opaque material with scissors in two. Two of the cases were greatly benefited, the other five only slightly.

In the three cases of capsular obstruction, the opaque material was torn through with needles, and in each with good result.

Several others of the forty-five remaining eyes might now be improved by tearing through opaque capsule, but I am rather shy of meddling with capsular obstructions if I can help it, and so long as they retain useful vision shall leave them alone.

I have often seen eyes lost from interference with opaque capsule when a very fair result had been obtained by removal of cataract, so I think that we should let well alone, and not endanger the eye by attempting the removal of capsular obstruction unless it is absolutely necessary.

THE SUBMARINE TUNNEL.—The trials are being vigorously pursued on each side of the Channel. At Sangatte, on the French side, a well has been sunk already to the depth of forty mètres, the works being carried on night and day. A pump has been fixed and is kept constantly in action, in order to exhaust the abundant quantity of water that is present. The well is to be carried to the depth of 100 mètres (109·3 yards) below low water. When this depth has been reached, a horizontal gallery a kilomètre (1039 yards) in length will be run through the chalk. This is termed a *galerie d'essai*, and it is only after a due appreciation of the difficulties attendant upon its execution that a final decision will be come to as to undertaking the submarine tunnel. Awaiting the results of these trials, the opinion which seems to prevail among geologists is that there is no important solution of continuity in the bank of chalk, notwithstanding the irregularities observed on the French coast—and consequently that the construction of the tunnel will not present any insurmountable difficulties.—*L'Institut*, August 2.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JULY.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	20·30	0·040	0·105	0·000	14·8	3·3
West Middlesex	18·70	0·051	0·120	0·000	14·0	3·0
Southwark & Vauxhall	18·20	0·051	0·111	0·000	15·4	2·4
Chelsea	19·40	0·055	0·108	0·000	15·4	2·4
Lambeth	19·60	0·059	0·120	0·000	15·4	2·4
Other Companies.						
Kent	27·1	0·007	0·330	0·000	18·8	3·3
New River	18·4	0·020	0·105	0·000	14·3	2·6
East London	18·1	0·036	0·105	0·000	14·8	3·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Grand Junction.

FORTY-FOURTH MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
HELD IN SHEFFIELD, AUGUST 1, 2, 3, AND 4, 1876.

ADDRESS IN SURGERY.

By W. F. FAVELL, M.R.C.S. Eng.,
Surgeon to the Infirmary, Sheffield.

MR. PRESIDENT AND GENTLEMEN,—In the first place, allow me to thank the members of the British Medical Association, and particularly those members who are my fellow-townsmen, for the high honour they have conferred upon me in putting this Address into my hands; at the same time, when I consider how many amongst the wisest and most eminent of British surgeons have delivered this Address in Surgery before me, I feel how little anything I can say can rival the memorable utterances of bygone years, and how much I need (what I know I shall get), viz., the indulgent hearing of the distinguished company here to-day.

If I can tell you nothing new to attract your attention or excite your admiration, I hope I may be able to say something useful, and, at all events, to draw attention to facts which will bear investigation again and again. Bearing in mind the rapid advances made in surgery within the last few years, and bearing in mind also the constant changes in surgical practice, it has appeared to me that it is well sometimes, on an occasion like the present, to pass in review some few of the most important changes in practice, comparing them, as far as we can, with recorded results of past experience.

Alterations are by no means necessarily *improvements;* and, in this age of rapid progress, are we not sometimes in danger of setting too light a value on the things of the past, and of too utterly discarding some remedial measures to which our predecessors attached immense importance? Permit me, in illustration, to quote the words of one of the wisest and most eloquent of surgeons, Sir James Paget. In a very charming and graceful paper, read at the opening of the Section of Surgery at Norwich two years ago, Sir James, referring to his note-book of cases recorded forty-years previously, says: "I found there some things which make me still fear, lest in our progress we should have let fall some things which we had better have held, and are now regarding some things too lightly that then seemed very grave, and perhaps are so still. For among the records which I found are records of methods of practice now almost completely disused, and yet in which I feel confident there was much right. I find, for example, a large and almost uniform practice of bleeding for all acute diseases, for many chronic, for most of those which were unknown and uncertain, and for a large proportion of those in which there seemed to be nothing the matter. Trying to learn something from these things, I come to one or two conclusions which I am sure the younger members of the profession need to have much impressed upon them. One of them is, that *at the present day we undoubtedly overvalue the blood, and estimate too cautiously the loss of it.*"

Gentlemen, these suggestive words from so profound a thinker and a man of such matured experience are worth pondering over; and may we not meet with many parallel cases in surgery? I know of no class of cases more important, more interesting, and in which a more marked change of treatment has taken place within a number of years, than cases of fracture of skull; and I think no records can offer a more marked illustration of this latter fact than the records of some of the master minds in surgery who have been connected with the hospital I specially venerate, St. Bartholomew's. Permit me briefly to quote the opinion of three men following each other in rapid succession, Pott, Abernethy, and Lawrence.

In Pott's "Surgery," published in 1808 by Sir James Earle, we find the use of the trephine in almost all fractures of the skull, whether simple or compound, is strongly insisted upon. He says, speaking generally of these fractures: "The number of cases of this kind which are necessarily brought into a large hospital, so situated as St. Bartholomew's, in the midst of a populous city, where all kinds of hazardous labour are carried on, has enabled me to make many observations upon them; and, although I have now and then seen some of them

do well without the use of the trephine, yet the much greater number whom I have seen perish with collections of matter within the cranium, who have not been perforated, and for whom there is no other relief in art or nature, has, I must acknowledge, rendered me so very cautious and diffident that, although I will not say that I would always and invariably perform the operation in every case of simple fracture, yet the case must be peculiarly circumstanced, the prospect much fairer than it most frequently is, and my prognosis delivered in the most guarded, apprehensive manner when I omit it."

And, again, he expresses his strong opinion, "that enlarging the opening of a fracture by means of a trephine will not produce or occasion much risk or hazard additional to what must be occasioned by the fracture itself that has already let in air upon the membrane; and, therefore, that *that* consideration is, at all events, in some degree at an end"; and so he goes on to argue that, as a matter of *prevention*, operation ought to be had recourse to in nearly all simple or compound fractures of the skull. Moreover, he did not confine his operation to one perforation of the skull, but occasionally trephined in two or three places, so as to embrace the whole of a fracture in the parts so removed; and yet I find, in spite of treatment so heroic, not a few successful cases recorded in his work on Surgery.

Abernethy differed in his practice from the course insisted on by Pott. He observed that a slight pressure from depressed bone did not interfere with the proper discharge of brain-function; and, whilst admitting that the pressure so exercised might in some cases set up irritation at a future time, he thought that generally the parts beneath became accustomed to it, and no evil results followed, and he thus cautiously expresses his view of the treatment to be pursued:—"From all I have learned from books, as well as from the observations I have made in practice and from reasoning upon the subject, I am disposed to join in opinion with those surgeons who are against trephining in *slight* depressions of the skull, or small extravasations on the dura mater."

Lawrence held, perhaps, a more decided opinion than Abernethy, he being certainly opposed to interference in cases of fractured skull, except where symptoms or other conditions clearly indicated it. In an able article on "Cases of Injury to the Head," by Mr. Evans, of the Hull Infirmary, published in the third volume of *St. Bartholomew's Hospital Reports*, Mr. Evans says, "I well remember some years ago the late Sir William Lawrence saying, in the wards of St. Bartholomew's Hospital, where a case had been recently trephined by one of his colleagues, that his experience of forty years in the wards of that hospital was, that such injuries did as well without operation as with it."

Here, then, I have briefly epitomised the opinions of three representative men of one of our great surgical schools—men whose opportunities for observation were immense, and who brought giant minds to bear upon the question; and I could considerably multiply opinions both in favour of and against interference in cases of depressed fracture of the skull, expressed by the leading surgeons of their time; and, though I think I may assert that the balance of opinion is now in favour of interfering extremely rarely in such cases, except where marked symptoms develope themselves, and that certainly a great change in practice has taken place since the teachings of Pott, still, with all the light of past experience to guide us, and with all the recorded results of the practice of the great men of former years for our instruction, the propriety of immediate operation in cases of depressed compound fracture of the skull is still an undecided point in surgery. All authorities agree that when symptoms of brain-pressure arise as a consequence of such injury, or where inflammatory symptoms develope themselves, not speedily yielding to antiphlogistic treatment, our duty is then to operate by trephining, or using Hey's saw or bone-forceps where practicable, so as to give exit to pus, or remove a source of otherwise fatal irritation; but it seems to me that the important and yet undecided question is, Are we to use these means *at first*, without waiting for the development of symptoms, in order to *prevent* their occurrence? Does the subject of a compound depressed or comminuted fracture of the skull run a greater risk by being trephined at once, though no symptoms exist, or by being left alone?

Two of the most eminent of living authorities strongly advocate immediate interference; you will almost anticipate me when I mention Mr. Prescott Hewett and Mr. Erichsen.

Mr. Hewett distinctly says that, "in cases of compound depressed fracture of the skull, the rule is to operate, and at once"; and Mr. Erichsen speaks even more emphatically. In his very admirable book on Surgery, he makes the following remarks on the subject:—"So far as my own experience is concerned, which is necessarily drawn purely from civil practice, I can say that, with the exception above referred to, I do not recollect ever having seen a case recover in which a compound depressed fracture of the skull occurring in an adult had been left without operation; but I have, on the other hand, seen several instances of recovery in which the bone had been elevated and fragments removed. The sooner this is done, the better; danger does not arise from early operation, but from delay; the presence of depressed and spiculated fragments pressing into the dura mater must infallibly and speedily induce encephalitis. I have several times trephined under such circumstances as these with success, and have never had occasion to regret doing so. Indeed, there is no class of cases in which the operation of trephining is attended by such successful results as in those of depressed and comminuted fracture." To what circumstances, then, are we to attribute this diversity of practice amongst men so thoughtful and so well able to form opinions? Possibly the excessive use—I suppose I may say the abuse—of the trephine in former times has been one cause of its almost absolute disuse by British surgeons within late years. I think that, in the case of many powerful and active remedial measures, once highly esteemed and strenuously enforced, as extended observation and scientific research prove to us that their employment is frequently unnecessary and often harmful, we are too apt to rush into the other extreme and altogether discard them, overlooking the value of their cautious and carefully considered employment. Another reason, I think, may be the unfortunate results which statistics give in cases where the trephine has been employed; but here, again, if we carefully investigate the existing conditions in many such cases, we must conclude that the same results would have followed, in spite of any treatment. The rule of practice with many eminent surgeons is to have recourse to the trephine *at once* in the treatment of compound depressed fracture, only in such cases as are accompanied by symptoms of brain-compression, and rarely, I fear, with a fortunate result; and, although in loose statistics such cases go to swell the number of deaths recorded after trephining, has the operation itself anything to do with the fatal result?

I think, if we come to examine such cases after death, we should almost invariably find some serious brain-lesion which could hardly have terminated otherwise than fatally, whatever treatment we had adopted. Permit me on this point to again quote Mr. Prescott Hewett. "It has never fallen to my lot," says he, "to meet with a single case of cerebral disturbance of a formidable or urgent character in which such symptoms were dependent upon depressed bone. In every case which I have seen with these symptoms strongly marked, there was also some extensive extravasation of blood, or some serious lesion of the brain-substance itself."

Again, perhaps the most obvious cause of these diverse opinions lies in the fact that, in cases of depressed fracture, we can hardly lay down a hard and fast line of treatment—much must be left to the careful and anxious consideration of the surgeon unhappily meeting with such cases. I think recent experience has abundantly proved that compound depressed fractures of the skull in adults *do* get well without operative interference; and, in illustration of this fact, I beg for a moment to refer you to three cases published in the *British Medical Journal* of July 8, by Mr. Gamgee of Birmingham. Here we find rapid and uninterrupted recovery from compound depressed fracture of the skull in adults, one man being fifty-five years of age, and the other two twenty-five years old.

They were all treated by perfect rest, cold to the head, and aperients. I could adduce other instances, but I refer to these as cases recently published, and probably familiar to many of my hearers. On the other hand, it is a well-known fact that such happy terminations are by no means constant, and that the trephine or some similar instrument has sometimes to be used to relieve inflammatory symptoms, or give exit to pus, which occur as the results of irritation set up by the fractured bone; even then recovery is by no means to be despaired of, though, of course, operative interference under such circumstances is far less promising than when undertaken without the inflammatory complication. Referring to my notes of cases in hospital, I find that only once in the

last five years have I had recourse to the trephine, and I did so in what I almost think is a typical case for operation.

H. D., a woman, aged thirty-nine, was brought into the infirmary with a history that she was engaged in some street row, and was knocked down by a stone thrown into the crowd. I found a large wound leading down to a comminuted punctured fracture, the portions of bone being driven deeply down. There were no head symptoms. Finding it impossible to pick out the depressed portions with forceps, I removed a semicircular piece of the sound bone with a trephine, and was able then easily to remove six comminuted portions of bone, some of them driven under the uninjured bone, and amounting in the aggregate to a piece as large as a half-crown. The dura mater was scratched, but not punctured. The woman was kept quiet, with cold to her head, and made a rapid recovery without any untoward symptoms. I think I may instance this as a case in which it is extremely doubtful whether so fortunate a result would have been obtained had I refrained from operation. I think, perhaps, there is a tendency in these days to overrate the danger of operative interference in such cases; for, where grave bone-injury already exists, and where air has already had access to the dura mater, and probably also foreign bodies, such as grit and dirt, it is open to question whether an operation, such as I have just described, performed with all possible care and delicacy of manipulation, adds very materially to the existing danger.

Certainly, I should be little disposed to lay down a defined line of treatment in cases such as I have been describing. Much must be left to the discretion and anxious thought of the surgeon, and whilst bearing in mind on the one hand that depressed compound fractures of the skull, even in adults, do get well without operation, one ought not to hesitate to interfere where the existing conditions of the fracture are such as to make one feel that there is probably less risk in interference than in simply waiting for results.

But time warns me to leave this most interesting and important surgical question, and to pass on to the consideration of one or two others, with a few brief remarks; and whilst on the subject of bone injuries, I should like to say a few words upon, and illustrate by an instructive case, and an equally instructive preparation, cases of fractures of bone in the immediate vicinity of important joints. I think there are few cases in surgery in which the accurate diagnosis is often more difficult, the anxiety involved greater, and the results less satisfactory, than in cases of this nature. Every practical surgeon is familiar with the impaired utility of wrist and hand which we occasionally see, particularly in old people, as a consequence of the fracture of the carpal end of the radius; and, again, impaired mobility of the elbow-joint is not unfrequently seen as a result of fracture through some portion of that complicated and important articulation; and I venture to say that such consequences are sometimes unavoidable, in spite of the most carefully conducted treatment; nay, I think I may go even further, and assert that cases do occur in which the surgeon, by skilful and carefully conducted treatment, has obtained the best results he could hope for, and which still are failures in the eye of the patient, ignorant as he is of existing conditions and almost inevitable consequences.

Surely, gentlemen, these considerations should teach us a lesson; they should teach us to look very charitably upon alleged failures in treatment, or upon so-called cases of malpractice. It is one thing to criticise the treatment of a deformed or distorted joint, weeks, or perhaps months, after the receipt of injury, when all *immediate* effects of such injury have disappeared; but it is a very different thing, when contusion, inflammation, swelling, and pain obscure the injury and interfere with manipulation, so to direct our treatment as always to insure a satisfactory result.

The case to which I wish to direct your attention for a few minutes, and which, through the kindness of my friend Mr. Wheelhouse, I am enabled to illustrate by a very instructive preparation, is one of dislocation of the hip, complicated, as I believe, by fracture of the acetabulum—that is, of the rim of the acetabulum.

A. B., a young man, a commercial traveller, was standing on the platform at a railway station, when he saw the train by which he wanted to travel passing rapidly through the station. He ran up to it, sprang upon the foot-board, and attempted to grasp the door of a carriage, but, being swung round by the momentum of the train, he was unable to keep his hold, and was thrown violently upon the rails, rolling over and over when he came to the ground. He lay stunned for a few minutes, and, when he attempted to get up, found his right leg so injured that he could not rise. He was carried into the waiting-room, and was seen very shortly afterwards by Dr. M., the railway company's local medical officer. This gentleman made a very careful and deliberate examination of the injured limb, and, as manipulation gave great pain, he put the sufferer under the influence of chloroform, so as to give himself every opportunity of arriving at a correct estimate of the nature of the injury. After nearly an hour's examination, he came to the conclusion that there was no dislocation, no fracture; but that the man was suffering from severe contusion. Afterwards, the sufferer was carefully laid in a railway carriage, and conveyed to his home in Manchester. Here he sent for his own surgeon. The same examination again was gone through, and the same result arrived at. As soon as the subsidence of swelling allowed it, a long splint was applied to keep the part perfectly at rest; and subsequently, as much pain about the hip was still complained of, his medical man, for his own satisfaction and that of his patient, called in a third surgeon, a man whose extended experience in cases of accident was undeniable. He found the limb lying flatly on the bed beside its fellow; careful measurements, conducted in the orthodox manner, proved that the injured limb was as long as, and at one time rather longer than, its fellow, and he coincided in the conclusions already formed, and in the propriety of the treatment adopted. And so the limb was kept at rest for some time longer. Here, then, we have three surgeons, separately and carefully examining this hip, and arriving at the same conclusions. But mark what followed in this singularly interesting case. When lapse of time and subsidence of pain warranted it, the splint was removed, and the patient was allowed to get up and try to move about. He did so, and attempted to bear some slight weight upon the injured leg, and *after* that he noticed, *for the first time*, that the injured leg was rather shorter than the sound one. This amount of shortening speedily increased to the extent of a couple of inches, with inversion of the foot; and, to cut a long story short, he consulted a fourth surgeon, who told him that his hip was dislocated; and eventually an action for damages ensued. In consequence of this, Mr. Wheelhouse of Leeds and I were asked to examine the case, and give evidence upon it. When we saw it, several months after the accident, the evidences of dislocation were clear enough; there was the characteristic shortening, the inverted foot, and the round head of the bone clearly resting upon the dorsum of the ilium. One of *two* things, then, must have happened in this case. Either (as was alleged) dislocation of the hip had occurred at the time of the accident, and had been overlooked, or else dislocation had taken place subsequently, as a result of some obscure injury to the joint. Against the first hypothesis was the testimony of three surgeons, who had all examined the hip carefully for dislocation or fracture, to the fact of the absence of deformity and the absence of shortening of the limb; whilst in favour of the latter hypothesis, in addition to what I have just stated, was the fact that no shortening took place till the man put weight upon the leg, and then it was immediately noticed. The only way in which one could reconcile the fact of undoubted *present* dislocation, with a history so opposed to its existence for some time after the accident, was on the hypothesis that, at the time of the accident, which was a very violent one, there was fracture of the rim of the acetabulum; that so long as no weight was put upon the leg, the head of the femur remained *in situ;* but that as soon as weight was borne upon the leg, the head of the bone escaped from the damaged acetabulum, and was soon drawn up upon the dorsum of the ilium. This theory was very ably argued by Mr. Wheelhouse, and surely it was a reasonable one—more reasonable than that a dislocation presenting such marked features as dislocation of the femur on the dorsum ilii should have been overlooked, though carefully searched for, by so many surgeons of ability and experience; and, though the probability of such an occurrence was denied, I am in a position, through the kindness of Mr. Wheelhouse, to show you a preparation taken from a case of accident admitted into the Leeds Infirmary, since the occurrence I have just related, which admirably illustrates the argument then urged. The case was admitted into the Infirmary for injury to the hip and severe internal injuries. Dislocation was diagnosed, and reduction readily effected. The patient lay in bed some days, and then died from internal injuries. During the removal of the patient from the bed, the hip, which had been in perfectly good position so long as the man was at rest, again became dislocated, and a post-

mortem examination revealed the condition I now show you —viz., "fracture of the rim of the acetabulum."

Erichsen, speaking of the treatment of such cases, says:— "But with every care a return of displacement will readily take place, and an unsatisfactory result can scarcely be avoided —shortening of the limb, and consequent lameness, being almost inevitable." Cases such as this one I have just related are of immense practical interest both to the surgeon and his patient. Certainly the patient has a right to expect that everything shall be done for him that careful judgment and judicious management can effect; but how often does the surgeon get undeserved blame when he has the misfortune to treat an injury so complicated that, in spite of all care and skill, he cannot avert an unsatisfactory result. I can imagine and excuse a man being angry when he finds himself permanently crippled by an accident, which at first, to all appearance, may not have seemed of a very formidable nature; but surely we, fellow-workers, *all* so fallible, ought to criticise the work of our brothers in a spirit of the widest charity.

The mention of Mr. Wheelhouse's name in connexion with this case, in which I was associated with him, reminds me how this Address was originally placed in his hands, and how generously and gracefully he relinquished it when the place of meeting was changed, and gives me the opportunity of paying a passing tribute to his surgical enterprise by a few remarks on what, so far as I know, is an important and an ingenious novelty in surgery. Some months ago I had an opportunity of examining in the Leeds Infirmary a case then under treatment, in which Mr. Wheelhouse had cut down upon, resected, and united by ligature, the divided ends of a sciatic nerve which had been accidentally cut across some months previously. The history of the case was briefly as follows:—

The patient, a man aged twenty-two, nine months before admission was climbing over a fence, when the railings gave way, and he fell backwards upon a scythe which he was carrying. The wound, which must have been an extensive one, as the cicatrix measured nine inches, was situated just below the left buttock. At the time of admission he was able to walk with difficulty, there being considerable dragging of the left leg, and, as he lifted it, the toes fell to the ground. He was unable to use the muscles of the back of the leg, and there was loss of sensation on the outer side of the leg and foot, the inner side retaining sensation. These conditions, taken in connexion with the situation of the cicatrix, led to the inference that the great sciatic nerve had been divided, resulting in paralysis of parts supplied by that nerve below the seat of division. The operation consisted in making an incision six inches in length in the course of the sciatic nerve, when the divided extremities were found an inch and a half apart, the upper segment being bulbous, the lower one flattened, and somewhat incorporated with cicatrix. The two extremities were then cut off, the divided ends brought together, and retained by sutures of carbolised catgut. This was facilitated by flexing the leg upon the thigh, in which position it was retained for some time. The man made a rapid recovery. When I saw him, some two or three weeks after operation, cicatrisation was almost complete, though the leg was still retained in its flexed position; but there was ample evidence afforded of returning sensation on the outer side of the leg and foot. In this case the restoration of sensation and motion appears to have been very gradual; but Mr. Wheelhouse informs me that since his discharge from the hospital the patient has gone on steadily improving, and gaining power in his formerly paralysed limb.

I have also the notes of a case of division of the median nerve by a wound from glass. It was treated in the same way, ten weeks after the accident happened; but the result does not appear to have been so satisfactory, as, though some amount of return of sensation and motion followed the operation as the wound healed and cicatrisation progressed, the sensation gradually diminished and numbness increased.

Two other cases I have records of, in which the divided ends of the nerves were brought together by suture immediately after the accident. In one case the median nerve, and in the other the ulnar nerve, were entirely divided. Both cases were boys of fourteen years of age. In one month from the occurrence of the accident both boys were discharged with their wounds healed, and sensation was perfect in each instance.

Now, I think I may instance these as four very suggestive cases. Perhaps they teach us no new facts in pathology; but, practically speaking, I think they are of importance. It will be observed that in the two cases in which some weeks elapsed between the receipt of injury and operation, the results were in one case very gradual and slow in their development, and in the other case satisfactory; but in the two cases in which operation immediately followed accident, sensation, at all events, was rapidly re-established. Now, experience has amply proved that regeneration of nerve-tissue after nerve division readily takes place more or less perfectly under favourable conditions. Dr. Hassall says:—"The regeneration of the primitive nerve-tube admits of proof, both by experiment and direct observation. The experimental proof consists in the simple division of nerves, or even in the removal of portions of them. The parts to which the nerve is distributed of course at first lose their sensory and motor endowments; these, however, after a variable time, are more or less perfectly recovered, thus completing the experimental proof. The recovery of the power of a nerve after the excision of a portion of it argues strongly the fact of the regeneration of the nerve-tubes; and this result, by a careful microscopical examination, can be positively demonstrated. The number of tubes in the renewed part of the nerve is stated, however, to be less than in the original portions; and this, in part, explains the reason of the restoration of the functions of a divided nerve being usually but imperfect." Every surgeon, too, is familiar with the fact that parts which have been completely severed, such as tips of fingers, will, if re-united, regain sensation, though the nerves have been completely divided. Thus, under favourable conditions of position, we may look for such an amount of return of sensation and power of motion, in parts supplied by divided nerves, as shall not materially interfere with future usefulness; but the practical lesson to be learnt from such cases as these is, that we may with safety so manipulate nerves as to insure such conditions of position. Perhaps the very painful, and sometimes even disastrous, result which has followed the ligature of an important nerve has deterred surgeons from interfering with them when divided. Sir A. Cooper records two cases of death from this cause—one from the ligature of the sciatic nerve to arrest hæmorrhage from an artery in its substance, and another in which the popliteal nerve was accidentally included in a ligature put round the artery. In both cases violent pains and death resulted.

In the cases I have recorded, I find complaint of much pain after operation in only one case—the first one operated on, in which the sciatic nerve was the one implicated. In this case there seems to have been great pain on the day of operation and the day following, but in the other three no mention is made of any disturbance caused by the operation. Probably the use of catgut suture, which, we know, soon dissolves, and the fact that the sheath of the nerves was carefully selected as the portion to be principally included in the sutures, may have had much to do with such fortunate results.

As a beginning, then, I think these four cases are both interesting and encouraging. If in the case of a limb left paralysed by division of an important nerve we can afterwards cut down upon, resect, and reunite such nerve, so as to restore power and sensibility to the parts supplied by it, at no great risk, much has been gained; and in cases of extensive wound or laceration, involving important nerve-trunks, these records raise the question whether it is not better not to be simply content with ligaturing bleeding vessels, and leave the nerve-trunk to the chance of assuming its original position, by carefully and accurately closing the wound, but to insure the coaptation of its divided ends by the careful introduction of catgut suture.

I wish to say a few words upon Esmarch's elastic bandage and constricting band, for the case of cure of aneurism in the popliteal span, recently published by Dr. Reid, of the Naval Hospital at Plymouth, as effected by the application of Esmarch's method for restraining hæmorrhage, is well deserving of consideration.

Operating surgeons constantly come in contact with cases in which, either to themselves or their patients, the application of Esmarch's apparatus is a great advantage. In a town like Sheffield, where very heavy manufacture is going on, and where much machinery and steam power are employed, severe accidents, entailing great hæmorrhage, are very common; and repeatedly have we found the advantage of Esmarch's method in the amputation of mutilated limbs, where every drop of blood is of consequence. And, again, how much the work of the surgeon is facilitated in such operations as the removal of sequestra surrounded by new bone, and in the midst of soft structures, often unusually vascular from long-continued local activity. Here his view of

facts is not obscured by the constant welling up of blood, and he is able to remove dead bone with the least possible damage to the new formation surrounding it, and acting as a substitute for it. In such operations, too, as those upon the foot, necessitating the disarticulation of small bones, with anatomical relations often obscured by disease and swelling, its advantages are obvious.

Esmarch's method thus secures a twofold desideratum in cases where its application is practicable, for it procures for the surgeon as clear a view of the parts he is operating upon as if he were operating on a dead body, and it secures for the patient the great boon of undergoing operation with the least possible loss of blood. I know it has been urged, in objection to its employment, that there is the risk of squeezing up into parts above inflammatory products, blood-clots, or partially disorganised blood; but I think, with care in the application, such accidents can rarely happen. Often as I have applied it, I never remember to have come across such results. The only unfortunate effects I have seen, I think, have been minor ones, such as some bruising and subsequent swelling of stump, when probably the elastic ligature had been applied more energetically than was necessary. The method can hardly be called a new one, though I think to the ingenuity of Esmarch we are indebted for devising the means of making it so widely and generally practicable. But over and above these well-known and generally acknowledged advantages, I must for a few minutes draw your attention to its employment for another purpose—the cure of aneurism. The subject of aneurism was so fully and exhaustively treated by Mr. Pemberton of Birmingham before this Association, four years ago, that little can be added to what he then advanced; but in the case recorded by Dr. Reid, when ordinary appliances failed, a rapid cure was effected by the application of Esmarch's bandage and ligature. The subject was a sailor, aged thirty-seven, with popliteal aneurism. Compression was first tried by genu-flexion, which caused so much pain and œdema of the leg that it had soon to be discontinued. Afterwards, Carte's compressor was applied at the brim of the pelvis, and again in Scarpa's space; but after four hours' continuous compression, severe pain again put a stop to treatment; and though pulsation in the tumour had ceased, it shortly returned, the opinion being that, although circulation through the femoral was controlled, a free supply of blood got into the sac through the collateral branches. It was then determined to try the effect of Esmarch's apparatus, not so as to empty the sac of blood, but keeping it filled, so to cut off all circulation through the limb as to allow of the coagulation of the contents of the sac. The limb was enveloped in the bandage from the toes upwards, but the bandage was passed very lightly over the knee, so as to exercise little pressure on the sac, and the thigh then enveloped to the middle third. The elastic ligature was passed round the thigh, and kept on for fifty minutes, when pain above the seat of the constriction necessitated its removal. It was then found that all pulsation had ceased; the aneurismal tumour was hard; and, as a means of precaution, a tourniquet was applied, at intervals, over the femoral for a few hours longer, to moderate the current of blood through the artery. Pulsation never returned, however, and the case when seen some months afterwards was perfectly well. The striking feature in this case is the rapid cure. One can readily understand stagnant blood, in a vessel in a limb almost deprived temporarily of vitality, speedily coagulating; but it will be observed that this is not precisely the method of cure which we have been in the habit of considering the most desirable in aneurism. The efforts of surgeons, from John Hunter's time, has been so to retard the flow of blood as to encourage the deposition of laminæ of fibrine till a sac becomes filled. In his Address in Surgery at Birmingham, Mr. Pemberton says: "What we want is a stream of blood flowing into the aneurism, that it should be more or less retarded there, and that there should be present something of the nature of a foreign body—for example, the fibrous laminæ—on which blood would coagulate and deposit its fibrine, for I strongly hold that what we want in these cases is a deposition of fibrine rather than a coagulation of blood. Surely the slow deposition, layer after layer, of solid fibrine in the sac, until filling in is complete, is a surer guarantee against future mishaps than if it were closed by a mass of suddenly coagulated blood." Now, whilst fully admitting the soundness of the views here expressed, I still consider this case well worthy of the attentive consideration of the surgeon. Certainly, I would prefer the gradual consolidation of the aneurismal sac by the deposition of fibrinous laminæ; but I am sure I have seen cases in which, either from the shape of the aneurismal swelling, or from the briskness of the collateral circulation, attempts to obtain consolidation by retarding the flow of blood have been useless; and, again, the pain induced by long-continued compression, or the nervous irritability of the sufferer causing him to be intensely sensitive to pain, may thwart our efforts to produce this gradual consolidation. Without presuming to draw conclusions from a single case, I still venture to bring this interesting one before the members of our Association, affording as it does another and a novel illustration of the benefits conferred upon surgery by Esmarch. And if further experience prove that, in cases where we fail to obtain the gradual consolidation we have hitherto aimed at, we can obtain rapid and lasting coagulation by actually stopping circulation in a limb, we shall have made another very important addition to the methods already in use for the cure of aneurism.

Gentlemen, I feel I have already trespassed long enough on your patience. I wish my crude and imperfect remarks had been more worthy of your consideration. I have been able to tell you little that is new and nothing that is original. It is given only to the gifted few to originate ideas and introduce innovations. But still I may hope to have completed a far from useless task if I have succeeded in interesting this large representative gathering in even one or two important surgical questions; for it is only by the accumulation of facts, and by the interchange of experiences, that we can hope to throw light upon those delicate and difficult problems in which the profession we love so well abounds.

Wholly occupied, as many of us are, in the pressing practical work of our profession, too little time can frequently be devoted to the scientific and more attractive side of it; and yet the humblest worker in our great field of labour, diligently and conscientiously doing his daily work, may reap a rich reward; for, even before wealth and honour, welcome as they are, is the gratitude of our fellow-men for benefits conferred upon them, and the peace that comes from a life spent in trying to alleviate the sufferings of our fellow-creatures.

ADDRESS IN PUBLIC MEDICINE.

By ALFRED CARPENTER, M.D., C.S.S. Camb.

A PARLIAMENTARY leader has spread far and wide the proposition: *Salus populi suprema lex.* We are bound to belive that when he uttered that sentiment he honestly gave adhesion to the principle involved in it. Nay, the harassing legislation which a belief in its correctness helped to promote has assisted to bring about the ebb-tide in the promotion of sanitary work which we are now witnessing. It may be thought that a proposition which has become a proverb cannot be accepted as an axiom, the epitome of abridged wisdom which is wrapped up in its meaning being lost sight of. Such is the proposition to which the then Prime Minister gave utterance nearly three years ago, and which should be the watchword of the Health Department of this Association. The questions which are involved in the proposition are manifold, and their prosecution by the members of the medical profession has produced a greater number of enemies than it has brought friends.

Ebb-tide in sanitary work, however, is not to be wondered at. Terence wrote in ancient times:

"Obsequium amicos veritas odium parit";

and as in times of old so it is now, obsequiousness has no place in the performance of duty, and as a natural consequence its prosecution promotes opposition. . . It is my present purpose to show why opposition is attended with so much apparent success, to point out simple lines of progress, and propound a theory as a basis for continued exertion.

It is scarcely more than forty years since the first national platform was established upon which satisfactory observations could be made and successful operations carried on in the cause of preventive medicine. The statistics which have been prepared by William Farr have been true pioneers of sanitary work. I would by no means decry the observations made by the older sanitarians. Howard and Pringle, Harvey and Jenner, with many other older workmen, are worthy of the highest regard by those who value the work in which we are engaged, and who think prevention of greater national importance than cure. If it had not been for the

work of these eminent men, followed as it was by that of the enlightened politicians who framed and passed the Factory Act of 1833, and the Registration Act of 1834, William Farr's records would not now be matters of history, and we might still be groping in the dark as to the natural laws which regulate the health of the people, and be theorising as to the causation of disease instead of calling upon Parliament to legislate for its prevention. The facts which have been brought to light by Farr's tables, the enormous mortality which has been shown to exist in defined districts, among defined classes of persons, and at particular epochs in their lives, together with the philosophical and suggestive papers which have been prepared by, or at the suggestion of, one who deserves as much of his country as any living man—I mean John Simon—have led to a flood of legislative measures, sometimes contradictory, passed in paroxysms; too often spasmodic in their character and unsatisfactory in their working; culminating at last in the enactment of a measure which made the appointment of medical officers of health compulsory upon all local sanitary authorities. This measure has laid a foundation which enables us to apply particular observations to defined localities all over the country. The compulsory appointment of those medical officers was preceded by a permissive stage—permissive, first, in the application of sanitary work to a particular district, permissive in the way in which that work should be applied, but at the same time accompanied by the stern resolves of the courts of law that in applying those works, and bringing them into practice, the rights of individuals should be respected. The antagonism between the *suprema lex* and the liberty of the subject, the opposition between *salus populi* and the rights of property, continued to throw serious impediments in the way of sanitary progress, because the truths of sanitary science were few, whilst the *ipse dixits* of its professors, both medical and engineering, were numerous and contradictory. Especially has this been the case with the comparatively new profession of sanitary engineers—a profession which has sprung up to execute the works which sanitary science has called for; the members of which profession, in a large number of instances, were ignorant of natural science. Is it to be wondered at that Parliament in its wisdom passed permissive measures? Is it not a natural thing that those who had faith in the truth of their dogmas should ask for a trial of the principles they wished to be carried into practice, before making it compulsory on local authorities to entertain them? Was it not natural that those who desired healthy and satisfactory progress should prefer to see the suggested enactments in operation, and that they would wish to have an opportunity of studying their effects before committing the Legislature to a course of action which would have to be retraced if it happened to be projected on wrong lines?

Hence the value of permissive measures. The promoters of antagonistic schemes for the improvement of the health of the people have had a fair field. The principles upon which these schemes are based may have been correct, but unfortunately the advice of the medical expert has been but too often only half acted upon. The principles which govern the application of sanitary law have been only half understood by those who have had to carry them into practice, and have been only half applied. Medical men are not acquainted with the first principles of engineering work. To engineers has been most naturally entrusted the duty of devising and carrying out the works which were required for the removal of the causes of disease, with the two frequent result of partial failure in effect because sanitary law or a study of biology has not been the guiding star of the engineer; whilst the medical adviser, being totally ignorant of the requirements of the former, has unwittingly passed over serious defects in the proposed schemes. The lesson which has been learnt is, that medical officers of health must know something of the first principles of sanitary engineering, so that they may be able to detect any grave defects in the works which a local authority may determine as requisite to be carried out in a given district. Such first principles must be a part of the education of everyone, so far as they are connected with drainage, water-supply, and building construction.

Registration of the causes of disease tells us in conclusive figures that disease is irregular in its incidence; that it coincides in its incidence with certain social conditions; that certain forms of disease decrease or increase as those social conditions alter for the better or for the worse. The study of the statistics of a given locality is a mariner's compass to the student in prevention; whilst the rise and fall of certain forms of disease in that locality constitute a barometer whose daily readings point out to the pilot the course which he should steer, and advise him of coming storms. It is only recently that every place has had its recognised pilot, whose duty it is to watch the indications afforded by registrations, and to advise the local authority accordingly. The indications are, however, not afforded to that officer at the most important and essential time—viz., at the very onset of epidemic or infectious disease. Registration of death is not in itself sufficient for the welfare of the State. The only information which a medical officer of health receives officially at present is, that disease of an infectious character has been fatal in a given place some time previously. This information is conveyed to him many days or even weeks after the events, and he finds, on inquiry, that the *materies morbi* has already been spread far and wide; that the contagia which have been produced by that case have been passed into the public sewer, the nearest watercourse, or other receptacle for human excreta, and, as a consequence, have most likely multiplied indefinitely. It is also probable that many cases of the same kind occurred before one was fatal, and that no efficient steps were taken to localise or circumscribe the effects of the disease in that locality. It is more than probable that if the proper officer could have had information of the first appearance of that disease in the locality, the general distribution of its contagious particles would have been prevented, and the people saved some of the consequences of that distribution. A natural sequence to the registration of death is the registration of these forms of disease, for the repression of which a sanitary organisation is by law established. That registration will be effected in due course. It is a coming wave of legislation waiting for the time when the natural history of those diseases which it is intended to encounter is more fully understood by the public, and more perfect knowledge obtained by ourselves as to the way in which preventive measures are to be used. We must be agreed among ourselves as to the proper steering-course before we can have sufficient influence with the Legislature to procure the enactment of a satisfactory measure. We must be agreed as to the class of disease which should be registered, and agreed also as to the persons who should give the information to the registrar. I cannot support the opinion that it is our duty, as a profession, to give information on this point. A medical man, or, indeed, any other person, is out of place in undertaking a duty which may follow upon, but which is not a part of, the work he is asked to perform by his employer, especially if that work appears to be to the detriment of the latter. It would be morally wrong for a medical adviser to conceal the nature of a given case, if of an infectious character, from the knowledge of his employer or the responsible head of the establishment in which his employer resides: but the medical man having communicated that knowledge to him, the latter should be the party to give the information to the State, and be responsible to the local authority if he withheld it. The members of our profession cannot claim the protection of privilege in any case. If called upon, they would be obliged to convict the employer of neglect, if the latter failed to comply with the requirements of the law, if such should be enacted. The employer, or the person responsible for his welfare, should give notice, just as at present the owner of cattle is bound to send information to the inspector that disease of a certain kind exists on his farm. It was felt, when the Contagious Diseases Act was passed, that to call upon veterinary surgeons to give the required information would defeat the object of the Act. It would no less defeat the object in the case of human beings if medical men were to be called upon to forward the information to the local authority; there would be an immediate premium on the employment of unregistered persons, and an effort made to suppress the discovery; and unless medical officers of health are to be entirely restricted from private professional work, it is quite impossible for such an enactment to work satisfactorily to the State, whilst, under any condition, it would be unjust to the private practitioner.

The progress which has been made in recent years in the repression of disease is marvellously great. The compulsory measures which are already on the statute book are extensive. The various Factory Acts, Nuisance Removal Acts, Registration, Vaccination, and Adulteration of Food Acts, Acts for regulation of lodging-houses, of water-supply, and numerous other fetters which are placed upon disease-production, both afloat and ashore, are very galling to a large portion of those affected by them; they are restive under the yoke, and will not under-

stand the reason why those have been enacted. As a consequence, the unwritten and unexpressed object of our legislators is to prevent the rigid application of the laws of health to their own particular locality. It is true that many among them are energetic, but many too frequently follow the shadow rather than the substance: they raise some question on some trivial side issue, and make a strain at a gnat: but on great questions which affect themselves they swallow the camel with the greatest ease. No better illustration of the truth of this proposition could be afforded than the action of a portion of those persons who have recently been agitating for a so-called Vivisection Bill. Some of these persons are permitting cruelty of the most excruciating character to be daily inflicted on their flocks and herds. They allow castration and other operations to be performed in the most painful manner on all classes of animals on their estates. They allow the cottages of their poor tenants to continue in a condition in which morality and chastity are impossibilities; whilst drunkenness, wife-beating, and child-murder are the natural sequences to such states of habitation. These things go on every day before their eyes. They have the power to prevent them, but they do not: yet they do raise their voices in shrill clamour against comparatively humane actions which they do not understand, which have for their objects the diminution of suffering in the future, and an elucidation of the truths of physiological and pathological science. The truths of those sciences are so telling against certain forms of quackery and delusion, that it is not surprising to find the supporters of quackery among the promoters of the Vivisection Bill. They would stop the study of physiology if they could, for it deals death-blows at the —pathys and —isms they delight in.

I would not, however, have it considered that we are in favour of the cruelties which is said to be practised by scientific students in demonstrating physiological facts. When I was myself a student I was never cognisant of such, and I believe that the statements are gross libels on our profession—libels which are quite unworthy of any Government to have countenanced, and are an indication of a desire on the part of some of the ruling powers to put a slight upon science, and especially upon that profession which includes among its members a large portion of the searchers after the hidden truths of nature.

An idea is now present in the minds of the ruling powers that they do not intend to be doctor-ridden. They have done a great piece of satisfactory work: they have made the appointment of medical officers of health compulsory. Some local authorities have even conscientiously performed their duty, and have appointed efficient officials.

The medical officers so appointed have zealously set to work to find out the sanitary defects which exist in their district, and have made elaborate reports regarding the same. Many are astonished to find that although appointed to do certain work and to make certain suggestions for action, no action is taken, and things remain much as they were before the appointment was made. There is nothing very extraordinary in this. It is the rule in everyday life. The custom of the unit is necessarily the custom of the aggregate of units, and the local authority does that as a body which the majority of individuals comprising it do in their daily life. It is the same result which naturally follows when a medical man offers his gratuitous advice to his wealthy patient at the wrong moment. The country is now passing through a phase of this kind: honest and conscientious medical officers of health are bringing down upon themselves a shower of indignant remonstrances, of widespread abuse and energetic opposition from local John Bulls, who do not recognise the fact that the State is suffering from mischiefs which can be removed if proper measures are taken for their removal. The reports of medical officers of health lie on the table, and very little concerted action is taken for the removal of those causes of disease which have been so ably and clearly pointed out. The patient is saying pretty plainly that he does not intend to rigidly obey the laws of health or to be doctor-ridden, and until some wave of epidemic disease arises, and compels him to reconsider his determination, he will not alter his course or take a different line of action: he may then instruct the sanitary engineer to carry out costly works which remove the most flagrant nuisance, but when carried out they often do not effect all the objects intended, because some first principle of sanitary law is altogether overlooked.

These results, though not due to defects in sanitary science so much as to construction of works, are leading the public to inquire for themselves and to criticise our actions. Fortunately for science, physiology is taught in some of our elementary schools, whilst honours are taken at our universities in natural science by men who do not intend to enter the medical profession. The youth of both sexes are learning more and more the laws of nature and imbibing the first principles of physics. A portion of the public believe that it is the duty of the physician to give a reason for the line of treatment he is pursuing: they will not be satisfied with an evasive answer, whilst the more sensible portion will not be led astray by a false one. Our explanations must be either strictly correct or so framed as to apply to a possible hypothesis, and not be contrary to the laws of natural science. To the medical profession the country owes in a great measure the knowledge which has been obtained of the laws which apply to disease-prevention. As a profession we must continue in advance of laymen, and we must not allow the idea to gain ground that prevention and cure are different studies and may be entirely separated from each other. It may be even that one will supersede the other, and become the more noble study, but to give currency to the proposal that medical men should not be called upon to consider the means to be used for the prevention of disease, and that they may ignore the operations of the engineer, would be suicidal. We must know how to prevent disease if we would retain the confidence of the public. If we are properly acquainted with the best principles of prevention as well as of cure, our objectors will not be long in finding out that they had much better be doctor-ridden, as they style it, than put their trust in delusions. At the same time, it is our duty to advise, not to dictate: to recommend, not to command: and to support our recommendations by arguments based on sound science. If the doctor has been unskilful, addicted to dogmatism, and to advance opinions which are not founded upon scientific truths, he is doing serious harm, and helping to promote those forms of quackery which are so rife among the idle, the self-willed, and half-educated ignoramus of society. We require a clear insight into the conditions which give rise to disease, to reduce the principles of preventive medicine to the plainest lines, and to bring it into formulæ which may be at once assented to: personality being the basis of all true knowledge in every branch of study.

I will set out what I believe to be some of these bases. The first principle of sanitary work is motion. Any plan which entails stagnation as a part of its scheme must have the cause for that stagnation very clearly expressed, and a sound reason given for it, or the scheme is bad in design and not calculated to effect the object for which it is proposed. This is a certain law with reference to the first great purpose of the sanitary officer. From the moment of excretion until it is utilised, motion of the excreta is the first sanitary law. If the excreta of carnivorous animals are kept moving, those combinations which produce epidemic disease are not forthcoming. For this purpose sewers are required in crowded localities. They are the necessary evils which follow upon the aggregation of individuals into crowded communities, though they are quite out of place in the village and the isolated mansion. Any sewer so constituted as to allow of stagnation of any of its contents in any part of its course is wrongly made. If arrangements are introduced which necessarily produce stagnation in the air, if only for a few feet of house-drain, a manufactory or vineyard is allowed to exist in which contagious particles may vegetate, and may be the starting-point of a fresh epidemic. Any trap on a sewer which is not accompanied by a corresponding ventilator may become a trap to catch men. Any sewer so constructed as to allow of deposit of solid matter, or which allows sewage to stagnate in any part of its course, is in a similar condition. Sewers must contain a current of sewage constantly passing down, with a corresponding current of air always passing one way or the other, if they are to be kept free from the power of manufacturing mischief. Ventilation must be free and absolute, ingress being allowed as well as egress, in a way which cannot be counteracted. For every house in connexion with a public sewer there should be at least two free openings provided in the house-drain, an inlet as well as an outlet. If this arrangement is carried out, and the openings contrived so as to effect the object in view, and not for the purpose of defeating it, the natural forces will more effectually ventilate the sewers than any artificial aids. The diffusion of gases, the tension of vapour, the differences of temperature in the sewer as compared with the outer air, the constant movement of

external air, together with the movement of sewage in the sewer, will suffice to produce a free ventilation at all times. If this be done, no contagium particle will have a chance of reproduction in the contents of sewers, and no sewer-gas will be discharged which will convey elements of mischief.

Deposit must not be allowed to take place: sewers must flush clean. The engineer who constructs sewers so that a deposit is probable in the invert of the arch has failed to effect the object for which he was engaged, and has erected an elongated cesspool. A sewer must flush clean under all circumstances. If sewage is always moving in the sewer there will not be time for deposit, there will not be time for those changes to take place upon which the production of contagia depend; so that motion prevents evil. Sewage must continue in motion and pass on to its destination. There is another point worthy of mention which is too often forgotten—fresh sewage does not smell. If a sewer stinks it is defective in its workmanship somewhere. It is not sanitary science which is at fault, but engineering work. Sewers which give out unsavoury odours ought not to be accepted. They are defective either in their ventilation or their levels; they are either wrongly designed or badly executed; and the engineer should be called upon to rectify the mistake.

Sewage cannot be retained in a sewer or anywhere else for more than twenty-four hours without producing a chance of evil; long before that time has elapsed it ought to be on its way to be utilised. The moment utilisation of sewage has properly commenced, from that moment the evils which might result from sewage recede into the far distance, and it becomes ineffective as a focus of infection. At present, nineteen-twentieths of the sewage produced by the thirty-two millions of Great Britain is cast into the sea or allowed to decompose after it has set up an immense amount of disease. Some of it becomes food for fishes, but the major portion is lost for ever by its reduction to its original elements.

It is not assumed that the utilisation of sewage by irrigation is possible in every place. It is, however, simply a matter of cost. At the first sewage conference ever held in this country, and which took place at Leamington in 1866, evidence was produced which showed the safety and success of the plan when managed by those who understood it. But the resolution which I submitted to the meeting, and which was ultimately carried without a division, stated that whilst sewage irrigation was a method of utilisation which would quite prevent the pollution of our rivers, yet there were places to which it was not applicable, and for which some other means of utilisation must be provided. I wish now to show what can be done by irrigation. The Croydon Sewage Farm at Beddington is at this moment utilising the sewage of 50,000 persons on 460 acres of land. It has been in action for sixteen years, and some of the land has been irrigated more or less night and day for the whole of that time. The farm is close to a dense population; it is immediately surrounded by residential property of the most valuable kind. The efficiency of the soil is becoming greater year by year, as the management of sewaged land is becoming better understood. The population of the parish in which it is situated, and of which it occupies nearly one-fifth of the whole area, has trebled since the farm was first laid out—an increase of population which is greater than has taken place in any neighbouring village or town. The rateable value in the parish books has risen by reason of the increase of building from £11,000 a year, at which it was rated in 1861, to £36,000 a year, at which it stands now. The death-rate, which averaged 20 in the 1000 before the establishment of the farm, has not risen above 17 since it has been in operation. The birth-rate is high, tending to raise the death-rate higher than it otherwise would be. Sewage farming at Beddington has neither depreciated the value of property nor injured life, but has actually acted in a contrary direction. It has also done much more than that. The land, which was naturally poor before it was taken for sewage utilisation, was let at the agricultural value of 24s. per acre. The neighbouring land has, however, risen in value since then, and now lets at £2 10s. to £3 10s. per acre as market garden land. But the Croydon Local Board have been obliged to take the land on lease at the enormous rental of £12 per acre, which is rather less than its cost would have been to us if we had purchased it compulsorily. The landlords, instead of receiving £525 per annum, now obtain £5500 a year without any trouble to themselves; they have become rich men, if they were not so before. The farm employs more than three times the number of hands, and raises at least five times the amount of produce. There is at this time upon the farm a herd of nearly 120 head of cattle, many of which have been bred on the farm, including fifty milch cows; they are as free from disease and as healthy-looking as any herd in any part of the kingdom. Let us bear in mind that the landowners have become rich men, the wages paid have more than trebled, the produce raised has increased by five times; there has been no depreciation of value to neighbouring property, no production of infectious disease or miasmatic influences, but there has been a complete destruction of the contagium-particles which a large population necessarily produces, whilst the effluent water discharged into the river after it has passed over the farm has seldom been less pure than that supplied to many places as potable water, although I would not, for obvious reasons, be in favour of such water being used for drinking purposes. This result is brought about by continuous movement; from the time the sewage is discharged into the house-drain until the time when the effluent leaves the farm is from six to twelve hours. The most important operation which takes place on a sewage farm is the destruction of contagium-particles. The moment they are brought into contact with the spongioles on the rootlets of sewage-grown crops, as may be easily seen in any field of rye-grass which is being irrigated with sewage, the spongioles seize upon the albuminous matters in the sewage by a kind of elective affinity, including the contagium-particles, remove them from the water, and digest them with an avidity which is most remarkable. No putrefaction takes place, no retrocedent decomposition arises, but the albuminous matter is digested as perfectly as white of egg is digested by the human stomach. Putrefaction is no part of sewage utilisation, and if putrefaction takes place there is a corresponding decrease of productive power, and also a proof that sewage farming is not properly carried out there. There are three simple rules to be observed—(1.) The sewage must be kept near to the surface of the land, so that the contagium-particles which may be contained therein shall not get beyond the reach of the spongioles of the crop, but shall be digested at once, before they can become reproductive. (2.) The amount of produce removed from the land must bear a constant and regular ratio to that of the sewage put upon it; and (3rd) there must be a rotation of crops, so that the materials common to sewage which one kind of crop does not take out from the land may be removed by another class of vegetable produce.

The utilisation of sewage by agriculture is one of the most important actions which the political economist, as well as the sanitary officer, can promote. It is a large field for the investment of superabundant capital, which must bring a handsome return to the inhabitants of the land in which it is invested, even if the investor fails to get a large premium. If one-tenth part of the sum which has been lost in Turkish, Egyptian, Honduras, and other worthless securities, had been invested in sewage utilisation, tens of thousands of acres of land which are now comparatively useless might be bringing in a yearly revenue of five pounds an acre to the present owners, whilst the produce raised upon them would assist to reduce the famine price of butchers' meat, and be a boon to the country. It is proposed to spend ten or fifteen millions of pounds in the formation of a Channel tunnel, which by a slight accident may be entirely lost. A similar sum expended for the purpose of utilising the sewage of London would make 10,000 acres of barren land as fruitful as the Beddington fields, and could not be lost. Motion in contact with atmospheric air in the sewer, on the farm and from the farm, constitutes the first principle of sewage utilisation. I say "in contact with atmospheric air," because this is the *sine quâ non* of utilisation. Even in the next best way of dealing with sewage—viz., by intermittent downward filtration—it is an absolute necessity, although in such case the utilisation is secondary and partial only.

Experience has taught us that in dealing with sewage there are two other canon laws which are simple and absolute in their character, and which cannot be departed from without danger. One has reference to the communication between the house and the main sewer. No matter how careful the architect or the sanitary engineer may have been in his plans, the drainage portion of the work is carried out by a class of workmen who habitually slur over their work, and the common laws of hydraulics and pneumatics are studiously ignored. The natural result is occasional or even frequent stoppage. To obviate this danger, no sewer should have any direct communication between it and the interior of the house. Such communication should always be by indirect channels only.

The other canon law is also as absolute. It is that no

water-pipe conveying potable water for use into any house should ever come into direct contact with a sewer or house-drain in any part of its course, especially at the orifice of discharge. The reckless way in which plumbers and house-fitters disobey these laws is producing danger to individuals in all ranks of society. Sewer air from imperfectly constructed sewers is laid on to our bed-rooms, dressing-rooms, kitchen departments, and lavatories, as regularly as if it were a necessary of life, whilst the water-pipe is in a thousand of instances so placed as to render it perfectly impossible to be used without the contingency of air finding its way to the water from the impurest of impure sources. People reputed to possess common sense do not see the danger of such proceedings, because everyone using water liable to be so contaminated is not affected on all occasions and at all times. They argue that the precaution of keeping water-pipes away from the neighbourhood of sewers is unnecessary, because a fatal result does not immediately follow. They might as well argue that a battle-field is not dangerous because the hero of a hundred fights died a natural death in his own bed.

I am inclined to make seven distinct classes of zymotic disease, and to include among them several which, at present, are assumed to be peculiar to animals alone. But the classification includes all the diseases which appear as epidemics in this country. The conditions are analogous under which one or other of them may arise, according as a concurrence of circumstances come together or not. The first class includes small-pox, cow-pox, chicken-pox, and sheep-pox. Its reproduction requires a germ or atom of potent matter which must be introduced into the animal economy from without. Now and then an individual is found who is insusceptible of the disease. If we could discover the reason for this insusceptibility, we should get the clue to the means which are required for the entire prevention of small-pox, and even render vaccination unnecessary. Attention to ordinary sanitary detail will not prevent its appearance, though it may diminish its fatality. A person who is apparently most healthy, very cleanly in his habits, who always inhales pure air, drinks pure water, and who is but little exposed to the influence of decomposing fæcal evacuations, may yet suffer from the disease. It is true that it is much more fatal in a dark, ill-ventilated house, with the insanitary surroundings which usually belong to such; still the fact remains: small-pox is not prevented by sanitary regulations alone, and is not so capable of prevention, by municipal and personal cleanliness, as most of the zymotic class.

A distinguished member of this Association has made out that the milder exanthem, cow-pox, acts as a preventive of the severer form of the disease, simply because it is a modified form of small-pox, modified by its transmission through an animal; the germ which produces it having been a germ of small-pox, changed in its nature by passing through the body of the cow. It is an instance of the way in which Providence places in our hands means whereby we may extract the sting of disease if we set about it in the right way. The recipient of the slighter disease is insusceptible of the severer form of malady for a long time; until most of the tissues of the body have been altogether changed, and new matter laid down in their place.

This insusceptibility to take on a similar form of malady a second time is peculiar to most zymotic diseases. A person having suffered from enteric or scarlet fever is less liable to suffer from that form of disease again. In this they differ materially from constitutional and functional diseases. If a person has suffered once from gout or bronchitis, he becomes more liable to recurring attacks. He has established a custom which will possibly set up an outlet in his system for the discharge of effete or used-up matter. It has one privilege attached to it: there is often a smaller quantity of the particular material in which the germ or potent matter of zymotic disease delights, than in that person who is apparently in a healthier state, which accounts for the fact that delicate people suffer less severely from epidemic maladies than those who are strong and hearty. The manifestation of zymotic disease represents the result of some potent force, or the effect of some living organism acting upon the humours of the body, and altering the condition of the system, which requires years to effect. It removes from the system the whole of the matter in which the active principle of infectious disease can revel, and until production of its particular pabulum takes place that particular disease cannot arise again, because there is no food for the active principle to live upon. I much doubt if this potent force or living organism, take it as we please, could have any effect upon the body if the recipient were perfectly healthy; if no impurity existed in the fluids of the body; if the blood contained nothing foreign to a healthy and natural state. If this be so, a question arises, as from whence these impurities proceed, and how their effects are to be guarded against. I venture to put forth an hypothesis for consideration, which will explain much which is difficult to understand on any other view. Some impurities must exist; they are the used-up matter, the result of the act of life, or they may be inherited tendencies, which have resulted from former neglect of sanitary law, and which have depreciated the quality of the stock, and rendered it more susceptible to bad influences. The impurities naturally increase if there are any defects in the sanitary arrangement of the individual corpus. Their presence is of no moment if they are not in excess, and if they are removed from the body as fast as they are formed, or in the course which they naturally follow. Let us represent them by X, in an equation in which the factors X, Y, Z (as a total) represent any form of epidemic disease. The problem is to assess the value of each factor in the equation. Divide the factors into two parts—centric elements, or those which are proper to the body; and excentric, or those which act upon it from without; X, Y, Z may equal zymotic disease of any kind. Let X = U and E; U being the used-up material, the formed material of Beale, always in the act of formation, is not foreign matter, and is not in ordinary proportions injurious to life. It is always being diminished as fast as it is formed, by one or other of the excretory organs which exist for the purpose of removing it. If all the excretory organs and all functions are healthy, and all doing their work properly, the body is in good health, there is no excess of used-up material, no *débris* of combustion. If, however, one or other of the excretory organs fails to do its duty, from either overwork or inertness, something is left in the humoral system, and E is added. It becomes a positive quantity, and represents the excess of matter which should have been removed, U + E = X. They have a common origin, being the *débris* of the act of living; E will differ in quantity as well as in quality. It will be modified by personal character, by actions, by non-actions, and even by attainments, but especially by attention to, or neglect of, sanitary and moral laws. Still more will it vary according to the circumstances of the community among whom the person resides, the moral and the sanitary state, or the habitual neglect of sanitary law in which that community may indulge. Thus, a municipal authority who allows overcrowding, foul air, immoral acts on the part of the people, impure water, or bad food, is providing an excess of E, and increasing the danger which may arise from the introduction of the potent principle of infectious disease. If E is absent, X is not complete, and X, Y, Z cannot arise; X even may be complete from the circumstance I have detailed, but Y, Z are still required to establish an epidemic. If Z is made to correspond to an atom of potent matter, a germ or living organism, the particulate contagium of any kind of zymotic disease, the multiplying focus of infectious disorder, and one of the excentric elements in the equation, it has to be introduced from without, and is capable of modification according to the character of the soil into which it may happen to be transplanted. Like the *Torula cervisiæ* or the *Penicillum glaucum*, upon which fermentation depends, and without which alcohol is not produced if Z does not gain admission to some part of the humoral system, the entity, zymotic disease, cannot arise. Just as *Penicillum glaucum* requires the sugar and the temperature to produce alcohol, so Z, the contagium-particle, requires the food upon which it increases and multiplies, as well as certain meteorological states, for its proper development. These latter conditions are represented by Y. The severity of the disease will depend upon the quantity of E which exists in the factor X. The epidemic will be more or less general and fatal according to the greater or lesser quantity of E in each individual, not according to the character of Z; Z will be reproduced according to the quantity of food in the recipient upon which it can increase and multiply. If E be absent, the effect of Z will be nothing, for there is nothing for it to feed upon. If, therefore, personal cleanliness be attended to, if all the excretory organs of the body are properly exercised, if the municipal authority has insisted upon obedience to sanitary law, if moral laws are obeyed in each unit of sanitary work, the effect of Z, whenever it happens to be introduced, will be reduced to a minimum, and Z may be so dwarfed as to be unable to effect a lodgment, or it may die out entirely. It will be by directing attention to the necessity

of diminishing the growth of E that we shall prevent epidemics from spreading, rather than by useless attempts to keep out z; by correct sanitary administration, rather than by trying to establish an all but impossible quarantine. If E in the factor x abounds, and quarantine is not effectual, if z once passes through the cordon, the power of the latter is lost, and all our work in that direction has come to nought. The equation stands thus: $x = U + E$, and represents the used-up material, the result of the act of life; Y = the meteorological conditions, such as temperature, moisture, and certain atmospheric states which are required for the rapid increase of epidemics; z = the contagium-particle upon which the nature of the disease depends. The fatality of the disease will depend upon the quantity of E in the factor x. The rapidity of growth will depend upon certain meteorological states represented by Y; but the character of the disease itself will depend upon z. We can diminish x to a minimum by personal, municipal, and sanitary arrangements. We cannot alter Y, but we can impede the introduction of z, and prevent epidemic disease, unless it can be shown that zymotic diseases may arise *sua sponte*. As regards small-pox, there is not any difference of opinion on this point. It certainly requires the introduction of z from without, and if the contagium-particle be absent small-pox cannot arise. It has been clearly shown that the contagium-particle is a living organism requiring certain forms of matter for its development, and if it do not meet with that matter its character is altered, and it is no longer the same entity.

There is a class which includes measles, whooping-cough, influenza, catarrh, and eczema epizooticum, in which z appears to be a germ of living organic matter, most probably of vegetable origin, possibly the fructification of a class of organisms which have recently been called schizomycetous, and which are too minute for identification with present microscopical powers. That vegetable matter can produce similar effects is seen in the action of the pollen of *Anthoxanthum odoratum*, and also by the fine powder of ipecacuanha. The effect upon mucous membrane of these reagents is not constant, it only arises in some persons. Year by year we find the persons affected to be more numerous. They probably have E in the factor x, in some form or other, in their systems. The action produced is immediate, and it may be likened to that set up by mustard. The latter affects every one alike, in which it differs from hay asthma. The action produced by fungi is not immediate; there is a period of incubation—a period sufficiently long for the production of an immense multiplication of fungous growth, and, as a sequence to that growth, the production of a chemical result. Growing fungi produce carbonic acid or other acid or etherial products; there is always a considerable formation of gaseous matter produced by such growth. This can set up irritation in the tissues, just as formic acid can if injected under the skin. The germination, and, as a sequence, the multiplication of fungi in acid media is one of the wheels within wheels often met with in nature, where reproduction is more rapid, because reproduction itself produces material which increases growth. There is a marked difference between the effect of the *materies morbi* which sets up epidemic catarrh and that of pollen upon mucous membrane. The one is reproductive, the other is not. It is in the result of reproduction that the cause for the catarrh is to be found. In that reproduction, a material is set free which acts in a manner similar to the pollen of the anthoxanthum. Those who live in close, ill-ventilated rooms, and who object to admit fresh air, are said to take cold when they do so. It is not the fresh air which injures them, but it brings into contact with the patient's mucous membrane some germ from without, or else it disturbs some such in the ordinarily undisturbed part of the room. The fruit takes root and grows in its new home, reproducing itself, perhaps, like cow-pox, under altered conditions, and in that reproduction sets free a material which is the actual cause of the catarrh.

The effect of copaiva in producing a rash similar to, and which cannot always be distinguished from, measles, except by the absence of fever, is a proof that a vegetable product can excite a similar state. It has not been shown that the rubeoloid eruption which sometimes follows upon the use of copaiva has any protective influence against true measles. An extended series of observations are required to prove this point; and it may be that there is an opening for information which is worth following up. Measles is more generally prevalent in mild damp seasons: it always appears more or less about cleaning time, when old heaps of rubbish are being disturbed, and decaying organic matter from homesteads and farmyards are being spread over the soil. It appears then as an epidemic, as if there were a sequence in the operation. It is possible that the schizomycetous organisms may be altered forms of some particular mould or smut, altered in the character of their fructification, and altered in their mode of growth by transplantation to a new home; just as the contagium-particle of small-pox is altered by its transit through the humours of the cow. Alterations of this kind do occur; the connexion between the echinococcus and the tapeworm is a case in point; and it does not follow that the organisms themselves are distinct species which require a continuous existence in that form for their occasional appearance as epidemics. Just as with small-pox, some persons never have measles, or whooping-cough, or scarlatina, though frequently exposed to the influence of the contagion. Whoever discovers the cause of this exemption will confer a boon upon humanity, as in that discovery will follow the establishment of a means for preventing altogether that class of disease.

The class which includes diarrhœa, cholera, dysentery, enteric and intermittent fever, are essentially filth-diseases, arising from the effects of a sewage-soaked soil, of polluted water or air, rendered foul by miasms, from decomposing organic matter. Wherever any of this class puts in an occasional appearance, diarrhœa is certain to be a regular visitor, whenever the temperature rises above the ordinary standard, and continues high for any time. It has been imputed to the rise and fall of the water-line in the subsoil in connexion with the rainfall of the district. A close investigation of conditions under which summer diarrhœa arises in those towns in which it is prevalent—such as London, Leicester, and Berlin—shows conclusively that, although the highest mortality corresponds with the lowest level of ground-water, there is no relative proportion in any other point. A relation does exist between the origin of the disease and heat. The greater the heat, the greater the mortality; the lower the amount of moisture in the air, the higher the death-rate from diarrhœa. A fall in the death-rate follows upon the return of atmospheric saturation. The fall in the level of ground-water, the increase of temperature, and the diminution of water in the air, all occur together. Then it is that those who inhabit cellars, underground dwellings, dark ill-ventilated houses, houses in which dry rot is taking place, all places likely to get an excess of carbonic acid in the air, suffer from the disease. Hand-fed children suffer first and most heavily. This appears to prove that the food is the main starting point. The food, when exhibited, is about to undergo some change, promoted by living organisms, which flourish most luxuriantly under the conditions mentioned. They obtain a lodgment in the mucous membrane of the alimentary canal, and destroy the child by destroying the nourishing properties of the food exhibited. Pettenkofer thinks that locality has more to do with the disease than the introduction of any particular germ—that removal from the place will prevent or even cure the disease. He imputes it to some influence produced upon the people by the rise and fall of water in the subsoil. This rise and fall is connected, but it is as a coincidence. The conditions which gave rise to infantile diarrhœa are those which promote the growth of certain living organisms. Such growth takes place most rapidly at high temperatures, when evaporation is rapid, and when the underground air has an excess of CO_2 in its composition, together with the organisms which accompany that excess—conditions which are likely to be in association with a low water-line; conditions which are always followed by heavy rainfalls. The z in the equation x, Y, z = infantile diarrhœa, is some living organism developed by continuous heat, by dry air, excess of CO_2 in that air, and some other unknown condition. This organism finds admission into the stomach with the food, sets up a fermentation, by which the nourishing power of the food is destroyed; produces an irritating material which, uniting with x, causes prostration; and, if this be not fatal, the child is starved to death. The localities in which diarrhœa arises are the favoured haunts of cholera and enteric fever, under other meteorological states in which heat and dryness are not contingencies. Pettenkofer considers their origin to be due to local and personal considerations, and believes that quarantine is useless. The conditions which herald the approach of cholera are progressive from place to place. The factor x may be brought in, and the disease produced earlier than it otherwise would if it had to wait for development *sua sponte*. The observations of Dr. Klein have established the coincidence of living organisms and typhoid in a way which is beyond cavil. In solving the power of each

member of the equation x, y, z = enteric fever, we may be certain that the factor z is a living organism capable of reproducing its like in any situation in which fæcal contamination has occurred, and in which the products of filth-decomposition are to be found.

Do any of these diseases arise *suâ sponte?* The sudden way in which some of them develope sanctions the idea. This is especially the case with enteric fever and scarlatina. Many intelligent and accurate observers have been unable otherwise to account for the appearance of these diseases in given cases. Yet the ordinary laws of natural history would forbid the suggestion. Growths, apparently spontaneous, are common in the vegetable kingdom, but in no case is it supposed that the growth has taken place without the previous presence of appropriate spores or seeds. The sudden and wide-spread appearance of eczema epizoötica among cattle, or the destruction of potato by potato blight, seem to be spontaneous, yet those diseases spread by contagium-particles. We may reasonably suppose that the propagation depends upon spores like to *Penicillum glaucum* or *Mucor mucedo*. Those spores are to be always found only waiting for a suitable situation to grow and become fertile in a few hours. They are both aërial and aquatic, and produce different results, according to the dryness or moisture of the position in which they are found, and are modified by the acidity or the alkalinity of the media in which they multiply. Bacteria of different kinds are found in one, vibrios in another; why should not those forms produce a potent matter in their growth, capable in itself of producing disease? We know that certain kinds of fish may be eaten to-day with impunity, but to-morrow they set up serious disturbances in the animal economy. Vibrios to-day may be harmless, but to-morrow they may produce disease. The secretion from the peritoneum to-day may do no mischief; to-morrow an irritative action may arise, which will set up a most virulent and infectious complaint. In peritonitis a most fatal form of infective disease may be set up, and the infectivity arises *suâ sponte* because certain circumstances have been altered, and the bioplasm existing normally in the tissues has taken on a new action. The germs were there, but the vital conditions being altered, a comparatively harmless secretion is turned into a virulent poison.

I believe this to be the case with those specific forms of contagion which are multiplied by filth. Scarlatina and typhus, enteric fever and cholera, arise apparently *suâ sponte*, because certain germs or foci of potent matter have been altered by the circumstances in which they are placed, and infective power has been added, just as infectivity is produced in the peritoneal secretion by inflaming the membrane which secretes it. The ordinary excreta of carnivorous animals, which contain the *débris* of animal food, may or may not be so placed as to produce the germ upon which filth-disease depends, just as dry rot may or may not arise in a building, according as to whether ventilation has been provided for and new wood kept out of the fabric. But if those germs be introduced into the human economy, the disease arises and spreads in the usual manner. So again with scarlatina, long-continued observation and analogy forbid the idea of an origin except from some bioplasm finding a suitable soil in which it may develope its poisonous character.

Time fails me to go through the list of zymotic diseases and show the character of z in each class. There is a close analogy, a continuing alliance, and a similar explanation can be made as to the value of z in each member of the class.

Zymotic disease, in the majority of instances, has its power of producing evil more in the character of the recipient than in the quality of z. Obedience to sanitary law in private life, together with the performance of public duty by local authority, will give comparative immunity from epidemic and infectious diseases, and render us in a great measure independent of the trammels of imperfect quarantine.

As zymotic disease has its main impetus in the disregard of duty, those who advocate the performance of that duty must be prepared to encounter opposition and witness an ebb-tide in sanitary work. It is imperfect knowledge on our part which gives strength to opposition. It is our duty to persevere in the prosecution of a more perfect work. Motion as opposed to stagnation, simplicity as opposed to complexity, should be our cardinal points; and if to this we add the peremptory utilisation of animal *débris*, the sting of epidemic and infectious disease will be taken away, and, in the words of the Psalmist, "we need not be afraid of the pestilence which walketh in darkness, nor of the destruction which wasteth at noon-day."

It is our duty to strive to reach this point of perfection. It can be obtained only by educating the people as well as ourselves aright, and we must trust to Providence for our reward.

ORIGINAL COMMUNICATIONS.

ON THE

THERAPEUTIC VALUE OF THE CRYSTALLINE PRINCIPLES OF ALOES.

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Professor of Chemistry at Clifton College.

Medical practice in this country recognises commonly only two kinds of aloes—the one obtained from Socotra, the other from Barbadoes,—both of which are directed to be employed in the preparations of the British Pharmacopœia. As is well known, all varieties of the drug consist of the dried inspissated juice, which, after cutting, exudes from peculiar vessels resident in the leaf of the plant.

Socotrine aloes is obtained from a plant (*Aloë Socotrina*) which grows or is cultivated in the island of Socotra in the Indian Ocean. The drug as it appears in commerce varies somewhat in character. It is imported chiefly in boxes from Bombay, and generally exhibits a reddish-brown colour. It is translucent when in thin fragments, and possesses an odour peculiar but not altogether disagreeable. When moistened with spirit of wine it exhibits under the microscope many small prismatic crystals. It is sometimes opaque and liver-coloured (hepatic), probably from the presence of feculent matter.

From certain highly crystalline varieties of Socotrine aloes imported into this country by way of Zanzibar, and first examined by the late Daniel Hanbury, F.R.S., it has been found possible to extract the crystalline constituent in a state of purity. The aloin obtained from this source is not identical with the aloin of Barbadoes and other varieties of aloes. It crystallises in small pale-yellow prisms, which are soluble in water and in spirit of wine, and contain about 14 per cent. of water of crystallisation. For sake of distinction it is called *zanaloin* or *socaloin*.

Barbadoes aloes is brought in gourds or boxes. It is obtained from the leaves of *Aloë vulgaris*, which is cultivated in Barbadoes. It occurs in masses of dark-brown colour, having a conchoidal fracture, which exhibits a peculiar dull, waxy surface, and emits, especially when breathed upon, a disagreeable alliaceous odour. Moistened with spirit, it displays abundance of crystals, and its crystalline constituent is easily obtained in large quantity from good samples. This crystalline constituent has long been known as "aloin," but now that there is abundant proof that each kind of aloes contains a crystalline principle peculiar to itself, it is desirable to distinguish this substance from the rest by the name *barbaloin*. It forms yellow prismatic crystals, soluble both in water and in spirit of wine. These crystals contain about 5 per cent. of water of crystallisation.

Since 1869 a considerable quantity of a new variety of aloes has been imported into this country from Natal. The plant from which it is prepared has not yet been identified. It is of a character quite peculiar and distinct from both Socotrine and Barbadoes aloes, as well as from ordinary Cape aloes. Natal aloes is dull-yellow, very opaque, and possesses but little odour. It contains a large quantity of a crystalline substance (*nataloin*), which is altogether different from the corresponding substances obtained from other kinds of aloes. It forms thin, rectangular, pale-yellow scales, which are but slightly soluble in water, and far less soluble in rectified spirit than barbaloin or socaloin. These crystals contain no water.

Socaloin has the formula $C_{16}H_{15}O_7.3H_2O$. It yields substitution-compounds with chlorine and bromine, having the formulæ $C_{16}H_{15}Cl_2O_7$ and $C_{16}H_{15}Br_3O_7$ respectively. When boiled with nitric acid, chrysammic acid is the characteristic product.

*

Crystallised barbaloin has the formula $C_{16}H_{18}O_7$. H_2O. It yields bromo- and chloro- derivatives corresponding with those of socaloin, and it also yields chrysammic acid under the influence of nitric acid.

Nataloin is believed to have the formula $C_{16}H_{18}O_7$. It is distinguished by inferior solubility, by its peculiar crystalline form, by yielding no substitution-compounds like those of barbaloin and socaloin, and, lastly, by giving no chrysammic acid, but only oxalic and picric acids, when boiled with nitric acid.

It will be observed, upon examination of these formulæ, that in the anhydrous state these three crystalline substances, albeit exhibiting well-marked differences of properties, and possessing, it must be supposed, different chemical constitution, have the same composition. They are, in short, isomeric.

An easy test by which the three substances are detected and distinguished from one another is as follows:—Cold nitric acid dropped upon socaloin produces very little change of colour; with barbaloin an intense, but quickly fading, crimson coloration is produced; and with nataloin a blood-red coloration, which does not fade unless heat be applied.

Barbaloin has long been an article of commerce, and has been represented as possessing great activity as a purgative. Some difference of opinion upon this question has, however, existed, and it seemed to us desirable to determine the question of its activity by systematic experiment. It also seemed to us worth inquiry whether the crystalline principles of Socotrine and Barbadoes aloes, which are constantly prescribed indiscriminately, were possessed of equal purgative power, or whether any marked difference in this respect could be observed between them. To the results obtained we have added a number of similar observations upon the purgative action of nataloin.

The crystalline principle of Barbadoes aloes has had numerous trials as to its efficacy, and especially as regards its purgative action; and the most widely different results have been obtained by various observers. We shall not attempt to account for this difference of opinion, but content ourselves with the record of our own conclusions based upon the observations we have made in fifty cases. But that this question is not already finally and satisfactorily settled would appear from the following extract taken from one of the most recent works on Therapeutics (Wood's):—"Aloin was formerly believed to be the active principle of aloes, but at present evidence is decidedly against this view. According to Messrs. T. and H. Smith, in doses of one or two grains it is almost a drastic purge: on the other hand, Robinquet took fifteen grains of it without effect, and affirms that it is a simple bitter." Dr. Craig, in the *Edinburgh Medical Journal*, says aloin is the only active principle found in aloes, and he says further that its "uniformity of strength, the smallness of its dose, and the certainty of its action, should commend it to the favourable consideration of all medical practitioners." So far as our observations go, they do not fully agree with the experience of Robinquet or Dr. Craig. We have generally found that when either barbaloin, zanaloin, or nataloin has been administered in doses of two grains or upwards there has been, in the majority of cases, some action of the bowels; but most certainly we have never once found doses of one or two grains to be "almost a drastic purge," as asserted by Messrs. Smith.

The before-named crystalline principles were prepared by Dr. Tilden, who assumes the responsibility of their chemical purity. The dose was given in the form of a pill, made by mixing the crystals with conserve of roses (except in twelve cases, in which barbaloin was mixed with hard soap). The observations made had reference only to the aperient action, or otherwise, of the substances under consideration. The persons to whom they were administered were, in most cases, adult males.

The general conclusions at which we arrived were that neither zanaloin, nataloin, or barbaloin were altogether inert, but that each of them, when given in doses of two grains or upwards, produced more or less action on the bowels. Barbaloin in doses under two grains frequently produced some slight laxative action; but with none of the substances, even when large doses were given, did the effect produced approach anything like a drastic purge. Barbaloin appeared to be rather more active than either of the other two. In our observations we did not give more than two-grain doses of this substance. Between the zanaloin and the nataloin there was not much difference in purgative action; the former was frequently given in doses of four grains without producing more than two slight motions. Nataloin in similar doses sometimes produced two, three, and even four motions; and sometimes there was no action following the dose. In one case four grains, given to a convalescent nigger produced no result; and six grains, given three days afterwards, also failed to act. In another case, a delicate girl took two grains with no effect; and six grains given the next day acted three times.

To summarise the general result of our observations: It appears that barbaloin, zanaloin, and nataloin, in doses of two grains, are each of them more or less aperient; barbaloin, apparently, rather more active in combination with hard soap than with conserve of roses. They are each of them decidedly uncertain and variable in their action. In those cases in which we have a record, the time which elapsed after the administration before there was any perceptible action varied from two and a half to fifteen hours. It did not appear to us that the crystalline principle was more potent than a similar dose of aloes; nor did we discover any advantages it possesses over an equal dose of aloes—except, perhaps, that griping was rather less common than when aloes alone was given.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

CASES UNDER THE CARE OF THE LATE MR. DE MORGAN.

[For the notes of the following cases we are indebted to Dr. R. W. Lyell, Surgical Registrar.]

Case 1.—*Abdominal Abscess* (*due probably to Vertebral Caries*) *which had been mistaken and treated for Hernia—Relieved.*

Thomas A., aged forty-four, an engineer, was admitted into Handel ward on May 11, 1875. He was a perfectly hale man till four years ago. At that time he had an attack of pleurisy of the left side, with "congestion of lungs," which disabled him for two months. Never recovered perfectly, but was afflicted with general rheumatic pains, with lumbago and sciatica of both hips. Two years ago he became an out-patient at Bartholomew's for "lumbago and sciatica." About this time noticed a small lump about half the size of an egg above Poupart's ligament on the right side. This remained stationary in this position for some months, during which time he followed his employment, except when the pain in the back and hips prevented him (would follow occupation for a few weeks, then be laid up for a time with the pain). Twelve months ago, lump disappeared gradually from above Poupart's ligament, and another swelling appeared in the groin below the ligament. This gradually increased in size till eighteen weeks ago, when it was about the size of an egg; it being considered hernia, he was advised to wear a truss. Has worn a truss up to the present time. The truss never kept up the swelling, which increased under it. Has had occasional rigors, usually during the last twelve months; has suffered from cramp in the right leg, and the foot has been swollen. After standing, both feet swell. Has not lost flesh. Has a somewhat diffused soft swelling, occupying a space from the right saphenous opening to Poupart's ligament. The saphenous opening is widely dilated and filled with a soft reducible swelling, which can be traced upwards in a less defined manner above Poupart's ligament. The skin is thickened and slightly ulcerated from the pressure of the truss. When he coughs there is marked impulse and increase of swelling; and pressure on the abdomen above communicates to the tumour below a marked impulse. The tumour at saphenous opening can be kept up with the hand when patient stands up. No pain in tumour. Some tenderness over the lower lumbar vertebræ, but no distortion. Dulness on percussion over the swelling. Abdomen tympanitic; fulness and tenderness on pressure in right iliac fossa. The fold of the groin is lost, and occupying this space, and for some distance above and towards the outside is a diffused swelling; fluctuation is communicated to the swelling in the groin from this abdominal swelling. The left thigh and leg are considerably greater in circumference than the right—one inch and a half in thigh, and one inch in leg. He says that this has been so for seven or eight months. Has

had shivering from time to time for months past. The shivering feel is confined to the lower part of the body from the umbilicus downwards. Pulse 74. Feels in perfect health, and "hearty." Sweats somewhat freely.

May 21.—Occasional brief shiverings last night, principally confined to lower half of body. No sweating; no pain. Empt. opii.

28th.—Attempt to discharge the contents by aspiration, but checked by flakes of fibrinous matter. A quantity of pus let out by incision, and the insertion of a drainage-tube. The cavity washed out with boracic acid solution.

30th.—Last night had severe rigor. The wound red; no discharge at all. There has been no offensiveness. Pulse 104; temperature 103·5° (1 p.m.). Thirst; no sweating or sickness; less pain in back. The iliac region more resonant; tongue clean.

31st.—Pulse 102. Very little sleep from pain around the orifice of abscess. Pus still flaky and inoffensive. Very tender over site of former swelling; redness extending up towards and beyond the anterior superior iliac spine along the fold of groin, with slight tenderness. No rigors; complains of thirst; tongue clean; no sweating; appetite poor; bowels open very freely; abdomen quite tympanitic; no vomiting. Quiniæ sulph. gr. iij., acid. sulph. dil. ℥x., aquæ ad ℥j., t.d.s.; syr. chloral hyd. guttæ xx., h.s.

June 1.—Slept better; appetite improved; discharge through tube very free. Complains of pain along the right groin towards hip in the course of the redness.

3rd.—Improving in condition. Abscess discharging freely; redness all gone from groin; no pain.

5th.—Lessening of quantity of discharge up to yesterday, when flow was very profuse; pus offensive.

10th.—Abdomen right side tympanitic. Has almost lost pain in back: no rigors; sweats at night; pulse 78. Thigh diminished one-half of excess over the opposite.

11th.—Good deal of pain in wound and down the limb, of an aching nature. Discharge profuse; slight shiver in lower extremities.

From this time onwards to September 23, when the patient was discharged at his own request, the flow of pus continued, and he complained of pains in the lower part of the spine and across the loins. There was no tenderness on pressure in these regions towards the end of the time he was in hospital. His general condition on leaving the hospital was considerably improved; pus still escaped, however, from a sinus in the groin.

Case 2.—Cysts in Thigh, supposed to have arisen from "Bicycling" —Removal—Recovery.

Francis P., aged seventeen, a clerk, was admitted into Pepys ward on May 4, 1875.

About eighteen months ago he noticed a tumour in the upper part of the right thigh, about the size of a walnut, freely movable under the skin, and painless. This has grown gradually (a little more rapidly during the past six months) and painlessly to the present size; it does not inconvenience him. The tumour was caused, he thinks, by a "strain" or "pinch" from riding on a bicycle. The "pinching" which occurs on being thrown from the bicycle usually happens on the right side. Had been "bicycling" six months before he noticed the tumour. Always healthy; has not lost any flesh; at present in good condition. A large, hard, inelastic, subglobular tumour affixed to the adductor region of the right thigh; its base is situated over expanded bellies of the adductors magnus and brevis; its dimensions vertically and horizontally are four inches and a half each way. When the muscles are relaxed, the tumour is freely movable on the tissues beneath, and the skin glides freely over its summit. When the adductors are brought vigorously into action, and the thigh is adducted and somewhat flexed on abdomen, the tumour is no longer movable on tissues beneath, but is firmly fixed. With the finger the tendon and upper part of the adductor longus can be traced downwards to the base of the tumour, under which it passes. More interiorly to this, towards the median line, some strands of the deep fasciæ of thigh can be traced down to tumour, over which they are lost. Below, some tense cords descend from tumour along the inside of thigh. The gracilis cannot be felt. There is no elasticity or tense feel to the touch of finger. It has no impulse, and is within the line of femoral vessels. No swelling of limb below, and no enlargement of glands or groin.

May 12.—Tumour removed from thigh. A longitudinal incision was made over the summit, about four inches long, exposing deep fascia, which was divided to an equal extent, exposing the tumour superficially, with longitudinal muscular fibres (the gracilis muscle) expanded and thinned over its surface. These were adherent to capsule of tumour, and were dissected off. The rest of the tumour was detached from part around without difficulty, being attached by some loose connective tissue. Below the tumour, after its removal, was exposed the thick muscular belly of one of the adductor muscles, but as the tumour was very loosely adherent here, it was detached without removing any of the muscular fibre. During the operation an opening was made into the tumour, a gush of clear yellowish serum following, but it did not collapse to any great extent. On examination, anteriorly were remains of attached muscular fibres to capsule, but posteriorly capsule was smooth and shining; it proved, on section, to be a large single cyst from which fluid had escaped. The interior of the walls of the sac was partially lined with a deposit of soft yellow translucent lymph, which could be peeled freely from the interior. The walls were very tough, of a pale cream colour, and of varying thickness; at one spot quite three-quarters of an inch in diameter, the rest varying from half an inch to two or three lines. It appeared to be composed of a fibrillated tissue which had been deposited in layers, and which could be peeled off, leaving a very thin, almost translucent fibrous capsule. Microsopic: Wall formed of finely fibrous tissue.

14th.—A little sickness after ether. Hst. pot. cit. efferv., 4tis horis. Wound dressed with saturated solution of boracic acid. Complains of burning pain in wound; tongue foul; pulse 108.

18th.—Sutures removed. Cat. lini.

20th.—Good deal of redness round wound, and extending upwards towards the buttocks.

20th.—Less redness; wound gaping widely, with gracilis fully exposed at its base; bathed in unhealthy pus, which has a tendency to bag in interstices of the wound. To lie upon the left side for better drainage.

24th.—All redness gone; pulse normal; skin cool; wound, which is pale and weak, dressed with Peruvian balsam.

29th.—Wound superficial and healthy.

June 16.—Wound of an elliptical shape, with base formed by granulation covering the surface of the muscle; granulation healthy, but slow in cicatrisation.

August 12.—Wound gradually closed; discharged.

Case 3.—Pulpy Synovial Disease of Knee-Joint, threatening Dislocation of Tibia backwards—Treated by Immovable Apparatus —Convalescence.

Christiana F., aged twenty-one, a servant, was admitted into Queen's ward on April 27, 1875. With the exception of an attack of pleurisy when sixteen years old, she had always been healthy. Her present attack began gradually, about twelve months ago, with pain in the right knee after exertion. Previous to that had fallen from a chair, but is ignorant if she struck her knee. A few days after the accident the knee began to swell. Swelling subsided in about a fortnight. Since then the joint has suffered exacerbations of pain and swelling at intervals, but she has never recovered perfect use of it. For the past six weeks pain and swelling of knee have been aggravated and continuous. Admitted with swelling of the right knee-joint; outlines of joint lost; patella movable; swelling below and on either side of patella, soft and doughy, and in some spots elastic; less swelling above the patella on thigh. Pain chiefly aching, worse towards evening; occasional shooting and jumping of the limb. Tenderness chiefly below patella, over the most elastic spot.

28th.—℞. Pot. bromid. gr. x., liq. opii sed. ℥xx., ol. camp. ℥j. ft. lot. Back splint.

May 3.—Pain in the knee very little ameliorated, aggravated towards night. Ice-bag.

20th.—Past few days pain has been less, especially since the application of ice; less jumping and starting of limb during night. Joint: There is somewhat more effusion into synovial cavity, and the swelling is more tense and elastic. On inside there is marked fluctuation. Still tenderness on pressure over inside of joint. Mist. quiniæ c. ferro ℥j., t.d.s.

21st.—Eight leeches to the knee.

23rd.—Less swelling and effusion into joint.

June 3.—Eight leeches. More tense synovial effusion

14th.—Less swelling since leeching, but still, upon the inner side and below the patella, there is a good deal of tense fluctuating swelling. Complains of jarring of the limb on the slightest movement or shake of the ward. Starting at nigh

not very frequent. Tenderness, chiefly over bony points below the patella.

August 19.—Condition of knee: Enlargement of joint considerably increased, and more general than before; integuments white and shining from superficial œdema, which extends down the upper half of leg. There is an evident tendency for the tibia to fall backwards, and line of the femur to deviate angularly from that of tibia. Removed from splint; found that the lateral movement of the knee is present in abnormal degree. Put up in plaster of Paris, with spica round hip, and windows cut into it around knee.

26th.—Limb has been more comfortable since application of plaster. Iodine to knee.

October 6.—Limb still in plaster, and counter-irritation by iodine kept up. Has now no pain in joint, and condition is improved.

December 31.—Since last note, especially during past month, has gone on to convalescence. The limb has been kept at rest in plaster, with counter-irritation to the knee by iodine, so that now there is no pain in the knee. The swelling is greatly reduced, and general health much improved.

January 22, 1876.—Is sufficiently recovered to be discharged. Disease appears to be cured, and for past fortnight has been up in the ward.

Discharged, with splint fitted to knee.

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Medical Times and Gazette.

SATURDAY, AUGUST 12, 1876.

THE ADDRESS IN SURGERY.

"*C'est l'occasion qui fait le voleur*" is an old French proverb, which we may, perhaps, be allowed to render thus: Opportunity makes the orator. There can be no doubt that the annual meeting of the British Medical Association, even if it do no other good, affords an unusual opportunity to the provincial magnates of the profession of distinguishing themselves, not only as hosts, but also as orators, and we are bound to admit that they make as good use of the one as of the other opportunity.

Mr. Favell's Address in Surgery, which we elsewhere give in full, although it contains no new points either in the diagnosis or treatment of surgical disease, nor clears up any the doubts with which surgical pathology is everywhere beset, will still be found exceedingly interesting, and full of valuable retrospective criticism, such as cannot fail, we think, to impress on those who read it the necessity for charitable feeling towards fellow-practitioners who happen to differ from ourselves in their treatment, as well as in their views concerning the production of disease. He begins his Address by reviewing the different methods of treating fractures of the skull taught by Pott, Abernethy, and Lawrence. Three "master minds in surgery," no doubt! and yet they differed among themselves as to the proper treatment of such an injury as this, which is very common, the effects of which are exceedingly obvious, and the causes well known. Pott advocated the use of the trephine in almost all cases of fracture of the skull, whether simple or compound. He says, "Although I have now and then seen some of them do well without the use of the trephine, yet the much greater number whom I have seen perish with collections of matter within the cranium, who have not been perforated, and for whom there is no other relief in art or nature, has, I must acknowledge, rendered me so very cautious and diffident that, although I will not say that I would always and invariably perform the operation in every case of simple fracture, yet the case must be peculiarly circumstanced, the prospect much fairer than it most frequently is, and my prognosis delivered in the most guarded, apprehensive manner when I omit it." Abernethy, on the contrary, wrote—"From all I have learned from books, as well as from the observations I have made in practice, and from reasoning upon the subject, I am disposed to join in opinion with those surgeons who are against trephining in *slight* depressions of the skull, or small extravasations on the dura mater"; and Lawrence still more strongly opposed this plan. He is reported to have said, when looking at a case which had recently been trephined by one of his colleagues, "that his experience of forty years in the wards (of St. Bartholomew's Hospital) was that such injuries did as well without operation as with it." Opinions differing as widely as do the above are yet the deliberate utterances of men whose names stand pre-eminent in the profession, and who, thanks to this position, had extensive opportunities of forming opinions from actual practice; for in no class of cases would theory seem to be more in favour of the least prudent course than in some which relate to injuries to the head. *A priori*, we should argue that the obvious line of conduct in a case of depressed fracture, whether simple or compound, is, if possible, to remedy the depression; but modern experience would step in and tell us that in a considerable number of cases interference is the most fatal course we can adopt. How is it, then, that an acute observer like Pott could advocate the trephine as freely as he did, with results which allow his critics to say, "And yet I find, in spite of treatment so heroic, not a few successful cases recorded in his work on Surgery"? Shall we fall back on the stereotyped phrases of the "change in type" of disease, or shall we endeavour seriously to consider our position with regard to this point, and try to learn something from it? Sir James Paget—speaking of quite another subject however—says, "In my note-book of cases I found some things which make me still fear, lest in our progress we should have let fall some things which we had better have held, and are now regarding some things too lightly that then seemed very grave, and, perhaps, are so still. For among the records which I found, are records of methods of practice now almost completely disused, and yet in which I feel confident there was much right. I find, for example, a large and almost uniform practice of bleeding for all acute diseases, for many chronic, for most of those which were unknown and uncertain, and for a large proportion of those in which there seemed to be nothing the matter. Trying to learn something from these things, I come to one or two conclusions, which I am sure the younger members of the profession need to have much impressed upon them. One of

them is, that *at the present day we undoubtedly overvalue the blood, and estimate too cautiously the loss of it.*"

We are not, of course, advocating that the trephine should be used as it was by Pott, but we venture to suggest, before condemning his practice, that the results of our own should be cautiously and carefully watched, lest we fall into the error to which Sir James refers in the above remarks. It seems to us that there are cases even of *simple* depression, where, although trephining would convert them into compound fractures, the operation *may* be called for; and further, we are inclined to believe that an unqualified condemnation of Pott's practice of trephining in almost all cases may cause—and, indeed, often has done—the surgeon to hesitate at a time when delays are not only dangerous but fatal. Our remarks have taken this direction because in contrasting the practice of Pott and Erichsen, or Prescott Hewett, Mr. Favell visibly, and not unnaturally perhaps, favours modern views, and it is in the interest of modern views and of surgical progress generally that we would caution against such a practice. We venture to feel that the indulgence which is claimed for Pott's practice is quite uncalled for, and believe that it is in the interests of many who in times to come are destined to be the subjects of injuries to the head, that we should point out that the only safe road to progress in this direction lies in accurate and painstaking clinical observation. The less we have to do with theories, and conclusions which have been arrived at under circumstances which we are quite unable to appreciate, concerning individual cases, about the peculiarities and idiosyncrasies of which we know nothing, the better for ourselves, our patients, and our progress. We agree most thoroughly with Mr. Favell when he says, "Perhaps the most obvious cause of these diverse opinions lies in the fact that in cases of depressed fracture we can hardly lay down a hard and fast line of treatment—much must be left to the careful and anxious consideration of the surgeon unhappily meeting with such cases."

It is not so very long ago that we noticed a German *brochure* on our library table having some such a title as this —"Can Aphasia ever justify Trephining?"—by an author whose name we at present forget. We were struck by the subject at the time, and our mind has since very frequently reverted to it. Dr. Brown-Séquard's recent lectures have, in spite of ourselves, rather upset the tenor of our hopes and aspirations—for every surgeon whose opportunities bring him in contact with head cases must fervently hope that physiologists will yet settle this much vexed question of the localisation of cerebral function; this would be the first step towards answering the question propounded in the little *brochure* just alluded to, a complete answer to which may one of these days yet be given, and one too which will place Pott's practice of trephining in a new and more favourable light.

We have lingered somewhat over this very interesting part of the Address, but there are other matters at which we would glance, of equal moment and of scarcely less interest. The case of injury to the hip related is exceedingly instructive and suggestive; but we must venture to criticise the explanation given. If it had been a fracture of the rim of the acetabulum, surely during the hour's examination and manipulation under chloroform the femur would have slipped out of its place; at any rate, it would be just as likely to have become dislocated by the manipulation under chloroform as by the weight of the body without chloroform. Is it not more probable, if the dislocation were not present from the first, that a spontaneous displacement may have occurred as the result of some acute mischief within the joint from the injury received in the fall?—a displacement which, no doubt, would become more pronounced so soon as the patient began to get about again during convalescence.

Of still greater interest are the cases of reunion of nerves after accidental division. Mr. Favell narrates the histories of four cases where the divided nerve-trunks were joined together and retained by sutures of carbolised catgut, in each of which the result was highly favourable. We quite agree with the author in his remarks—"As a beginning, then, I think these four cases are both interesting and encouraging. If in the case of a limb left paralysed by division of an important nerve we can afterwards cut down upon, resect, and reunite such nerve, so as to restore power and sensibility to the parts supplied by it, at no great risk, much has been gained; and in cases of extensive wound or laceration, involving important nerve-trunks, these records raise the question whether it is not better not to be simply content with ligaturing bleeding vessels, and leave the nerve-trunk to the chance of assuming its original position, by carefully and accurately closing the wound, but to insure the co-aptation of its divided ends by the careful introduction of catgut suture." In many cases, thanks to Esmarch's bandage, such an operation would be exceedingly simple; and we shall be much deceived in our estimate of surgical enterprise if this operation be not shortly as naturalised as the use of pins in harelip, or sutures in plastic operations and on other occasions where co-aptation is the great desideratum.

We shall here close our remarks on this excellent Address, satisfied if our comments serve to direct a closer attention to, and a more careful consideration of, some of the many points of interest with which it abounds.

THE ADDRESS IN PUBLIC MEDICINE.

In directing attention to the difficulties and obstacles attendant on the progress of Public Medicine, Dr. Alfred Carpenter, in his Address to the members of the British Medical Association, reminded us that "it is scarcely more than forty years since the first national platform was established upon which satisfactory observations could be made, and successful operations carried on, in the cause of preventive medicine." The statistics prepared by Dr. William Farr had been the true pioneers of sanitary work. He acknowledged to the full the excellence and greatness of the work done by the older sanitarians. But for their labours, and the work of the enlightened politicians who framed and passed the Factory Act of 1833, and the Registration Acts of 1834, "Farr's records would not now be matters of history, and we might still be groping in the dark as to the natural laws which regulate the health of the people, and be theorising as to the causation of disease, instead of calling upon Parliament to legislate for its prevention." But gradually "the facts brought to light by Farr's tables," the knowledge gained of excessive mortality obtaining "in defined districts, among defined classes, and at particular epochs of their lives," and the invaluable papers "prepared by, or at the suggestion of, one who deserves as much of his country as any living man—viz., John Simon," led to numerous legislative measures, of varying value and efficiency, but culminating in the passing of a measure making the appointment of medical officers of health compulsory upon all local sanitary authorities. The stage of compulsory measures was—wisely, as Dr. Carpenter thinks—preceded by a permissive stage; for "the antagonism between the *suprema lex* and the liberty of the subject, the opposition between the *salus populi* and the rights of property, continued to throw serious impediments in the way of sanitary progress, because the truths of sanitary science were few, while the *ipse dixits* of its professors, both medical and engineering, were numerous and contradictory." Sanitary engineers had to be educated in natural science, and medical officers of health in the first principles of sanitary engineering. We have now, however, a sanitary organisation established by law for the repression of disease, which, however, is still imperfect in this most important respect—that "the only information which a

medical officer of health receives officially at present, is, that disease of an infectious character has been fatal in a given place some time previously," and when he receives this information the *materies morbi* of the case has already probably been spread far and wide. But, says Dr. Carpenter, the registration of the preventive forms of disease is a natural sequence to the registration of death; and this registration will be effected in due course. "It is a coming wave of legislation, waiting for the time when the natural history of the diseases it is intended to encounter is more fully understood by the public, and more perfect knowledge obtained by ourselves as to the way in which preventive measures are to be used." We must be agreed, first, among ourselves "as to the class of disease which should be registered, and agreed also as to the class of persons who should give the information to the registrar." And on this point we are glad to find that Dr. Carpenter enforces the opinion we have always held. "A medical man," he says, "or, indeed, any other person, is out of place in undertaking a duty which may follow upon, but which is not a part of, the work he is asked to perform by his employer, especially if that work appears to be to the detriment of the latter. It would be morally wrong for a medical adviser to conceal the nature of a given case, if of an infectious character, from the knowledge of his employer, or of the responsible head of the establishment in which his employer resides; but the medical man having communicated the knowledge to him, the latter should be the party to give the information to the State, and be responsible to the local authority if he withholds it." Should medical men be called upon to forward the necessary information to the local authority, "there would be an immediate premium on the employment of unregistered persons, and an effort made to suppress discovery; and unless medical officers of health are to be entirely restricted from private professional work, it would be quite impossible for such an enactment to work satisfactorily to the State, whilst, under any conditions, it would be unjust to the private practitioner."

Dr. Carpenter then proceeds to speak of some of the obstacles that now impede the work of the sanitarian. There is an ebb-tide in sanitary work. The ruling powers have taken up a notion that they are not going to be "doctor-ridden." They have done a grand piece of satisfactory work—they have made compulsory the appointment of medical officers of health, and some local authorities have even gone so far as to appoint really efficient and capable officers. These medical officers go zealously to work, and present elaborate reports respecting the sanitary defects in their respective districts. But there matters often stop. The reports lie on the table, and nothing, or very little, is done. For this state of things several reasons may be given. First, the tide is at ebb, and probably will be till some new wave of epidemic disease rouses the country into renewed action; then, the expected results have not always followed the carrying out of costly sanitary works, not perhaps from defects in sanitary science so much as on account of faults in the construction of works; and, further, the public are, in consequence, beginning to criticise our actions, and to inquire for themselves. The schoolmaster is abroad; the first principles of physics, the laws of nature, and even physiology, are being much more widely and generally taught, and people are beginning to ask us to explain why we recommend such and such lines of action, and to demand reasons for the faith that is in us; and we must be prepared to support our recommendations by arguments based on sound science. "We require a clear insight into the conditions which give rise to disease, to reduce the principles of preventive medicine to the plainest lines, and to bring it into formulæ which may be at once assented to, perspicuity being the base of all true knowledge in every branch of study."

We then have set forth what Dr. Carpenter holds to be some of the main and fundamental principles of sanitary work. And the first of these is *motion*. "From the moment of excretion until it is utilised, motion of the excreta is the first sanitary law. If the excreta of carnivorous animals are kept moving, those combinations which produce epidemic disease are not forthcoming." And for this purpose sewers are required in crowded localities; they are the necessary evils that follow upon the aggregation of individuals into crowded communities. But they must be so constructed as not to allow of either stagnation of sewage or stagnation of air. "They must contain a current of sewage constantly passing down, with a corresponding current of air always passing one way or the other, if they are to be kept free from the power of manufacturing mischief. Ventilation must be free and absolute, ingress being allowed as well as egress, in a way which cannot be counteracted. And for every house in connexion with a public sewer there should be at least two free openings provided in the house-drain—an inlet as well as an outlet." This arrangement being fully carried out, the natural forces will most effectually ventilate the sewers. "The diffusion of gases, the tension of vapour, the differences of temperature in the sewer as compared with the outer air, the constant movement of external air, together with the movement of sewage in the sewer, will suffice to produce a free ventilation at all times. If this be done, no contagium-particle will have a chance of reproduction in the contents of sewers; and no sewer-gas will be discharged which will convey elements of mischief." Sewers must flush clean under all circumstances; and no sewer ought to stink, for "fresh sewage does not smell." The sewage having been successfully carried away from the points of production, it ought to be utilised without delay, by irrigation or in some other way; and Dr. Carpenter naturally, and very effectively, illustrates this part of his teaching by relating what has been done by irrigation on the Croydon Sewage Farm at Beddington. The farm of 460 acres utilises the sewage of 50,000 persons. It has been in action sixteen years; it is close to a dense population, and it is immediately surrounded by residential property of the most valuable kind. The results may be shortly stated thus: the death-rate, which averaged 20 in the 1000 before the establishment of the farm, has not risen above 17 since it has been in operation; and the land has increased immensely in value. "The landowners have become rich men, the wages paid have more than trebled, the produce raised has increased by five times; there has been no depreciation of value of the neighbouring property, no production of infectious disease or miasmatic influences, but there has been a complete destruction of the contagium-particles which a large population necessarily produces, whilst the effluent water discharged into the river after it has passed over the land has seldom been less pure than that supplied to many places as potable water."

Two other canon laws must be absolutely observed in dealing with sewage: "No sewer should ever have any direct communication between it and the interior of a house. Such communications should always be by indirect channels only"; and "no water-pipe conveying potable water for use into any house should ever come into direct contact with a sewer or house-drain in any part of its course, especially at the orifice of discharge." This is constantly disregarded, and "sewer air from imperfectly constructed sewers is laid on to our bedrooms, drossing-rooms, kitchen departments, and lavatories as regularly as if it were a necessary of life, whilst the water-pipe is in a thousand instances so placed as to render it perfectly impossible to be used without the contingency of air finding its way to the water from the impurest of impure sources."

The latter part of Dr. Carpenter's valuable Address we must be content to notice very briefly. He puts forth an

hypothesis which will explain, he believes, much that is difficult to understand in the production, spread, and fatality of zymotic diseases. Every case of zymotic or epidemic disease is supposed to be represented by, or due to, three factors—x, y, z; partly centric elements, those which are proper to the body, and partly excentric elements, or those which act upon it from without. The centric elements are represented by x, which may consist only of u, the used-up material, or formed material of Dr. Beale, which is always in the act of formation, and ought, in a state of perfect health, to be always perfectly removed; but it may not, from some fault in excretion, be duly removed, and then x = u and e, or the excess of used-up matter; and x may differ in both quality and quantity; it will be modified by personal character, by actions, by non-actions, and even by attainments, but especially by attention to, or neglect of, sanitary and moral laws. And still more it will vary according to the circumstances of the community among whom the person resides, the moral and the sanitary state, or the habitual neglect of sanitary law in which that community may indulge. This forms the soil in which a contagium-particle of disease can live, the pabulum on which it can thrive and multiply; z is the germ or living organism, the particulate contagium of any kind of zymotic disease, which has to be introduced from without; and y represents the meteorological conditions, such as temperature, moisture, and certain atmospheric states which are required for the rapid increase of epidemics. "The fatality of the disease will depend upon the quantity of e in the factor x. The rapidity of growth will depend upon certain meteorological states represented by y; but the character of the disease itself will depend upon z. We can diminish x to a minimum by personal, municipal, and sanitary arrangements; we cannot alter y; but we can impede the introduction of z, and prevent epidemic disease, unless it can be shown that zymotic diseases may arise *suâ sponte*." It follows that zymotic disease, generally speaking, has its power for evil more in the state of the recipient than in the quality of z. Obedience to sanitary law in private life, together with the performance of public duty by local authorities, will give comparative immunity from epidemic and infectious diseases, and render us in a great measure independent of the trammels of imperfect quarantine. Let us then persevere, in spite of opposition or indifference, in the search for perfect knowledge, and the prosecution of perfect work. "Motion as opposed to stagnation, simplicity as opposed to complexity, should be our cardinal points; and if to this we add the peremptory utilisation of animal *débris*, the sting of epidemic and contagious disease will be taken away, and, in the words of the Psalmist, we need not 'be afraid of the pestilence which walketh in darkness, nor of the destruction which wasteth at noon-day.'"

We regret that we cannot, now at least, more adequately notice this latter half of Dr. Carpenter's very able and suggestive Address, but we commend the whole of it to the careful and considerate study of our readers. The hypothesis propounded is at any rate very plausible and interesting, though objections to it might no doubt easily be raised.

THE CRUELTY TO ANIMALS BILL.

On the afternoon of Wednesday, the 9th, the Cruelty to Animals Bill passed its second reading in the House of Commons without a division. This was due in part, no doubt, to the appeal made by the Prime Minister to the House, as the fatal hour of six approached, to allow a decision to be come to at that stage of the Bill, as "members who wished to speak on it would have an opportunity of doing so on the third reading." But the result was undoubtedly chiefly gained by the very conciliatory speech of Mr. Cross in moving the second reading, and the amendments which he stated Government was prepared to introduce. It was no doubt very gracious of Mr. Cross to speak in terms of such high praise as he did of the medical profession, to observe that in this age of progress "probably in no intellectual pursuit had greater progress been made than in medical science and scientific inquiry," to declare that "there was no intention whatever to cast a slur on the medical profession, to which all are so deeply indebted," and so on; but we would very willingly have given up all such verbal compliments for the practical one of dropping the Bill. The amendments he proposed are, however, a considerable gain. First, in the case of eminent physiologists, in granting them licences the Secretary of State need not require their experiments to be performed in a registered place, but they may be allowed to make them in their own houses. Then special licences may be granted for experiments on dogs and cats; prosecutions against licensed persons are only to be instituted with the sanction of the Secretary of State; and the provisions of the Bill are not to apply to invertebrate and cold-blooded animals.

Dr. Ward, who had on the paper a motion for the rejection of the Bill, withdrew his opposition to the second reading after Mr. Cross's speech. Sir John Lubbock, after a very able speech against the Bill as it came down from the House of Lords, also supported the second reading, but hoped to see some further improvements introduced in Committee. Mr. Lowe made a powerful and altogether unanswerable speech against the measure, and expressed the hope that the House "would not allow it to pass, at all events in its present shape." And Dr. Lyon Playfair hoped that Government would "feel bound to introduce a measure dealing not with this insignificant and microscopic portion of this subject, but with the world of cruelty that was going on around us." He altogether denied that there had been cruelty on the part of distinguished physiologists, but thought, nevertheless, that it would be well to have legislation on the subject, inasmuch as it would serve to set the public mind at rest, and afford a guarantee that no unnecessary cruelty would be indulged in; and he observed that "physiologists admitted the moral obligation resting on them to cause as little suffering as possible, and did not object to that obligation being made statutory."

It may be said, perhaps, that it becomes a question of expediency whether an amended Bill should be allowed to pass; but the Bill has yet to get through Committee and through its third reading, and then the Lords will have to consider the amendments of the Commons. A very little determined opposition would yet stop the passing of the measure.

THE WEEK.

TOPICS OF THE DAY.

The recent discussion on the subject of discontinuing the use of alcoholic stimulants in workhouses appears to have roused the attention of guardians of the poor all over the country. Last week the Board of Guardians at Bridgwater had a long discussion with reference to the use of alcoholic stimulants in their workhouse. By a vote of eleven against eight the following resolution was carried:—"That the large amount of alcoholic stimulants supplied for the use of the sick inmates in this union is unwise; that it is unjust to the ratepayers; and that, subject to the approval of the Local Government Board, such stimulants shall be discontinued for the future." If the use of stimulants in Bridgwater Workhouse has been excessive, the guardians would do well to look into the matter, but in endeavouring to be "just to the ratepayers" the guardians must not forget justice also to the poor under their charge; and whether the total abolition of the use of alcoholic stimulants for the aged and infirm will be found to answer remains yet to be proved.

At the meeting of the Liverpool Town Council held on the 2nd inst. it was announced that the Local Government Board had sanctioned the appointment of Dr. Taylor as Deputy Medical Officer of Health for the Borough and Port.

The Secretary of the League in Aid of the Christians of Turkey reports that a medical representative of the League has left London for the seat of the war, taking with him a supply of medicines, lint, bandages, splints, etc. Miss Pearson and Miss McLaughlin have also left for Belgrade. Another committee which has been formed in this country has despatched Dr. Laseron, with two other well-qualified surgeons, to the seat of war. Dr. Laseron is to report the precise wants of the hospitals before anything is sent out from here. Meanwhile, an earnest appeal has been telegraphed to the *Times* from Belgrade for the means of providing the wounded in Servian hospitals with surgeons, attendants, instruments, chloroform, quinine, etc. The sufferings of the wounded are described as dreadful, and the mortality is reported to be great. Mr. Farley, of Great Winchester-street, is announced as the secretary of a fund to be raised for this purpose, and it is hoped that a few hundred pounds will be at once collected to send out what is needed. We also understand that Musurus Pasha, the Turkish Ambassador in this country, is authorised by his Government to engage the services of twenty or thirty English surgeons for service with the Turkish armies in the field.

Lord Dartmouth has presented to the town of West Bromwich fifty acres of land at Cooper's Hill for a public park. The gift was announced at a meeting of the West Bromwich Improvement Commissioners held last week, and a vote of thanks to his lordship was passed.

Our most recently acquired territory, the Fiji Islands, seems likely to earn an unenviable notoriety for unhealthiness. The ravages committed among the natives by the late epidemic of measles will not have been forgotten; and we now learn, from letters which have just been received, that the health of the place is exceedingly bad, numerous deaths having occurred among the white population. The men of the Royal Engineers sent out there have suffered very much, and four of their number have died; typhoid fever is said to have been the prevalent disease, and, with the sultry weather experienced, the sick-list when the mail left was very large.

The official report of Mr. W. H. Power to the Local Government Board on the outbreak of enteric fever at Eagley, states that the evidence points conclusively to the contamination of milk by infected water used for dairy purposes. The case, he says, is simply one more, and a serious one, added to those already on record which point to the urgent necessity for regulation and adequate supervision over the sanitary conditions of dairy farms.

An inquest was held last week before Dr. Hardwicke, at University College Hospital, to inquire into the death of Jane Park, aged forty-one. The husband of the deceased said that he, with his wife and a female friend, had a little refreshment at an hotel in High-street, Camden Town, on the 29th ult. They subsequently parted, and deceased and her friend attempted to cross High-street; in doing so they were knocked down by a brewer's dray, and his wife was so severely injured as to necessitate her removal to the Hospital. There she was seen by the House-Surgeon in the casualty waiting-room, in which place she was kept until her death without being properly attended to. His wife was quite sober; all she had had was a third of a half-quartern of whisky in a little water. Mr. J. A. Kemp, the resident House-Surgeon, deposed to attending the case on its arrival at the Hospital. Deceased was suffering from collapse, and a wound on the scalp; he smelt alcohol, and kept her in the waiting-room. He returned to her in about half an hour, and found her pulse better. He then went to dinner, and at seven o'clock (an hour afterwards) went to see her again, and found her in the dispensary waiting-room. She was very bad, and an ounce of brandy was given her, but she died. A post-mortem examination showed that the cause of death was extreme collapse, the result of a ruptured spleen, kidney, and liver. Dr. Hardwicke inquired if this case was treated as one of drunkenness, and Mr. Kemp is reported to have replied that it was. The coroner said it was a matter of grave importance that the deceased was not admitted to one of the wards on admission, instead of being kept in a waiting-room without proper attention. The jury concurred in the remarks of the coroner, and returned a verdict of "accidental death." Since the inquest Mr. Kemp has addressed a letter to the *Times*, giving his reasons for following out the course he took in the case; and stating that during his absence the woman had, contrary to his express orders, been moved by her husband from one room to another, where she had fallen down, and was in a state of intense shock. He also denies that he ever said or thought that the woman was drunk. It is very unfortunate that Mr. Kemp did not more fully explain, before the coroner, why he did not have the deceased at once placed in bed; and that his statements altogether were not clearer. Cases of this description give a handle for the ridiculous prejudices which, amongst the lowest classes, are entertained against hospitals.

The Select Committee of the House of Lords on Intemperance sat for the second time on the 3rd inst., the Archbishop of Canterbury in the chair. After half an hour's consultation they adjourned. It was understood that they would not meet again this session. It is worthy of notice, in connexion with this subject, that on Sunday last Cardinal Manning addressed the members of various temperance organisations, to the number of about 2000, a large proportion of whom were Irish. The Cardinal was received with loud cheering, and delivered an eloquent address, in which he dwelt upon the home blessings and comforts the wonderful spread of temperance was bringing to the people of the metropolis and of the country. He exhorted all present, men and women—but especially women,—to shun the public-houses, and to set an example which would tend to eradicate the drinking habits which were the social curse of the country. At the close of the meeting some hundreds took the total abstinence pledge.

Dr. Cody, of the Bombay Medical Department, has been appointed Durbar Physician and Chief Medical Officer in the Baroda State. Dr. George Smith, Deputy Surgeon-General, Mysore Division, has been recommended by the Madras Government to the Secretary of State for India for the appointment of Surgeon-General, Indian Medical Department. Cholera still prevails at Murree; fifteen European cases are reported, of which nine proved fatal.

MR. HUTTON AND THE "SATURDAY REVIEW" ON VIVISECTION.

A LETTER has been recently addressed by Mr. Hutton, a member of the Senate of the University of London, to Lord Granville, the Chancellor of the University. The purport of this letter is to explain the reasons of his withdrawal from the Senate. They are twofold: firstly, he objects to the decision of the Senate to memorialise the Government against the Vivisection Bill; and secondly, he objects to the course taken by the University as the body entrusted with a fund bequeathed by Mr. Brown for an animal hospital, by which he considers the University has identified itself "with the most advanced advocates of vivisection."

Mr. Hutton's letter proves him to be a man who at any rate has the courage of his opinions, but of this none who know Mr. Hutton require to be reminded; perhaps also it shows a mind considerably biased by his own particular notions when forming an opinion of the conduct and motives

of others. The letter might have been allowed to pass unnoticed, however, had it not been commented upon, and, in fact, endorsed, by the *Saturday Review*.

The article in the *Saturday Review* considers Mr. Hutton's letter "affords an instructive account of the attitude it" (the Senate of the University) "has assumed, under the influence of its medical members," towards the subject of vivisection. The writer agrees with Mr. Hutton, that the Senate has "thrown its whole influence, publicly, into the wrong scale," and quietly sneers at the kind of arguments to which the Senate lent its ear when it resolved to oppose the Government measure.

It will be remembered that what the Senate really did was to pass a resolution, by a majority of fourteen to four (Mr. Hutton being one of the four), to memorialise the Government for further modifications of the Cruelty to Animals Bill as amended in Committee of the House of Lords. It was strongly felt that the Bill still retained too much of the penal character, and that greater liberty was required with regard both to the places for the performance of experiments, and to the kinds of animals employed. As to how far the Senate acted under "the influence of its medical members" may be imagined from the names of those who supported the resolution. Lord Cardwell, Mr. Fowler, Mr. Osler, and Mr. Hutton did not form a very strong minority, and it is hardly likely that the eight non-medical senators who helped to form the majority acted simply under the influence of the six medical members who voted. Mr. Lowe, whose opposition to the Bill as it stood was of the strongest, is hardly, we should have thought, the kind of man to be led by the nose by an outside influence, medical, political, or otherwise. The support given by the Senate to the resolution they passed, shows clearly that there is an enlightened opinion on the subject of vivisection outside the pale of the profession, and that there are minds dispassionate enough to weigh the facts and arguments, and then to oppose the Bill on its own account.

Both Mr. Hutton and the writer of the article in the *Saturday Review* are, of course, entitled to their own opinions as to English, as well as foreign, physiologists. They may, if they please, conclude that foreign physiologists have come to think "nothing of the suffering inflicted in comparison with the results, . . . and that English physiologists, though not so reckless, recognise a very different standard of morality in these matters from that by which they abide in ordinary life." Or they may accuse great surgeons of "very great recklessness in inflicting anguish." But it was a little too bad of a Linacre Professor of Physiology to give the *Saturday Review* writer—after referring to certain experiments tried or suggested—the chance of saying, "Now, all this goes far to confirm the correctness of a statement that 'a man who has the reputation of a splendid operator is always a just object of suspicion,' and still more perhaps those whose ambition it is to become splendid operators."

Really, a teacher of physiology, even if he is not a Fellow of the College of Surgeons, and has never practised surgery, might be expected to know the groundlessness of any such suspicion of operative surgeons on the score of vivisectional experiments. He might be expected to know that men ambitious of becoming splendid operators do not resort to vivisections with that aim. They are accustomed to practise their art upon the dead subject, and to have to pay, too, very highly for their subjects. What young surgeon would indulge the hope of becoming skilful in amputating a breast, in excising a hip-joint, or in performing lithotomy or colotomy, by practising on a cat or a dog? And, further, it may be asked, How many vivisectional experiments has any one "splendid operator" seen? Have any three good operators, chosen at random, seen three such experiments? Have they done one such between them?

But the folly and irrelevancy of associating or comparing surgical operations and brilliant operators with vivisectional experiments are too glaring to require illustration in a medical paper.

IMPROVED WATER-SUPPLY FOR THE NORTH-WESTERN SUBURBAN DISTRICT.

On the 3rd inst. we were present at the opening of the Colne Valley Waterworks at Bushey, which have recently been constructed by a limited liability company at a cost of about £75,000. From a sanitary point of view, these works are of great importance to an extensive district on the north-western boundary of the metropolis, including Higher Heudon, Kingsbury, Harrow Weald, Pinner, Mill-hill, Highwood, Edgware, Stanmore, Bushey, and Elstree. Hitherto a large portion of this district has been dependent for its water-supply for drinking purposes on that derived from wells sunk in the chalk. The water thus obtained is very hard—indeed, it contains so much lime in solution as to render it quite unfit for drinking purposes. The water of the Colne Valley Waterworks Company is derived from a well in the chalk 235 feet deep, from whence it is pumped into reservoirs by means of two 60-horse power engines capable of delivering 1,200,000 gallons per day. When the engines are at rest, the water rises in the well to within eight feet of the floor of the engine-house; but when the pumps are in action, drawing 800,000 gallons per twenty-four hours, the water sinks to a depth of thirty-six feet in the well, or fifty-nine feet from the surface. As pumped from the well, the water has 18·5° of hardness, but the object of the Company being to supply the district with water which shall be as nearly as possible absolutely pure, Dr. Clark's process for softening water has been adopted, by which the hardness is reduced to 3°, which is only about one-fourth of that of Thames water. This is the first time that Dr. Clark's process has been adopted on a large scale near London, although it has been in successful operation at Caterham, Canterbury, and other provincial towns. The inhabitants of the district above named are deeply indebted to Viscount Malden, the chairman of the Company, and those gentlemen who are associated with him in the undertaking. Through their public spirit thousands of persons who have hitherto been compelled to use water which is calculated to produce calculus and some of the worst forms of dyspepsia in those who are in the habit of drinking freely of it, have now at their doors water which is equal in purity to that supplied to any town in England.

A NEW PERIL IN OUR STREETS.

The perils of the streets are occasionally intensified in a manner which it is not good for a nervous person to dwell upon. A case in point was afforded at the last week's meeting of the Metropolitan Board of Works. A report was brought up from the Works Committee, stating that a few days previously Mrs. Bryant, the wife of the occupier of No. 80, Stockwell-park-road, conveyed a powerful explosive of the nitro-compound class from Lime-street to that address. She travelled in an omnibus with some litho-fracteur, and reached her residence at 2 o'clock p.m. The litho-fracteur was in two parcels of 10 lbs. each, one of which was placed in a passage inside the house, and the other on the ground at the rear. This latter immediately exploded, but although the force of the explosion was felt for some distance, fortunately very little damage was done. Five persons were on the ground at the time, and only one little girl was hurt. The windows in the neighbourhood of the house were shattered, and much alarm was created in the district, especially when it was known that more explosives were on the premises. It was found that the unexploded parcel was made into charges for blasting purposes. The whole of the litho-fracteur was conveyed to the Government magazine for seized explosives on Plumstead Common, and destroyed. The premises were searched by the police, but no more explosive substances were found. The immediate cause of the

explosion was not clear, but the litho-fracteur was probably in a highly sensitive state from the heat of the weather. The Committee proposed that proceedings should be taken against Mrs. Bryant for conveying the litho-fracteur in a public carriage. This decision seems to us the only one that could have been arrived at. If the "highly sensitive" state of the litho-fracteur had caused it to explode in the omnibus, there would probably have been such a catastrophe to record as it has, fortunately, never yet been necessary to chronicle, in the streets of our metropolis.

THE POLLUTION OF RIVERS.

The pressure brought to bear upon the Government on the subject of the pollution of our rivers has not been without result, and we have the satisfaction of recording that the Bill for the Prevention of the Pollution of Rivers has passed the House of Commons, and been read for the second time without division in the House of Lords. There has been a compromise to some extent between the Government and the Opposition, but this is only what might have been expected when a measure of large sanitary reform is opposed by a powerful interest like that of the great manufacturers. In this instance, however, the compromise may not turn out very injurious to the public, if the provisions of the Bill are carefully carried out. Full provision is made against the deposit of solid matter and sewage in the river-courses; and while it is conceded that a certificate given by the proper sanitary officer to a manufacturer shall save him from the ruinous process of injunction for a period of three years, yet he remains liable to damages for any injury he may do, and special means are secured if he should transgress the spirit of his certificate. The Bill promises to be useful, though certainly not all that could be desired; and there is no doubt that the attitude taken by the Government in pressing it on will have a good effect upon those whom the measure is intended to reach, as many who were waiting, in the hopes of the Bill being abandoned for the present, will now think about altering the nuisances of which they have so long been guilty, so as to avoid, if possible, coming within its scope.

INDIAN MEDICAL DEPARTMENT.

The following is a list of the Indian medical candidates who were successful at both the London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley, August, 1876, viz.:—

	Marks.		Marks.
1. Tomes, A.(a)	5816	13. Henderson, W.G.H.	4426
2. Meredith, E. B.	5220	14. Doyle, B.	4412
3. Mawson, W. A.	4902	15. Cobb, R.	4266
4. Maitland, J.	4856	16. Stephens, A. E. R.	4259
5. MacGregor, J.	4837	17. Cadge, W. H.	4220
6. Peever, G. H.	4818	18. Hunter, J.	4085
7. Dantra, S. H.	4746	19. Swaine, C. L.	4067
8. Macdonald, D. J.	4650	20. Smith, M. H.	3966
9. Stewart, A. K.	4625	21. Dalal, K. A.	3920
10. Walker, G. L.	4502	22. Boyd, H. W. B.	3886
11. Hamilton, H.	4462	23. Farrell, P. J.	3662
12. Halpin, J. N.	4440		

NAVAL MEDICAL DEPARTMENT.

The following is a list of the Naval medical candidates who were successful at both the London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley, August, 1876, viz.:—

	Marks.		Marks.
1. Thomas, R. Th.	5170	7. Sibbald, T. M.	3120
2. Cree, W. E.	4105	8. Thompson, Wm.	3042
3. Crocker, H. L.	4005	9. Yeo, R. F.	2775
4. Popham, T. D.	3945	10. Armstrong, J. B.	2548
5. Colthurst, L. T.	3703	11. Smith, Geo.	2536
6. Kellard, J. T. W. S.	3150	12. Cuffe, G. M.	2353

(a) Gained the Herbert Prize.

THE "THUNDERER" DISASTER.

Since our last report one man (Oliver Greenfield) has died, and three have been discharged, leaving one officer (Mr. Thomas, engineer) and fifteen men in Haslar Hospital. The services of the supernumerary surgeons, Messrs. Goodman and Burgess, have been dispensed with, and the duties devolved upon Messrs. Wood and Laslett, members of the permanent staff of the Hospital. Although the danger to be apprehended at this, the suppurative period, is fully appreciated by those responsible for the treatment, it is nevertheless thought unnecessary to continue to report any of the cases as "very dangerous," or "dangerous," when, all things considered, they are progressing so favourably. Not the least remarkable feature in the worst cases is the great amount of emaciation which has taken place. It is worth while to notice shortly the remarkable general interest and thoughtfulness displayed in every direction, from far and wide, to do all, by advice and assistance, to render the position of the sufferers more tolerable. Thus, strawberries and bouquets of flowers have been liberally sent for them from the neighbourhood of the Hospital; while grapes and lemons have reached them from Gibraltar; and many kinds of treatment have been kindly recommended to the notice of the medical staff—as baths of olive oil, with the head only raised out of it; varnishes of various kinds, from pitch to copal; emollient dressing of skimmed cream, and slightly stimulating ones of red currant jelly, and so on *ad infinitum*—showing the extended interest taken in the sufferers.

PAROCHIAL AUTHORITIES CHARGED WITH CREATING A NUISANCE.

After repeated adjournments at the Clerkenwell Police-court, the charge of creating a nuisance at Holloway, preferred against the Islington Vestry by a resident in the neighbourhood, and which was reported in the *Medical Times and Gazette* of July 1, has broken down. For several months past the Islington Vestry has used a piece of enclosed land at Holloway as a dust-shoot, and several thousands of cartloads of ashes and refuse matter have been deposited, from which it was alleged foul and noxious smells arose, which were injurious to the health of the residents in Ashburton-grove. The complainant's case was supported by Dr. Glover and other medical witnesses; but on behalf of the Vestry, Dr. C. Meymott Tidy, Medical Officer of Health for the parish, and four other medical gentlemen, were very positive in their opinion that there were no grounds whatever for the assertion that the dust-shoot was a dangerous nuisance. Believing that the weight of scientific evidence was in favour of the Vestry, Mr. Barstow—the sitting magistrate—dismissed the summons, each side, however, to pay its own costs.

SUPPLY OF BODIES FOR ANATOMICAL PURPOSES.

The authorities of the London Hospital Medical College are suffering, in common with other medical schools, from a scarcity of subjects for anatomical study, and have applied to the Board of Guardians of the City of London Union for the delivery to them of the unclaimed bodies of persons who may die in their workhouses at Homerton, Holloway, and Bow, in accordance with the Act for Regulating Schools of Anatomy, 2 and 3 Will. IV., cap. 75. We are glad to state that the Guardians, by a majority of seventeen to nine, resolved to grant the request.

SANITARY MATTERS IN MANCHESTER.

In their annual report for the year 1875 the Committee of the Manchester and Salford Sanitary Association refer with regret to the continued apathy displayed by the Corporation of Manchester in connexion with the providing of hospitals for the reception of cases of contagious disease. Notwithstanding that the subject has been repeatedly urged upon their notice, the City Council have neglected to make any provision for

the isolation of contagious diseases; and the Committee allege that hundreds of lives are annually sacrificed in consequence of official inaction in this matter. We trust that the latest representations of the Local Sanitary Association will have the effect of stimulating the members of the City Council to discharge an obvious duty, with a view to preserve the health and lives of those over whom they are to some extent, or rather should be, the guardians.

THE MANUFACTURE OF SAUSAGES.

At Brentford Police-court, on Saturday, a wholesale sausage manufacturer was charged with having a large quantity of unwholesome meat upon his premises, and intending it for human food. The charge having been clearly proved, the magistrates, after consultation, sentenced the offender to three months' imprisonment with hard labour. We are glad that in this case the prisoner was not allowed the option of paying a fine. The practice of making sausages with bad meat is, we fear, a common one; and many cases of common diarrhœa and English cholera might be traced to the eating of the poisonous stuff that is sent out from wholesale sausage manufactories. All such establishments should be registered, and subject to daily inspection by trustworthy sanitary officers.

PARLIAMENTARY.—MEDICAL OFFICERS OF HEALTH—NEUTRALITY OF ARMY SURGEONS—POLLUTION OF RIVERS—CATTLE DISEASE (IRELAND) BILL—MILITIA SURGEONS—LEPROSY IN INDIA—THE GENEVA CONVENTION.

In the House of Commons, on Thursday, August 3,

Mr. Sclater-Booth, in reply to Dr. Cameron, said that under the Act of 1872 it was provided that the first appointment of medical officers of health should be for a period of five years. There was no desire to limit the appointments; the idea was rather to sanction permanent appointments where medical officers could be found ready to devote their whole time to the duties. The report of an experienced inspection on the whole question would soon be presented.

Captain Nolan gave notice that he would ask a question as to the immunities to which medical men and ambulance corps were entitled in the war between Turkey and Servia, as if it were a war between two independent Powers; and to request the Government, in the cause of humanity, to urge this matter on the Porte, and, if necessary, on Servia and Herzegovina.

On Friday, August 4,

On the order for the third reading of the Pollution of Rivers Bill, Mr. Dillwyn complained of the insertion, without adequate notice, of the 16th clause, by which a manufacturer might continue to pollute a river for three years, if he had received a certificate from the Local Government Board, without being subject to interdict or injunction. He moved that the Bill be read a third time this day month.

Mr. Sclater-Booth pointed out that the clause which was now objected to had been very carefully considered. It was intended so to deal by way of injunction, which he understood might go to the length of stopping works, that that procedure could not be resorted to during the existence of a certificate, the certificate being granted for only three years, and not granted unless the works of purification were actually being carried out. If it were desirable that the language of the Bill should be reviewed, there could scarcely be a better tribunal for the purpose than the House of Lords.

Mr. Cross said that the Bill dealt completely with that great source of the pollution of rivers arising from sewage; and if there were nothing else in the measure but the means of preventing that great cause of injury to the public health, and also to the cattle feeding on the banks of rivers, it would be well to pass it. With regard to the pollution produced through manufactories, it was a great step to stop the further pollution of rivers by manufactories to be hereafter established. With respect to that part of the evil created by existing manufactories, they had to deal with vested interests, and must proceed in these matters by degrees. No one who visited the North of England could fail to notice that the rivers there were gradually becoming choked up with the solid refuse thrown into them, and the injury thus caused to the people living on their banks was incalculable. In the neighbourhood of some of the large towns in his own county the expense incurred in dredging these rivers was enormous.

The Bill was read a third time.

In the House of Lords, on Monday, August 7,

The Duke of Richmond, in moving the second reading of the Cattle Diseases (Ireland) Bill, said that Ireland differed from England in the fact that local authorities were not armed with the powers of compulsory slaughter and compensation as in England. The Lord Lieutenant would, if the Bill passed, be able to confer upon boards of guardians within their several unions some of the powers which he, with the Privy Council, now exercised under the existing law; and the Bill would also confer powers of making regulations for preventing the spread of disease among sheep, cattle, and horses, horses being now for the first time included under the term "animals." If sufficient inspection were provided in Ireland, so as to prevent the exportation of diseased animals to England, great benefit would accrue to both countries.

Earl Spencer thoroughly approved the principle of the Bill, which was then read a second time.

In the House of Commons,

Mr. Hardy, in reply to Dr. Playfair, said that the new Warrant gives medical officers of militia an increase of rank and increase of pay, subject to certain conditions. On the other hand, it takes from them, in cases where brigade depôts are formed, the duty of inspecting the recruits, who are inspected by army surgeons without charge. It has been frequently a subject of complaint that these Militia medical officers lost by having to neglect their private practice in order to inspect the recruits. They will continue to be employed on this duty when no army medical officer is available. Until December 31 next it will not be known how many militia medical officers accept the new terms, and until then he could not undertake to enter upon a full consideration of the facts.

Lord George Hamilton, in reply to Sir P. O'Brien, said it was not the intention of the Government to give effect to the suggestions of Dr. H. V. Carter, embodied in his report relative to leprosy and leper asylums in Norway, with reference to India. They have directed further inquiry to be made in India with a view to ascertain the correctness of the conclusions at which Dr. Carter had arrived.

Mr. Disraeli, in reply to Captain Nolan's inquiry respecting the immunity and protection which, under the Geneva Convention, would be accorded to medical men and ambulance corps in a regular war between two independent Powers, said that the inconvenience which he apprehends will not be experienced, because not merely has the Porte accepted the Geneva Convention, but the Governments of Montenegro and Servia have also respectively accepted that Convention.

In the House of Lords, on Tuesday, August 8,

The Marquis of Salisbury, in moving the second reading of the Pollution of Rivers Bill, said that it did not go quite so far as the measure which was lost at the end of last session. It proposed to effect three objects: the exclusion of solid matter and sewage from rivers, as well as all new sources of pollution arising from manufactures and mines.

The Bill was read a second time.

QUITE TIME!—The Thames Conservators, in their report, recently issued, in referring to the extension of time granted to some of the local authorities, to enable them to execute works for the diversion of sewage, state, "They feel that the time has arrived when no further delay should be allowed, and that the compulsory powers of the Act of 1867 should now be enforced."

POISONOUS PROPERTIES OF GLYCERINE.—From a series of experiments, made by the subcutaneous injection of glycerine in dogs, Drs. Dujardin-Beaumetz and Audigé arrive at the following conclusions:—1. Chemically pure glycerine may induce in the dog, within twenty-four hours, when introduced under the skin, fatal accidents if employed in the dose of eight grammes to 1000 grammes of the weight of the animal. 2. The general characters of such poisoning accidents (acute glycerism) resemble, within certain limits, those of acute alcoholism. 3. The necroscopical lesions in glycerism are analogous to those of alcoholism, whence it would appear that the toxical action of the two bodies is very much the same. 4. In a therapeutical point of view, the introduction of too large a quantity of glycerine into the system is, probably, not without some danger.—*Bull. de Thérap.*, July 30.

MEETING OF THE BRITISH MEDICAL ASSOCIATION AT SHEFFIELD.

On Wednesday began the real work of the Association. This was introduced by an Address in Medicine, the orator this year being Dr. Sieveking, of whose speech we have already spoken. Excellent as the Address was, its effect was somewhat marred by a rather hurried delivery.

After luncheon came the Sections, commonly also ushered in by Presidential Addresses, but these should be always subsidiary to the main Address delivered in the morning. The sectional proceedings were, on this occasion, uncommonly good, especially in Medicine, when a capital selection of papers were down for reading and discussion. Unfortunately, from the absence of some of their authors, these were not all read. The first communication was of unusual value, and consisted of a report by Dr. Rutherford on further experiments as to the influence of drugs on the secretion of bile. The substances selected this time were equally important with those already examined, and the results equally interesting. Many of them were quite new, and, consequently, all the more valuable. Foremost among them were certain remedies of American origin, commonly called eclectic. These go by names elsewhere associated with nearly pure products, but, as used by the eclectic body, are little better than crude extracts more or less dried. The so-called eclectic class of practitioners are not very highly respected, even in America; and the properties attributed by them to the drugs they use must always be regarded with some suspicion. Certain of these drugs Dr. Rutherford has taken and thoroughly examined. The results he has obtained have been most striking, some—as enonymin—proving really wonderful stimulants to the secretion of bile. Another curious fact he has made out is that the salts—say the sulphate—of potash or soda are more decidedly stimulant to the bile secretion than is that of magnesia. But to the whole subject we shall probably return at a subsequent period.

The other Sections also had excellent work before them. It had, however, been intimated that Messrs. Firth and Sons would cast a gun in the afternoon, and this withdrew many visitors from the work of Sections to the more novel sight awaiting them. The process was not, however, so interesting as the inspection of the works—one division of which was more than usually attractive to medical men: this was the process of saw-making, and of saw and file grinding. The latter of these processes has been so much talked about from different causes that it might have attracted greater notice than it did. What mainly struck the visitor was, first of all, the comparatively wretched look of the men. They were badly developed, and their arms—contrary to what one would have expected from the nature of their work—were neither muscular nor well-shaped. The imperfect ventilation, especially in the smaller shops, wou'd help this, but the peculiar attitude of the men must have something to do with it. They sit astride a block of wood, with their grindstone before them, and in applying the saw lean over this, pressing down with all their might. In file-grinding a much greater variety of attitudes is necessary, but none of them are healthy. Wet grinding is now the rule in Sheffield.

This leads not inappropriately to the most important discussion, on Thursday, on trade diseases. This was opened by Dr. Charles Hall, of Sheffield, who has been for many years in practice there, and whose acquaintance with the grinders' diseases is both wide and intimate. The other papers which were contributed, but which were not all supported by the presence of their authors, were—"On French Millstone-Makers' Phthisis"; Dr. Purdon, of Belfast, "On the Effects of Flax Dust on the Lungs"; Dr. Berridge, of Aberdeen, "On the Phthisis of Granite Masons"; Dr. Elam, formerly of Sheffield, "On the Presence and Tolerance of Foreign Matter in the Lung"; Dr. Arlidge, of Newcastle-under-Lyme, "On Potters' Disease and a Demonstration of Dr. Richardson's Respirator." This furnished material enough; but it was again interrupted by a visit, largely attended, to the Cyclops Works, to see the rolling of a large armour-plate. This visit was, if possible, more interesting than that of the former day. The plates were very large, and though the machine work was wonderful, that of the manipulators was more so. Here, too, visitors had an opportunity of seeing the Bessemer process of converting iron into steel fully carried out. It was most interesting to witness on such a large scale. The machinery, too—the steam-hammers, and above all the apparatus for planing, shaping, and exactly fitting the armour-plates—was full of interest. Nevertheless, it is doubtful whether the plan of throwing open such works during the sitting of sections is a good one. They certainly prove to most more attractive than listening to papers or discussions.

In the morning an admirable Address in Surgery was given by Mr. Favell, and was listened to by a very large audience with much pleasure and satisfaction. This was followed at a most unfortunate time by a speech by Dr. Brown-Séquard. Men were getting impatient for their luncheon, and many preferred that to the address by Dr. Brown-Séquard. The number of listeners was perhaps lessened by the peculiar mode of delivery of the speaker, and his partiality for French idioms.

It is impossible in such a sketch to give a full *résumé*, or even a slight sketch, of all which is done on such occasions. It is better to give a sample when possible, and that we hope to do hereafter.

Friday constituted the last day of actual work, and, to enable those who live at a distance to reach their homes, the work began earlier than usual. On this day the Address on Public Medicine was delivered by Dr. Alfred Carpenter, of Croydon. This, like all the public addresses, was an able work, and was received as such ought to be. There were a good many papers to read, but by twelve o'clock the Sections were almost entirely abandoned for the more enjoyable work of a visit to the country surrounding Sheffield. Sheffield is not at any time a lovely spot; smoke hangs over it perpetually, and during the mornings of the meetings this was not improved by a tendency to rain, which, however, passed off towards the after part of the day, and thus gave an opportunity of seeing in greater comfort those sights for which Sheffield is famous.

If the mornings of the Association are devoted to work, the evenings are usually given up to gaiety—we can hardly say festivity,—the private hospitality of the members of the profession; but there was no public reception, such as has been sometimes given by private citizens. On Wednesday evening the President, Dr. Bartolomé, gave a reception in a kind of museum which is being gradually accumulated in Sheffield. The meeting was greatly overcrowded, and, as part of the programme was to be carried out *al fresco*, a downpour of rain sadly interrupted public enjoyment. On Thursday evening came the public dinner of the Association, which was largely attended, and very successful. This has not always been the case, but the value of the ordinary guinea ticket was somewhat augmented by a donation from the funds of the Reception Committee.

On Friday afternoon two excursions were organised—one to Wortley, where lunch was prepared for a hundred by Lord Wharncliffe. The country around is eminently beautiful, and is furthermore interesting as the site of the opening scene of "Ivanhoe." Here, too, abode the famous "Dragon of Wantley," which is the old spelling of the present Wortley. The visitors were most kindly and courteously received by Lord and Lady Wharncliffe, and most hospitably entertained by them.

The other Friday excursion was to Wentworth House, the seat of Lord Fitzwilliam. The drive to this is singularly beautiful, and the house, with its paintings and statuary, exceedingly well worth seeing. The stud of horses, too, is unusually large and fine.

These excursions showed that if Sheffield itself is not a very delightful place, its environs are eminently beautiful, and this was only confirmed by Saturday's experience. By far the favourite excursion of Saturday was to Chatsworth and Haddon Hall. The drive extends above sixteen miles, partly over the moors. Both places are objects of great interest and beauty. The name of Chatsworth is known to all—it is, of course, quite a modern building; but Haddon Hall, which belongs to the Duke of Rutland, is of an antiquity both striking and venerable, and is, moreover, kept in fine repair. Two other excursions were available. These extended into Derbyshire also, but by rail. The one was to Matlock Baths, the other went further on to Buxton. The scenery about Matlock Baths is very impressive and beautiful: rocks rising abruptly above the Derwent, forming precipices, or covered with trees, give views and landscapes as peculiar as they are

fine. Here the profession of Derby, Wirksworth, and Matlock had united to welcome their brethren, to whom they gave a hearty reception and as hearty entertainment. This excursion was chiefly organised and carried to its most successful issue by Dr. Webb, of Wirksworth. Some of the more distinguished members went on to Buxton, but their numbers were more limited.

Sooner or later all things come to an end, and in this way terminated the forty-fourth annual meeting of the British Medical Association. Successful we may say it was. Visitors were most kindly received by their local brethren, and everything done to render their visit pleasant. The work done was considerable in quantity and good in quality. The numbers assembled were not so great as have been seen at other meetings. Especially, there were not many representatives of our profession from London, Edinburgh, or Dublin; but many men from neighbouring districts were brought together; and the social intimacy is not one of the least attractions of these annual gatherings.

At the close of the meeting no place had been selected for the next annual meeting, though several places were named. This, however, is perhaps best left to the Committee of Council; such awkward *contretemps* as that which occurred during the past year will be then more easily avoided.

During the meeting certain sums were granted by the Scientific Grant Committee for the prosecution of expensive researches. These were as follows:—Drs. Braidwood and Vacher, for research in Life History of Contagion, £15, and £20 for plates; Dr. Crichton Browne, further researches in the Actions of Nitrite of Amyl, alone and in combination with other remedies, £7; Dr. Fothergill, the effect of certain agents upon the Circulation, £20; Dr. Galabin, further research in investigation of Pulse Curves, £25; Dr. Rutherford, further researches on Biliary Secretion, £50; Dr. Burdon Sanderson, F.R.S., for prosecution of inquiries in the Pathology of Epizootic Pneumonia, £50; Mr. William Bruce Clarke, research on Syncope and Shock, £10; Dr. Pye, for an investigation of the Relation that the Retinal Circulation bears to that of the Brain, £10; Dr. William Stirling, for research in the Physiological Action of certain substances on the Spinal Cord, £15; Drs. Spencer and Shaw, the action of Uranium Salts in Diabetes, £10.

It may be well for those engaged in such researches to know that the full sum available has not been disposed of, and that the Committee are still open to receive applications.

Finally, we should be awanting in our duty did we not acknowledge the great courtesy and kindness we have personally received, both from officials and private individuals.

FROM ABROAD.

The War in the East.

The *Wiener Med. Zeit.* announces that several young surgeons have left Vienna and Prague either as volunteers or engaged by one or other belligerent. Dr. Steiner, one of Billroth's pupils, and Dr. Lewit, a pupil of Dumreicher, have been appointed directors of Servian ambulances; and they, as well as several others for the Turkish army, have repaired to their posts. All accounts concur in stating that there is a most terrible dearth of surgeons, instruments, dressings, and all kinds of transport. The *Med. Zeitung* has despatched to the seat of war Dr. Schneid, an able Vienna surgeon, completely abreast with the situation of affairs, and who will soon be able to forward authentic reports of the condition of things and of military surgery there. The Vienna Patriotic Aid Society, a branch of the Red Cross, has declined interfering in the contest, on the ground that Servia and Montenegro cannot be regarded as independent belligerent powers. The *Wiener Med. Woch.* says, speaking of this refusal, "We are the less able to conceal our astonishment at this resolution, as it is based upon grounds that are quite unfounded. Montenegro and Turkey are, at any rate, independent, and therefore belligerent powers, and the nice distinction which regards Servia as only a rebellious province (which opinion, however, the diplomatists do not seem to admit) ought not to be employed to paralyse the efforts of humanity. The extraordinary apprehension expressed, that any distribution of charitable gifts to the wounded in Sclavonic regions would be regarded as a national demonstration, and could not, therefore, be participated in by non-Sclavonic contributors, is without any weight. Friends of mankind would all have contributed, and how a collection made for the wounded of both armies could be feared as a demonstration passes our comprehension. It would almost appear as if the Society is actuated by some other motive. Is it desirous of reserving its activity for a later opportunity, more immediately in contact with Austria? This would perhaps be the only 'patriotic' excuse that could be devised for the cold-hearted resolution that has been come to." The *Petersburger Med. Wochenschrift* says "that the Society for Aid to the Sick and Wounded (the Russian branch of the Red Cross) has resolved to send surgeons to the seat of war where typhus has broken out, and has already carried off one of the Russian physicians out there. General Tschernja has forwarded a telegram to the St. Petersburg Ladies' Committee for Aiding the Servian Families, stating that the sanitary branch of the Servian army is in the most defective condition, being unprovided with either surgeons, medicines, or appliances. At the present time the *personnel* of the Servian Army Medical Service consists of 110 military and 200 civil surgeons, 70 of the number being foreigners."

GENERAL CORRESPONDENCE.

THE PROPOSED ALTERATIONS OF THE LAWS OF THE BRITISH MEDICAL ASSOCIATION.

Letter from Mr. Lawson Tait.

[To the Editor of the Medical Times and Gazette.]

Sir,—I shall be glad if you will allow me a little of your space to state that no vote of censure all round was in any way intended by my proposed alterations. If you will compare the laws as they were before the Edinburgh meeting with what they are now, you will see that all my proposals, with one exception, were merely reversions to the old laws. The exception in question was to place the editor on the same footing as the secretary, of being re-elected every year. When Mr. Watkin Williams was secretary, and the Association was really provincial, he was elected by the members every year, and I submit that this was a good democratic principle.

The last of my proposals, and that to which you seem to object most strongly, was merely to confirm what has always been the principle of the *Journal* until the new rules were passed by a *coup de main* at Edinburgh—namely, that the *Journal* should be the medium of communication between the members. In this matter also I adopted the very language of the old laws. My object in seeking to enforce this principle was that I find that the *Journal* has put off this function altogether, and that those of us who are not in the good graces of the editor cannot obtain admission to its columns at all. Thus: I read a paper at the meeting in 1872, and had the usual circular asking for the manuscript; I sent it, and it was acknowledged, but from that day to this it has never appeared; and I have heard many similar complaints. If the members of the Association like to see their *Journal* made into a competitor with the *Lancet* and the *Medical Times and Gazette* for business purposes, well and good; but I do not think that this should be its function. Surely so numerous an association could support a better journal without the constant touting which the present editor finds necessary. The complaint of crowded space is hardly a just one to the members when we find that there is room to be got for a paragraph to explain that a portrait in *Punch's* cartoon is meant for the editor, though even after the explanation a good deal of faith is wanted to swallow it.

Then, finally, another object I had was to remedy a singular omission which exists in the present laws. The Committee of Council are empowered in Laws 12, 13, and 15 to appoint an editor and a secretary, but to dismiss the secretary only. This, of course, puts the editor entirely beyond their control, and the time may come when he will snap his fingers at them. Whether rightly or wrongly expressed, my intention was, and will be, to prevent the Association becoming the property of a London oligarchy or of an editorial autocrat.

I am, &c., Lawson Tait.

*** We willingly give space for Mr. Lawson Tait to say his say, but our opinion remains what it was last week.—Ed. *Med. Times and Gaz.*

MEDICAL NEWS.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examination during the July and August sittings of the examiners :—

Andrianaly, Madagascar.
Christie, Joseph William, Stirling.
Dobson, Arthur, Leeds.
Grealy, Joseph, Galway.
Hutchinson, John Garbutt, Cumberland.
Kennedy, Samuel, County Down.
Legat, Andrew Eddowes, South Shields.
Leiper, Alexander, Stonehouse.
Mason, Alfred Haynes, Kent.
M'Callum, Edward, Edinburgh.
Paine, Frank Trevor, Cardiff.
Parry, John Henry, North Wales.
Rajaonah, Madagascar.
Reid, Robert Stewart, New Zealand.
Roberts, Arthur Robert, Worcestershire.
Service, John, Kilwinning.
Simpson, Robert Parkyn, Boston.
Tanner, Lombard John Newman, Cork.
Whiteley, Edward Arthur, Wakefield.
Witz, James Frederick, Tobago.

The following gentlemen passed their final examination, and were admitted L.R.C.P.E. and L.R.C.S.E. :—

Badcock, George Sainthill, Brighton.
Baker, James Payne, Maidstone.
Balhirnie, John Patrick, Leamington.
Blumer, William Percy, Sunderland.
Brander, Edward Salisbury, India.
Brown, Horatio Ross, Folkestone.
Bull, Joshua Edward, Cork.
Calwell, William, Ballyreagh.
Darutz, Jean Aristide Climent, Mauritius.
Deacon, William Oliver, Armagh.
Dockeray, John Alexander, Rathvilly.
Elliott, James May, Dungannon.
Fletcher, Frederick Alexander Campion, Yorkshire.
Green, Albert, Bradford.
Hiffernan, James Eld, Mallow.
Kay, Alfred, London.
Kirk, Robert, Bathgate.
Lord, Frederick, Kent.
Lucas, Joseph Henry Richard Wallace, Liverpool.
M'Glade, James, Kent.
M'Kinney, Samuel Biggar Giffen, Belfast.
Morrison, Alexander, Linlithgowshire.
Osburne, Cecil Anthony Perrier, Cork.
Roberts, Thomas M'Guire, Dublin.
Sanctuary, Thomas, Dorsetshire.
Scott, William Edward, Northamptonshire.
Shorten, James, County Cork.
Stuart, John Alexander Erskine, Berwickshire.
Wallis, Hugh, Sussex.
Williams, Alfred Dawson, London.
Wood, Francis Henry, Wakefield.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 3rd inst., viz. :—

Bevan, Richard, L.S.A., Redruth, student of Guy's Hospital.
Boodle, George Adolphus, L.S.A., St. John's-wood, of St. Bartholomew's Hospital.
Bullen, Beresford Robert, L.S.A., Upper Kennington-lane, of St. Thomas's Hospital.
Cuming, Charles Henry, Devonport, of University College.
Dowding, Alexander William Woodman, L.S.A., Ampthill, of the London Hospital.
Eve, Frederick Samuel, L.R.C.P. Lond., Ockenbon, of St. Bartholomew's Hospital.
Fabien, Lewis, Trinidad, of University College.
Gathergood, Benjamin William, L.S.A., Lynn, of Guy's Hospital.
Glyn, Herbert Arthur, L.S.A., M.B. Aber., Gloster-street, S.W., of St. Bartholomew's Hospital.
Hatch, William Keith, M.B. Aber., Shrewsbury, of King's College.
Mahony, Lawrence Francis, L.S.A., Dalston, of the London Hospital.
Nutcombe, Frederick, Meonstoke, of St. Thomas's Hospital.
Paul, Reginald, L.S.A., Langport, of the Middlesex Hospital.
Rowbotham, Arthur Joseph, Woolwich, of Guy's Hospital.
Sandwith, Flemiog Mant, Wimbledon, of St. Thomas's Hospital.
Stevenson, Leader Henry, Bexley, of Guy's Hospital.

Two candidates were approved in Medicine, and when qualified in Surgery will be admitted Members of the College, and five candidates having failed to acquit themselves to the satisfaction of the Court of Examiners were referred to their professional studies for six months.

At a meeting of the Council on the 7th inst., Mr. John Beames Burroughs, of the Mall, Clifton, was admitted a Fellow of the College, his diploma of membership bearing date January 25, 1828.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their first professional examination during the July sittings of the examiners :—

Beresford, Francis James, Leicester.
Gordon, Richard, jun., Sligo.
Maclean, Kenneth, Ross-shire.
Nichol, James Thompson, Newcastle-on-Tyne.
Ryan, Mark Francis, Kilconly.
Thatcher, Charles Henry, Edinburgh.

The following gentlemen passed their final examination, and were admitted Licentiates of the College :—

Fraser, Peter, Hamilton.
Forbes, Duncan, Dumfries.
Hamilton, James Alexander Greer, County Tyrone.
Hardie, Robert, Leith.
Hunter, Henry, County Derry.
Irvine, Robert William, Blair Athole.
Jolly, Samuel Aird, Portarlington.
MacRitchie, Donald, Inverness.
Magill, James, Derry.
Maull, William, Auchterarder.
Nichol, James Thompson, Newcastle-on-Tyne.
Norris, Richard Hill, Birmingham.
Smith, William, Preston.
Willard, Rufus, Illinois.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 3 :—

Davis, Frederick Howard, Dawley, Salop.
Denby, Timothy Curtis, Infirmary, Bradford, Yorks.
Lake, William Wellington, Middlefield, Ilford.
Lithgow, Thomas George, Kensington-park-road.

Note.—In the pass-list of July 27, the address of Robert Alex. Jackson, given as "Norfolk-square," should have been "53, Notting-hill-square."

The following gentlemen also on the same day passed their primary professional examination :—

Burgess, William Milner, St. Bartholomew's Hospital.
Cary, Joseph, London Hospital.
Davies, David S., St. Thomas's Hospital.
Giffard, Henry Edward, St. Bartholomew's Hospital.
Harris, Frederick A., St. Thomas's Hospital.
Langton, Herbert, St. Bartholomew's Hospital.
Leah, William, Queen's College, Birmingham.
Newman, Arthur J., Middlesex Hospital.
Revell, Richard Carter, Middlesex Hospital.
Swann, Alfred, Queen's College, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BINDLEY, PHILIP, M.B. Lond.—Resident Medical Officer to the General Hospital, Birmingham, *vice* Alfred H. Carter, M.D. Lond., resigned.

ROBERTS, ARTHUR, M.R.C.S. Eng., L.S.A. Lond.—Medical Officer of Health to Keighley Local Board of Health.

BIRTHS.

BLAKER.—On August 3, at 7, Lansdowne-crescent, Worcester, the wife of E. S. Blaker, surgeon, of a son, stillborn.

CHILCOT.—On July 30, at Bridge House, Dartford, the wife of James Chilcot, M.R.C.S., of a son.

DOUGLAS.—On August 4, at Ivy House, Newbury, the wife of W. T. Parker Douglas, M.B., of a daughter.

GRAVES.—On July 7, at Naini Tal, North-West Provinces, India, the wife of Surgeon-Major William Graves, Army Medical Department, of a son.

HIBBERD.—On August 1, at Campfield Lodge, Walterton-road, St. Peter's-park, W., the wife of Edward Hibberd, M.D., of a daughter.

HICKS.—On August 5, at Amhurst-road, Hackney, the wife of Dr. George Borlase Hicks, of a son.

ORMSBY.—On July 14, at Stourport, Worcestershire, the wife of John Ormsby, L.R.C.P., of a daughter.

RAYNER.—On August 1, at Tiviotdale, Stockport, the wife of Edwin Rayner, M.D., of a daughter.

SMITH.—On August 5, at Kenwith, near Bideford, N. Devon, the wife of Heywood Smith, M.D., of a daughter.

MARRIAGES.

BEST—WOOLLEY.—On August 3, at Christ Church, Clapham, James Best, Esq., of High-street, Kingston-on-Thames, and 9, New Bridge-street, E.C., solicitor, to Mary Jane, youngest daughter of the late Nathaniel J. Woolley, surgeon, of Ecton, Northamptonshire.

BROWN — EDWARDS.—On August 2, at St. Andrew's, Wiveliscombe, Somerset, Charles Abbott Brown, B.A., late of Christ Church, Oxford, to Elizabeth, youngest daughter of Andrew Francis Edwards, M.D., of Bourne House, Wiveliscombe.

FORWOOD—MUSPRATT.—On August 2, at St. James's, West Derby, Ernest Harrison, fifth son of T. B. Forwood, of Manor House, Thornton Hough, Cheshire, to Mabel, younger daughter of the late Dr. Muspratt, of The Hollies, West Derby, Liverpool.

GERLACH—LEWIS.—On July 19, at North Holmwood Church, Capt. Edmond Johann Conrad Gerlach, only son of Dr. J. A. Gerlach, of Paderborn, Prussia, to Jane, only daughter of the late Mrs. J. Lewis, of 20, Upper Woburn-place, Tavistock-square, London.

NEVILS—ROBERTS.—On August 8, at St. James's Episcopal Church, Edinburgh, Henry William, only son of the Rev. Gerard Nevile, to Lucy, fifth daughter of Dr. W. A. Roberts, of 47, Queen-street, Edinburgh.

PAIRMAN—WATSON.—On August 2, at 13, Torphichen-street, Robert Pairman, M.D., of London, to Jessie Jeanie Watson, youngest daughter of the late James Watson, Esq., of Mitchell-hill, Peeblesshire.

RICHMOND—DAWSON.—On August 3, at Christ Church, Crouch End, Onslow Robert Richmond, L.R.C.P. Lond., M.R.C.S. Eng., of Lodgewood, Gravesend, youngest son of Robert Richmond, Esq., barrister-at-law, of Crouch End, to Mary Fanny, eldest daughter of Eneas Dawson, Esq., of The Woodlands, Crouch End.

DEATHS.

CORNWELL, MARY ANN, wife of Dr. James Cornwell, of Purbrook, Sydenham-hill, on August 5.

DUNN, JANET JOHNSTON, widow of the late Dr. Thomas Russell Dunn, Inspector-General of Hospitals and Fleets R.N., at Dunallan, Bridge of Allan, N.B., on August 3.

JULIUS, EMILY, eldest daughter of the late G. C. Julius, M.D., at Mazehill House, St. Leonard's-on-Sea, on July 31.

PEAKE, GEORGE WILLIAM, M.D., Staff Surgeon-Major, at Colchester, on August 8, aged 51.

RAINEY, HARAY, M.D., LL.D., Emeritus Professor of Forensic Medicine in the University of Glasgow, at 2, Woodside-place, Glasgow, on August 6, in the 84th year of his age.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIGHTON AND HOVE DISPENSARY.—Resident Medical Officer and Dispenser. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London or Licentiates of the Apothecaries' Company of London, and duly registered under the Medical Act, 21 and 22 Vict., c. 90. Diplomas and other testimonials to the Chairman, on or before September 4.

HALIFAX INFIRMARY AND DISPENSARY.—House-Surgeon and an Assistant House-Surgeon. Applicants for the office of House-Surgeon must possess a double qualification and be registered under the Medical Act. The Assistant House-Surgeon must possess at least one qualification. Applications, with testimonials, for either office, to the Chairman of the Medical Staff, on or before August 15.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—House-Physician. Candidates must have a recognised medical or surgical qualification. Applications, with testimonials, to David Cannon, Secretary, on or before August 31.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-UPON-TRENT.—Two Resident Medical Officers, viz., House-Surgeon and House-Physician. Candidates must be duly registered and possess a diploma or degree in Surgery from the College of Surgeons in London, Edinburgh, or Dublin, or from one of the Universities, and a diploma, degree, or licence in Medicine from a University or duly recognised licensing body of Great Britain or Ireland. Applications and testimonials to the Secretary, on or before August 30.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons and Licentiates of the Apothecaries' Company, or be graduates in medicine of some university of the United Kingdom, or possess a diploma from some College of Physicians in the United Kingdom, where examinations are made the test of fitness; must be unmarried, and willing to engage for a period of not less than one year. Salary £85, with board, lodging, and washing. Testimonials to Dr. Luke, Hon. Secretary.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Physician (Out-Department). Candidates must be graduates of a university in the United Kingdom, or if holding a foreign degree only, must be members of the London College of Physicians. Applications, with testimonials, to George Scudamore, Secretary, Lower Seymour-street, Portman-square, W.

SUSSEX COUNTY HOSPITAL.—House-Surgeon. Election by ballot. Candidates must be registered as Members of one of the Colleges of Surgeons of the United Kingdom, and Licentiates of the College of Physicians of London, or of the Society of Apothecaries of London, unmarried, and, when elected, under thirty years of age. Salary £80, and £10 a year from each resident pupil, with board and lodging. Diplomas and testimonials to Lieutenant-General E. F. Bourchier, Secretary, Brighton, not later than August 23.

SWANSEA HOSPITAL.—Resident Medical Officer. Candidates must be registered in medicine and surgery. Applications, with testimonials, to J. W. Morris, Secretary, 23, Gower-street, Swansea, on or before August 16.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

WESTERN GENERAL DISPENSARY, MARYLEBONE-ROAD.—Honorary Physician. Candidates must be Fellows or Members of the Royal College of Physicians of London. Testimonials and qualifications to the Secretary, on or before August 14.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Aston Union.—Mr. J. C. Weddell has resigned the No. 5 St. Nechells District; area 1260; population 26,009; salary £60 per annum.

North Witchford Union.—Mr. James B. Ryley has resigned the First District; area 18,024; population 3336; salary £40.

Stourbridge Union.—Dr. Campbell has resigned the Oldswinford No. 1 District; area 866; population 11,512; salary £80.

APPOINTMENTS.

Alderbury Union.—Francis John Hannah, M.B. Univ. Dub., M.D. Univ. Dub., and L.F.P.S. Glasg., to the Downton District.

Bolton Union.—James Stewart, L.F.P.S. Glasg., and L.R.C.P. Edin., Resident Assistant Medical Officer at the Workhouse.

HYPODERMIC INJECTIONS OF MORPHIA IN OBSTINATE DIARRHŒA.—M. Révilliod states that numerous trials in Prof. Vulpian's wards have shown that morphia, hypodermically used in moderate quantities, has proved a most valuable remedy in arresting diarrhœas that obstinately resist all other treatment—as, *e.g.*, in the diarrhœa of phthisis.—*Gaz. des Hôp.*, August 5.

THE NEW CHAIR OF MENTAL DISEASES AT PARIS.—On the presentation of the budget of the Minister of Public Instruction to the Chambers, M. Clémenceaux carried an amendment providing an annual sum of 13,000 fr. as the salary for a Professor of Mental Diseases. MM. Liouville and Cornil failed to carry a previous amendment raising the salaries of the Professors of the Faculties of Medicine and Science to the same sum as those of the Professors of the Faculties of Law and of Letters—viz., to 15,000 fr. in place of the present amount, 13,000 fr.—*Gaz. Méd.*, August 5.

STATISTICS OF TOBACCO-SMOKING.—The following table gives for each country named its consumption of tobacco per annum per 100 inhabitants:—Belgium, 250 kilogrammes; Holland, 200; Germany, 150; Austria, 124·5; Norway, 102·5; Denmark, 100; Hungary, 94; Russia, 83·3; France, 81; England, 62; Italy, 57; Spain, 49; Sweden, 34 kilogrammes. From this it seems that France (in a revenue point of view) does not smoke enough. When she attains the position of Belgium in this matter the tobacco impost will return 896,000,000 fr. to the exchequer, instead of its present 3,000,000 fr.—*Journal de la Soc. de Statistique*, July.

SPONTANEOUS GENERATION.—The *Institut* (August 2) announces that the Académie des Sciences received at its meeting on July 31 (the French academicians take no holidays) two letters in absolute contradiction with each other, and both written on the same day (July 29), one dated from London by Prof. Bastian, the other from the Valais by Prof. Tyndall. The former reiterates the affirmations made in a previous communication, that urine exposed to a temperature of 50° C. (122° Fahr.) undergoes spontaneous fermentation without the intervention of any ferment. In his letter Prof. Tyndall declares that Prof. Bastian's experiments are absolutely incorrect, he having in vain repeated them. He has never obtained any but negative results, and denies that Prof. Bastian has any right to draw conclusions from them favourable to spontaneous generation.

THE ST. PETERSBURG LYING-IN ASYLUMS.—In a recent inaugural dissertation, Dr. Stoltz gives an account of the working of the ten Lying-in Asylums that have been recently established at St. Petersburg. Established on account of the danger that exists in the agglomeration of puerperal women, these asylums have only three or four beds in each; and although many of these are placed in very insalubrious districts, a six years' experience has proved their great utility. Of the 7907 women who have been delivered in them, only eighty, or 1·1 per cent., have died, while at the three hospitals the mortality has been 3·6 per cent.; so that the lives of 200 women have been saved which would have been lost in the old establishments. Besides their great convenience in being distributed over the city, the cost of these asylums is much less than that of the hospitals, the expense of each patient being in the latter from nineteen to twenty-three roubles, while in the asylums it is only twelve roubles.—*St. Pet. Med. Woch.*, July 29.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

A. B, Liverpool.—The two last-named works contain all that *books* can teach; the rest must be learned by practice, and any deficiencies in description must be supplied by the results of personal experiment. We should fancy that dealers in microscopic slides could obtain from their slide-makers pieces of injected material; but we should advise A. B. to persevere in his attempts to inject, feeling sure that he will finally succeed.

Boston.—Dr. Creighton's anatomical researches towards the etiology of cancer will be found in "Reports of the Medical Officer of the Privy Council and Local Government Board," new series, Nos. 3 and 4, 1874 and 1875, published by Eyre and Spottiswoode, London.

P. T. W.—Pliny says of the introduction of feather beds, "that the beds of the Roman gentry were generally filled with feathers, and those of the inns with the soft down of reeds. Straw was used, even in the Royal chambers of England, so late as the close of the thirteenth century. Beds were for a long time laid upon the ground, till at length the custom of raising them on feet and pedestals, which anciently prevailed in the East, and was introduced into Italy, was adopted in Britain."

H. B.—A contemporary says, "It is not generally known that Lord Carnarvon has a brother, the Hon. Alan P. Herbert, who is a practising physician in Paris, a graduate in medicine of the University of Paris, and physician to the British Hospital there. Dr. Herbert is a disciple of the much-abused Claude Bernard—a great experimenter on animals. Thus, of the 'three Herberts,' Lord Carnarvon is in favour of vivisection under conditions; Mr. Auberon Herbert is hotly opposed to it under any conditions; Dr. Alan Herbert may be counted as one of its apostles. It might be desirable for Lord Carnarvon to attempt to settle the family difference of opinion on this subject before undertaking to consolidate by legislation the opinion of the country."

COMMUNICATIONS have been received from—

Mr. Lawson Tait, Birmingham; Dr. H. K. Oliver, Boston, U.S.A.; Dr. A. M. Buchanan, Glasgow; Mr. E. Sabgeant, Bolton; Mr. W. Douglas Hemming, London; A. B., Liverpool; The Secretary of the Army Medical School, Netley; Dr. Sparks; The Secretary of the Royal College of Surgeons, Edinburgh; The Secretary of the Medical Faculty, Aberdeen; Mr. H. J. Leonard, London; Mr. C. A. Fox, Stoke Newington; Mr. Charles Higgens, London; Mr. Henry Morris, London; Mr. Balmanno Squire, London; Mr. Godlee, London; Mr. J. Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

Information as to the Laws relating to Public Health and the Removal of Nuisances—Alfred Hill, M.D., Report on the Health of the Borough of Birmingham—William R. Dunham, M.D., Theory of Medical Science—J. Solis Cohen, M.D., Inhalation in the Treatment of Disease—George A. Otis, The Medical and Surgical History of the War of the Rebellion, part ii., vol. ii.—W. Julius Mickle, M.D., Notes on Syphilis in the Insane—Alvis Martin, M.D., Hunyadi János Aperient Natural Mineral Water—St. Bartholomew's Hospital and College, Sessions 1876-77.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Gazeta Medica—Edinburgh Medical Journal—Liverpool Critic—American Journal of Medical Science—Hastings and St. Leonard's News—Philadelphia Medical Times—New York Despatch—Indian Medical Gazette—Canada Medical and Surgical Journal—Bombay Gazette—New York Courier.

APPOINTMENTS FOR THE WEEK.

August 12. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

14. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

15. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

16. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

17. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

18. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 5, 1876.

BIRTHS.

Births of Boys, 1255; Girls, 1205; Total, 2460.
Average of 10 corresponding years 1866-75, 2151·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	888	791	1679
Average of the ten years 1866-75	839·4	793·1	1632·5
Average corrected to increased population ...	...	...	1747
Deaths of people aged 80 and upwards ...	...	...	39

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	4	8	1	4	1	1	...	81
North... ...	751729	...	3	4	3	13	2	5	...	114
Central ...	334369	...	1	...	...	1	...	...	...	22
East	639111	...	5	6	2	11	1	2	...	71
South... ...	967692	1	8	18	3	9	1	1	2	113
Total	3254260	1	21	36	9	38	5	9	2	401

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·771 in.
Mean temperature	61·2°
Highest point of thermometer	78·0°
Lowest point of thermometer	47·2°
Mean dew-point temperature	51·8°
General direction of wind	W.S.W. & S.W.
Whole amount of rain in the week...	0·67 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 5, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Aug. 5.	Deaths Registered during the week ending Aug. 5.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2460	1679	78·0	47·2	61·2	16·22	0·67	1·70
Brighton	100632	42·7	35	31	71·6	48·0	59·9	15·50	1·04	2·64
Portsmouth ...	124867	27·8	97	52	69·6	52·7	60·7	15·95	1·03	2·62
Norwich	83430	11·2	46	37	77·9	45·5	59·8	15·45	0·96	2·44
Plymouth	72230	51·8	43	26	71·1	52·1	60·7	15·95	1·38	3·51
Bristol	199539	44·8	145	89	76·5	47·4	60·0	15·56	1·29	3·28
Wolverhampton ...	72549	21·4	63	37	73·4	44·2	58·0	14·44	0·93	2·36
Birmingham ...	371839	44·3	292	149	73·8	45·6	58·3	14·61	0·80	2·03
Leicester	113581	35·5	86	86	76·5	45·5	59·5	15·28	0·51	1·30
Nottingham ...	93627	46·9	66	64	75·3	43·2	58·1	14·50	0·59	1·50
Liverpool	521544	100·1	392	272	71·3	47·0	57·3	14·06	1·10	2·79
Manchester ...	357917	83·4	253	194	76·0	45·0	57·7	14·28	1·72	4·37
Salford	138425	26·8	105	79	73·9	42·2	56·5	13·61	2·02	5·13
Oldham	88609	19·0	56	52	...	...	...	...	...	...
Bradford	173723	24·1	134	79	72·4	46·8	56·9	13·83	1·49	3·78
Leeds	291580	13·5	243	203	77·0	46·0	58·1	14·50	1·19	3·02
Sheffield	274914	14·0	209	143	75·0	41·0	58·4	14·66	0·93	2·36
Hull	136933	37·7	104	80	75·0	46·0	58·8	14·89	0·85	2·16
Sunderland ...	108313	32·8	75	46	76·0	45·0	58·4	14·66	1·12	2·81
Newcastle-on-Tyne	139929	26·1	97	71	...	40·0	...	...	0·95	2·41
Edinburgh	215146	51·3	152	82	...	...	...	...	...	...
Glasgow	545144	90·4	383	273	62·5	42·7	51·2	12·33	2·96	7·52
Dublin	314666	31·3	187	129	72·2	40·8	58·0	14·44	1·39	3·53
Total of 23 Towns in United Kingdm	8028595	37·7	5723	3953	78·0	40·0	58·5	14·72	1·19	3·02

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·77 in. The highest was 30·08 in. at the end of the week, and the lowest 29·31 in. on Thursday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

FORTY-FOURTH MEETING
OF THE
BRITISH MEDICAL ASSOCIATION,
HELD IN SHEFFIELD, AUGUST 1, 2, 3, AND 4, 1876.

SECTION OF PUBLIC MEDICINE.

OPENING ADDRESS.

By J. B. RUSSELL, M.D.,
President of the Section.

GENTLEMEN,—Although, fortunately for me, the usage of this Association does not impose upon the Presidents of Sections the duty of delivering an address in connexion with their departments, still I am desirous on the occasion of my first appearance before you as your President to ask your indulgence for a few remarks. This I the more readily do that the colloquial work thus afforded me suits my want of leisure for the set phrases and connected thought of a paper.

You are aware that I am Medical Officer of Health for the city of Glasgow, and Glasgow is notorious for its unhealthiness, and for the vigorous efforts being put forth by the local authority for its improvement, especially in the direction of clearing out and reconstructing the older and most unhealthy portions of the city. It is not my intention to repeat before you any details of the nature, extent, and operations of the Glasgow City Improvements Act (1866), which were so fully narrated and discussed in the introduction and passage through the Houses of Parliament of the Artisans' Dwellings Act, and for which we certainly have had ample credit awarded. But the fact that there is now an imperial measure declaring that "various portions of many cities and burghs are so built, and the buildings thereon so densely inhabited as to be highly injurious to the moral and physical welfare of the inhabitants," and enabling communities so situated, without the trouble and expense of a local Act, to institute improvement schemes, makes me think that a short statement of the more obvious results of our operation, and some remarks flowing therefrom on reconstruction, density, etc., may be useful to such of you as advise authorities or practise in communities who may take action under the general Act.

That portion of the city of Glasgow which was included in the powers of the Improvement Act of 1866 embraced about eighty-eight acres, on which a population of 51,300 persons lived in upwards of 10,000 houses, using that word not in the structural sense attached to it in England, but in the social sense customary in Scotland, meaning that fraction of a building rented and occupied by one family. Although the Act was passed in 1866, the demolition of houses was not commenced to any important extent until 1870, the intervening years being devoted to the acquisition of the properties involved in the scheme. When such operations are carried out, the advantages anticipated are of two kinds—(1) immediate, and (2) remote. In terms of the Act the extent of the demolition and displacement at any one time are defined by Section 28. Within six months no number of inhabitants exceeding 500 can be displaced without a certificate from the sheriff of the county, granted on evidence, that accommodation exists or shall be provided for the inhabitants displaced. In Scotland the times of year when houses are let are May and November. The May term has been preferred for the greater part of the evictions and demolitions, being the summer, when least hardship is likely to arise. On two occasions—viz., in May, 1874, and May, 1875—a minute test of the *immediate* results upon the people displaced has been instituted. The investigation extended to 1169 families, containing 3710 persons. The houses were fair samples, situated in the oldest parts of the city, of the whole property to be dealt with, and their inhabitants of that class of our urban population which is the source of so much trouble and anxiety to authorities of all kinds. I shall not trouble you with more than a general statement of results, merely adding this assurance—that they are not guesses or approximations, but based on accurate statistics. When a householder is summarily ejected from his house, and the house demolished, the necessary immediate results are manifested in changes as regards the size of his house, its rental, the readjustment of the number of inmates per house, the position of the house relative to the centre of the city, and the facilities afforded for the disposal of the excreta of the inmates. Taking up those points in succession, the following are the immediate results of our action:—

As to *size of house*, it would have been better had it been possible to state the cubic contents rather than the number of apartments; for, in reference to the comparative size as well as comparative rental, the words house and apartment without further explanation mean very different things as applied to the dwellings demolished and those into which the inmates removed. But while 84 per cent. of the old houses were hitherto under the Glasgow Police Act—*i.e.*, their cubic contents were marked on the doors, with a statement of the corresponding number of inmates allowed—the majority of the new houses were not so ticketed, and consequently a sufficiently laborious inquiry would have been made still more so by the necessity of measuring those houses for the sake of comparison. After all, however, the result would have been merely to express in figures what you may accept my assurance is the fact, that the dwellings which those people were compelled to leave were, on the whole, so bad that it was impossible for them to find their equal, or their like; and you may take it that the words house or apartment mean something more as applied to the new dwellings than to the old—more, in the way of space, comfort, and convenience. You must keep this before your mind in interpreting the meaning of the following bare figures, and estimating the facts to which they give most meagre expression. We found 478 families occupying dwellings of only one apartment; of these, 296 removed to dwellings of the same size, and 138 to larger, while 25 gave up householding and took to lodgings, 1 removed to the suburbs, 9 to the country, and 9 are otherwise accounted for by emigration, imprisonment, the poor-house, etc. We found 330 families occupying dwellings of two apartments; of these, 217 removed to dwellings of the same size, 34 to larger, and 68 to smaller, while 2 went into lodgings, 1 removed to the suburbs, and 1 to the country, leaving 7 to be otherwise accounted for. We found 62 families occupying dwellings of three apartments; of these, 15 removed to houses of the same size, 8 to larger, and 33 to smaller, while 1 went to lodgings, 3 removed to the suburbs, and 1 to the country, leaving 1 to be otherwise accounted for. The remaining 28 families occupied dwellings larger than three apartments; and of these, 3 removed to houses of the same size, 1 to a larger, and 23 to smaller, leaving 1 to be otherwise accounted for. The general result is that only 13 per cent. of the families displaced by our operations removed to smaller houses, even if we estimate the comparative size on the rough basis of the number of apartments, while 20 per cent. removed to larger.

In a sanitary aspect, the meaning of the size of a house depends upon the relation between the number of the family and the capacity of the house. Applying this test also, the results are satisfactory. Both in May, 1874, and May, 1875, it was found that the average number of inmates in the houses of one apartment into which those families assorted themselves was decidedly less than in those which they had left; that in houses of two apartments also the average number was less, though not so decidedly; while in houses of three apartments and upwards the numbers were considerably greater. All this is just as it should be. The operations left the families displaced living in houses better adapted to their numerical requirements than those in which they found them.

This fact is all the more important and gratifying when we turn to the matter of rental, and observe that, of all the changes forced upon those people, that of increased expenditure for house-rent was the most decided, and very probably to themselves the greatest and most obtrusive. For every class of house there was an increase of rent, amounting to 20 per cent. on the old rental of a one-apartment dwelling in 1874, and 17 per cent. in 1875; to 20 per cent. on the old rental of a two-apartment dwelling in 1874, and 21 per cent. in 1875. The purely fictitious nature of the accommodation provided in these wretched dilapidated properties is made glaringly manifest by the comparative rental of the houses above two apartments. To say that a dwelling of three or four apartments could only be got in the new localities at an increase of 50 to 58 per cent. over the rental of the same size of dwelling in the old localities is to misrepresent the case and do an injustice to the honest landlord quite as great as would be the quotation of the prices of the merchant of adulterated

goods against those of the fair dealer. The same remark applies to the smaller houses, though not to the same extent. What would a house of one apartment be at 2s. 6d. or 3s. 6d. per month, or a house of two apartments at 5s. per month, or a house of three apartments at 5s. 10d. per month, or one of four apartments at 7s. 10d. or 8s. 6d. per month? Yet these are all quotations of rents actually paid. A house means something more than a hole. The burrow of a Bosjesman is not a house. But are there people in our large towns who can contribute no more monthly towards the provision of a dwelling-place than such sums as these? If there are those, for the public safety and for the sake of our civilisation, philanthropy or taxation must provide for such, but my experience does not lead me to believe in their existence, except as the product of vice and improvidence. My invariable experience is that in those hovels you do not find those who are poor from necessity of circumstance, but those who live by unlawful callings or who divert from their families and their houses every possible penny in order to spend it in self-indulgence. In 1865, in his Report to the Privy Council on the Housing of the Poor in Towns, Dr. Hunter said: "From one point of view, crowding in Glasgow means the diversion of income from rent to supply whisky." The same remark, I have no doubt, applies to the same class in all large towns.

Another item in the changed circumstances of those people which admits of numerical statement is the method of excrement disposal. In 1874 we found that only 4½ per cent. of the families displaced had water-closets, the remainder using ashpits and privies. In their new abodes 13½ per cent. were supplied with those conveniences. In 1875 the proportion was increased from 7 per cent. to 14 per cent. by the compulsory change. Here, again, we must call your minds to the improved conditions which cannot be expressed by bold figures. The ashpits and privies of the new localities are much more inoffensive and innocuous than in the old, where, from want of space, they were close to the dwelling-houses, often at the bottom of enclosures, which were simply pits or tanks, in which the foul effluvia stagnated, and surrounded by windows through which they passed freely into the houses. In the new localities also, in 1874, 63 per cent., and in 1875, 45 per cent. of the water-closets were situated, not in the houses, but on the common stair; indeed, but for this I should hesitate to enumerate among the advantages of the change the fact that houses of this class were provided with water-closets. It is scarcely possible to find a position in a house of four or five apartments where a water-closet will not be a dangerous nuisance; and it is simply abominable to introduce such a thing into a house of three apartments or less. Apart from those objections on the ground of space and structure, there is this other of wider application, that a certain amount of culture and intelligence is necessary for the proper management of those social conveniences; and wherever a water-closet is common property, as a rule it is abused: it is essentially suited only for the use of one family living in a self-contained house. In Glasgow, unfortunately, where we have proved that our Improvement Trust operations are increasing the proportion of our excretions which passes into the sewers, we have not seen the last of the nuisance. We are increasing the pollution of the Clyde beyond the increase proportioned to the growth of our population; but, after all, in relation to public health, it is a question of degree. On the one hand, we have the filthy ashpit or privy in our confined courts and yards; and, on the other, the filthy river flowing through a long open space, and exposed freely to the open air. Still it is not a case of "How happy should we be with either," but how gladly would we part with both.

The last of the immediate and numerically measureable results of our demolitions, is their effect in accomplishing the dispersion of our population more equally over the area of the city. We shall discuss the matter of density and its relations to health immediately; but meanwhile we shall assume that the expulsion of the masses of the community from the centre outwards is at once to effect an improvement in their general hygienic position. We must go down into the city to earn our bread, but the nearer to the outer verge we can sleep and rear our families, the better in the aggregate. The Cross may be taken as the centre of the city of Glasgow, being almost equidistant from all points of the municipal boundary, and also the nucleus round which the city has grown—the oldest, most densely inhabited, and most unhealthy part of it. The general result of our investigation in 1874 was, that before our operations only 27 per cent. of the families displaced lived beyond half a mile from the Cross, but that afterwards no less than 60 per cent. were dispersed to various stages beyond that distance, 2 per cent. flowing over into the suburbs. In 1875 we found that, as in the former year, before being disturbed, only 27 per cent. lived outside a circle within half a mile radius from the Cross, but that afterwards 54 per cent. had settled down outside that circle, 1 per cent. having gone to the suburbs. In each year the rest of the wave of dispersion was at the three-quarter mile circle from the Cross. If we confine our attention solely to the families primarily displaced, the internal movement resembles that of a wave gathering up to a crest, then breaking and flowing outwards in a diminishing stream: but if we have regard to all the units of a population in whose midst this commotion takes place, we shall discover a process of displacement and substitution whose only limits are the very outer confines, not merely of that which is artificially termed Glasgow, but of that great community of which Glasgow is the vital centre. Those people go into cast-off houses just as they wear cast-off clothes, and the demand is met by "making-down" houses, connecting one large into a cluster of small—a process to which I shall not allude further than to say that it is rapidly reproducing the evils to get rid of which we are expending so much money.

Such are all the facts capable of statistical expression concerning the sanitary results of the Glasgow Improvement Act which I can adduce. They are, you will observe, facts concerning the very people whom the operations of the Act immediately affect, and they are the immediate effects upon those people. As to the ulterior effects upon the health of those people, and upon the health of the general community, I am not yet able to speak. A necessary condition of all effects upon health is time. On general principles, we believe that all the changes to which I have given numerical expression are of a nature to benefit the citizens involved in those changes: but for the manifestation of those benefits, until they also admit of statistical expression, time for their development is absolutely essential. It seems to me they have begun to show themselves, but it would be premature to appeal to figures in proof of our belief.

I may, however, allude shortly to other procedures under the Improvement Act which have been adopted in the direction of the amelioration of the unhealthy conditions of city life. The first of these is the provision of common lodging-houses. In the course of our investigations we found that between 3 and 4 per cent. of the families displaced went into lodgings. The keeping of lodgers is quite a feature of small house-keeping in Glasgow, and a very unpleasant one it is, both in its social and sanitary aspects. At the census of 1871 it was found that 23 per cent. of all the families kept lodgers, and the practice prevails among those who must necessarily sacrifice both decency and health in the exercise of it. Even of families living in one apartment, 14 per cent. had lodgers, and of those in two apartments, 27 per cent. As three-fourths precisely of all the dwellings in the town are of that size, you will understand what an important element in the community in every aspect is the unattached lodging population. To my mind, the introduction of lodgers into the family circle of those small houses is to be regretted and discouraged. In a one-apartment house it is simply abominable to contemplate; and in all cases the close personal contact and want of privacy either of the general or family functions which must prevail are made doubly injurious, morally by the introduction of strangers, besides the physical injury of overcrowding. Of this, lodgers are the frequent cause, being crammed into houses which, without them, would afford tolerably decent and wholesome accommodation to the natural inmates. Hence, as the Scotch Registrar-General pointed out in his Report on the Census, "the larger house for the operative, built with a view of effecting the better separation of the sexes, is in reality found to have no such effect; but, on the other hand, holds out an inducement to him to crowd his family to a greater extent than when he occupies a house of one or two rooms" (vol. ii. p. 35). In destroying those fictitious houses, let at nominal rents, which I have described, the Improvement Trust were adding to that vagrant class of people who occupy common lodging-houses, and for them only did they of themselves provide accommodation in the shape of large lodging-houses, with day-rooms, lavatories, and every convenience, where each has a separate bed, and the use of a cooking-range and utensils, at the charge of 3½d. per night. They are each under the charge of a superintendent, and are kept in admirable order. They are self-supporting, and return 5 per cent. on the capital expended.

From this we may have some idea how lucrative the lodging-houses provided by private enterprise must be.

Now we come to the most important branch of all improvement schemes—the reconstruction, the provision of buildings for the people displaced, and their supervision so as to check the upgrowth of like errors of plan and occupation. In a memorandum addressed to Mr. Secretary Cross, and contained in papers presented to Parliament before the introduction of the Artisans' Dwellings Bill, the sub-convener of our Trust (Bailie Morrison) says—"We do not build houses, as a sufficient number of these are erected by private enterprise to meet all the wants, and no case of real hardship is known. The houses now built are under restrictions (so far as within the Glasgow municipal boundaries only—see Glasgow Police Act, 1866, particularly clauses 370 and 371, through which provision is made for ventilation, etc.), and these are rigidly enforced in every case. We are opposed to competing with private enterprise, as such a course checks building. Neither do we consider it prudent to become philanthropic landlords—to let houses below the actual rents to any class, as this has a decided tendency to pauperise and destroy that feeling of independence in our working-class population to which they are already too prone." I do not question the propriety of this decision to leave to the action of the ordinary law of supply on commercial principles for the demands of a public necessity; but it ought to be an essential condition of such a decision on the part of a local authority carrying out such operations that they have the power of impressing upon the new buildings of the present all the sanitary lessons of the past—that, in short, they should have a liberally constructed Building Act. This we unfortunately do not possess in Glasgow, as is sufficiently manifested by a resolution of the Committee of Health, of date January 18, 1875, to this effect:—"The attention of the Committee having been directed to the evil effects resulting from the occupation of buildings of a certain construction now being erected in different districts of the city, particularly tenements of dwelling-houses erected on what is known as the hollow square system, the Committee remitted to a sub-committee of their number, along with the medical officer and master of works as a special committee, to examine these buildings relatively to the width of the adjoining streets, and open spaces inside of these squares, and to report what steps should be adopted by the Board in reference thereto."

I shall not occupy your time with any details of the defects in the powers of the local authority over new buildings, noted and reported by this Committee. It is enough to state that they were numerous and most important, and that their labours resulted in the appointment of a deputation, which waited upon the Home Secretary and Lord Advocate, and strongly represented to the Government the necessity of statutory provision for the enforcement of a uniform system of building regulations in the cities and large towns of Scotland, and beyond the boundaries thereof, within a certain defined radius from the centres of such cities and towns, according to their population and area. The important lesson which I wish to impress upon your minds is this: that to enter upon any large scheme of demolition of the dense unhealthy areas of large towns, without first looking narrowly into the existing building regulations, is to adopt a course which necessitates extensive reconstruction and erection of new buildings, without a sufficient guarantee that they shall not, in any degree, reproduce the evils of the old, and, indeed, shall be in all respects the best that the most advanced sanitary requirements can demand. Let the example of Glasgow therefore, be a warning to other communities. A full quarter of our total inhabited houses have been erected since 1866, when our Improvement Act was passed, and of that quarter 93 per cent. were dwellings of one, two, or three apartments. Yet while we have enforced all the powers we possess of regulating those new buildings, and while they are undoubtedly improvements upon the old, we confess that we have let slip a golden opportunity of erecting a model city.

The operations to which I refer have enhanced enormously the value of property in the city and of land suited for building purposes in its neighbourhood. The tendency of both is always upwards in the vicinity of towns; but the artificial stimulus of those extensive central clearances, and the outward pressure caused thereby, have, in Glasgow, added to house property and land all at once a marketable value which in ordinary circumstances would have been the slow incitement of years. In this way the great problem which presents itself at the very outset of any attempt to provide working-class houses on commercial principles has been rendered still more difficult of solution. I mean the value of land, the primary cost of sites for buildings, and the difficulty of so planning our buildings as to secure a sufficient return upon capital, and yet not overlimit and overcrowd the soil. It seems to me that the question of the health of towns has now passed out of the hands of the architect, the engineer, and the capitalist. Speaking, for the moment, in a representative sense, I do not feel called upon to be architect, and economist, and hygienist all in one. In the latter capacity I am prepared to lay down general principles, and to criticise and approve, and unless it be that architects cannot draw plans which will satisfy both the hygienist and the capitalist, I see no reason why I should be asked to do more.

However the task of providing healthy houses is to be accomplished, I believe our knowledge of the necessary conditions is sufficiently advanced, and our convictions of their practicability sufficiently clear, to warrant the Legislature in taking the same position as in the case of trade nuisances, and say these are our conditions, and you must comply with them. It was never intended that cities must either cease to grow or become huge sarcophagi, because architects and engineers could not satisfy the hygienist on the one hand, and the capitalist on the other.

It is somewhat remarkable that in the endeavour to work out this problem of house accommodation and high-priced land, you, in the south, are turning with favour to the flatted system of tenements, on which we in the north look with misgivings. It requires no great consideration or exercise of ingenuity to discover that the simplest way to solve the problem of dear land is to build upwards into the air. Still you will readily understand that the public of Glasgow, paying a yearly tax to disperse densities averaging 800 to the acre, convinced that they were building houses too tall, and packing them too closely in districts which did not carry about a fourth of that number, and only just recovering from the alarm of a death-rate of 66 per 1000 under the smothering blanket of the previous winter's fog, were startled in the spring of 1875, when news was brought to them from London, that people were being exhibited there, living in tall tenements like steeples, seven flats high, and 1600 to the acre. You may fancy with what eagerness and anxiety the officials and members of the corporation seized the first chance of being in the metropolis to go and see this wondrous sight. I must add that when the Chairman of our Health Committee, our Master of Works, Dr. Gairdner, the late Medical Officer of Health, and myself looked upon those erections in Farringdon-road, we recognised too much of the features of the High-street and Salt-market, to take readily to the belief that we saw before us a solution of the question of house accommodation for urban communities. Still, a rash inference or a misleading statement, uttered with authority, often gives much trouble to persons who are striving for a principle, and from the amount of attention which the above statement has attracted in Glasgow, it seems worth while to look narrowly into it. I wish also to add, that while reference is made to one set of model dwellings alone, I have various others in London, such as the Peabody, Corporation, Waterlow, etc., in my mind also, to all of which the same criticisms apply as in the case of the buildings specially quoted.

In February, 1875, Mr. Charles Gatliff, Secretary to the Metropolitan Association for Improving the Dwellings of the Industrious Classes, read a paper before the Statistical Society of London "On Improved Dwellings and their Beneficial Effect on Health and Morals, with Suggestions for their Extension." It is an extremely able, exhaustive, fair, and, on the whole, accurate statement of the facts as regards the dwellings of the Metropolitan Association, to which the flatted tenements in Farringdon-road belong. I am anxious that nothing in the way of adverse criticism which I may make shall be taken as depreciatory of Mr. Gatliff's services in compiling such a paper. The Association was incorporated by Royal Charter in 1845, the dividend being thereby limited to 5 per cent. as the maximum. It has provided accommodation for 4150 persons in flatted tenements in London, and for 1150 in cottages in the suburbs, to which gardens are attached. The tenements are built in blocks from five to seven flats in height, standing vertical to the street. (The cottages range in size from two to six rooms, and in rent from 5s. to 7s. 6d. per week; the dwellings in flats range in size from two to four rooms, and in rent from 4s. to 9s. 6d. per week.) The average density of the inhabitants of those dwellings is 1140 to

the acre. At one part of the paper the mortality is said during the last eight years not to have exceeded 14 per 1000; and I have seen this quoted repeatedly, although it is an error as we find from Table IV. that it has ranged from 15 to 18, per 1000. The birth-rate was 36 per 1000. The death-rate of all London in the same time averaged 24, and the birth-rate was 34·5. The financial results are, that for 1875 the maximum dividend of 5 per cent. was paid, and for the five previous years 4½ per cent.

There are various minor criticisms which occur to me upon this paper, which I may rapidly mention before proceeding to the main question of principle involved. First, the average death-rate of those model dwellings in eight years is 16 per 1000, calculated from Mr. Gatliff's data; but you will observe these are derived from all the buildings, urban and suburban, making twelve widely scattered groups of persons. It is eminently unsatisfactory to test such a system of building as the flatted tenement by throwing along with its statistics those of self-sustained cottages with gardens, which everyone admits must be a sanitary Arcadia. And in the discussion at the Statistical Society, a member "begged to submit that the death-rate was entirely fallacious, inasmuch as a considerable number of the inmates of these model lodging-houses died in the hospital." I put this by letter to Mr. Gatliff, and find that this has not been inquired into. Another circumstance to be discounted from the value of Mr. Gatliff's death-rates is contained in his own description of the process of selection of the population from which they are derived. In his own words, "the inmates of these model houses always undergo a twofold process of selection; that is to say, the inmates first select the model lodging-houses as harmonising with their own decent tastes, and are then chosen from a larger list of applicants, according to the discretion of the managers of these institutions." In short, the inmates as well as the houses are models. Again to quote Mr. Gatliff, "at each of these establishments a superintendent resides, to collect rents, supervise, and make himself generally useful; and there is a labourer to execute repairs, also residing on the premises. These men, in performing their duties, become acquainted with the tenants, their occupations and pursuits, and soon detect any drunkards, brawlers, prostitutes, receivers of stolen goods, or other bad characters, who occasionally resort to improved dwellings to evade suspicion." I only ask you to consider what influence on the death-rate of almost any sort of property would be exercised if the landlords set themselves thus to eliminate all the "drunkards, brawlers, prostitutes, receivers of stolen goods, or other bad characters."

But the point to which I wish most particularly to direct your attention is the imperfect and fallacious ideas of density which pervade Mr. Gatliff's paper and underlie his inferences; for example, in such a passage as this: "When we consider the diminished rates of mortality and disease which accrue to the tenants in them, notwithstanding that the average population is at least four times more to the acre than in the most densely populated parts of the metropolis, we have an irresistible argument in favour of the increase and extension of this class of buildings. In Westminster, which is the most densely populated part of the metropolis, the population is only 235 persons to the acre; whereas in the dwellings provided by the Metropolitan Association, including in the areas the large courtyards and gardens attached, the average is 1140 to the acre; and yet the rates of mortality and disease are at the low figures just stated." In a foot-note, it is added: "In one instance (that of the Farringdon-road Buildings) the population is 1625 to the acre."

In the passage quoted, Mr. Gatliff contrasts the density and mortality of Westminster with what he calls the density and mortality of his dwellings. In the former, we have 235 persons per acre, and a mortality of 27 per 1000 (the average of last decade for Westminster registration district); in the latter, we have 1140 per acre, and a mortality of 16 per 1000—nay, we have even 1600 per acre in one building; and yet see what material advantages remain. The question of whether 16 is or is not the mortality, is of little moment. We have at present to ask, is this a logical comparison? and I have to answer that it is not. An essential condition of the notion of density, and an element which enters into its very definition as a law, is not the rate, but the area over which the rate prevails; and that area must be a continuous area, not formed of patches only brought together upon paper for statistical purposes. But Mr. Gatliff takes districts of land dotted all over the metropolis, with the flatted tenements thereon, and his cottages in the country with their gardens; adds together their area and their population, finds the proportion is 1140 to the acre, calls this their density, and then contrasts this with the density of between two and three hundred continuous acres in Westminster, and, by implication, with all that we know of the relation of density and death-rate, as illustrated in three decades of the Registrar-General's Returns, derived from square miles of country, urban and rural! Could anything be more fallacious? The fact is, the density of those buildings and cottages is simply that of the district in which they stand, if taken individually; and, if collectively, that of the metropolis as a whole, viz., 45 per acre. If you have 800 people living on half an acre of ground in the middle of Hyde-park, that does not mean that they are living at a density of 1600 per acre; they are living upon the density of the surrounding acres. If such a block of buildings were transported into the midst of a semi-asphyxiated city, such as Glasgow, where every patch of soil has already been utilised, and the general stock of air is poor, the death-rate would soon adjust itself to the actual density. In short, we may be sure that, while the seven-flatted tenement, carrying 1600 per acre of the area of its own site, may be a satisfactory solution of the difficulty of ground-rent and cheap house-accommodation, as between the architect and the individual capitalist who holds the ground or builds the tenements, it would be ruinous for the health of the community if applied to a large area, and intolerable, unless the Government or the local authority provided lungs in the shape of free space, on the bounty of which the tenants would live.

A few minutes ago I referred to Glasgow as a "semi-asphyxiated city," and I used the term with deliberation, as I believe that it is on the quality of the air that density of population most certainly tells. The influences on earth and water may be combated and diminished with comparative ease; but it is to a great degree inevitable that, except in so far as purity of earth and water lessens the impurity of the air, density must carry with it aërial contamination. In cities we have a conjunction of circumstances, all which co-operate to throw an excess of impurity into the air, and also of circumstances which obstruct and impair the natural arrangements for the reduction of those impurities. Just let me give a few details of my own city relative to this matter. What is called Glasgow, and for municipal and statistical purposes is embraced under the name, occupies an area of 6033 acres, of which, we may say, 1000 are unbuilt upon, but available for building; while 282 are devoted to public parks, and 137 are graveyards, of which 120 are still in daily use. On the remaining 4614 acres, there were congregated, in 1875, 534,560 human beings, of whom three-fourths lived in dwellings of one and two apartments; 8200 horses in 2300 stalls; 1770 cows in 330 cow-houses; 1370 pigs in 140 piggeries. Each of these collections of animals has its attached heap of manure or refuse; the human animals having 7000 ashpits, or ashpits and privies with pans, the superficial area of which, at a moderate computation, will be four acres and a quarter, and probably a third of this area is covered with a mixture of night-soil and ashes or night-soil alone. The emanations of this area are more injurious than if it were really continuous, as these ashpits and privies are all situated in confined courts, or inside those hollow blocks in which the Glasgow tenements are always built. Add to this the products of combustion of coal, poured out from hundreds of factory stalks and thousands of domestic vents, and of some sixteen hundred million cubic feet of gas which are consumed, besides three million cubic feet which leak into the soil; then look at the hindrances thrown in the way of nature by our block-buildings, which are so many boxes of stagnant air; by our back buildings standing inside those boxes; by our narrow streets and tall tenements; and at the subversion of the cycle of nature by the abolition of vegetation, partly through our avarice of the soil, which will not leave a yard to its natural uses, if possible; partly through the density of our atmosphere, which kills all trees, and in some places even grass, so that the influence of Glasgow is like that of a flight of locusts, it leaves not a green thing behind. Can it be a matter of surprise that bronchitis, consumption, and other diseases of the lungs constitute, year by year, from 31 to 38 per cent. of our entire mortality. The same fatal prevalence of pulmonary disease attends all urban communities, more or less; and when the sources of mortality are compared with the density of large areas over decades, it is found that they show characteristics consistent with, and proportioned to, density. Sometimes this tendency to asphyxia in our large cities is

brought out in an appalling manner by passing physical changes, which temporarily itensify all those obstacles to the purifying efforts of nature which we have enumerated. Such are the effects of combined cold and fog, of the influence of which an illustration was furnished in London in December, 1873, when the death-rate was pushed up to 38, and the cattle in the Christmas show at the Agricultural Hall died in great numbers, manifestly choked. But more shocking was our own case, in December, 1874, when, during a ten days' continuous fog, ending on the 31st of that month, the death-rate of Glasgow reached the unprecedented point of 69 per 1000 in the week ending January 2—this rate being calculated from the date of death, and not merely from that of registration, which at such a season may be unduly defined. And what were the causes of those deaths?—of the total 700, no less than 372 were pulmonary, only 107 were zymotic, and the remaining 221 were from other general causes. So that, simply by drawing the curtain of the fog over a city during a time of intense frost, it is possible, under those circumstances of constantly impaired aëration of its organic effluvia, to well-nigh stifle it, and cause a mortality to which zymotic disease contributes comparatively nothing; and which, indeed, it seldom occasions under such degrees of prevalence of pestilence as are known in modern times in the temperate zone.

We are thus led up to the consideration of an exact measurement of density as a factor in relation to health. The simple numerical statement is subject to so many modifications by association with varying conditions in the other circumstances of the vital units, that it is very desirable to obtain some compendious exact expression of the meaning of density in each case. This would probably be afforded by analysis of the air. So far as density of population is a factor of disease, it must have a corresponding density of air, and thus the chemist could detect where, under given circumstances, we pass from a degree of density consistent with health in those circumstances to one productive of disease. I need not remind you that, through the laborious investigations of Dr. Angus Smith, the most important of which were expended upon the air of the neighbouring city of Manchester, the outlines of the chemical climatology of cities have been clearly shown, and the chief difficulties of method have been overcome. When we recollect the special provision made by the laws of diffusion of gases for the dispersion of carbonic acid, we can estimate the importance of the establishment of the presence in excess of that gas in the atmosphere of cities. It prepares us to expect the presence also of foreign ingredients in the shape of solid particles of animal and other matter, which, unaided by pneumatic laws, depend for their dispersion upon mechanical transport by the fluid medium in which they are suspended. It is to this atmospheric dust, and the products of that portion which is organic, that modern pathology leads us to attach most importance, and also that modern chemical processes have made most advance in their power of estimating. The mechanical obstacles to the effective operation of the laws of diffusion which accompany density of population tend to the accumulation in the lowest atmospheric strata in which we live of a microscopic sediment that is both mechanically injurious to life and productive of chemical deterioration in the quality of the vital air.

I have long thought that the most important aid which chemical science could furnish to public health would consist in the systematic publication of analytical reports on the quality of the air we breathe, similar to those which are habitually furnished of the water we drink. Angus Smith says—"It was a great day for the world when air was found to be something material, and to be capable of weighing down the scales of a balance"; but what he says in the previous sentence—"when we are children, air is nothing"—is nevertheless true of the ordinary thoughts and conceptions of air current in the minds of the general public, whose intelligence is really the measure of sanitary progress. It is not what Angus Smith teaches, but what our mayors and aldermen, provosts and magistrates, believe and have some rough practical apprehension of, that will sustain and give effect to a medical officer's denunciation of overflowing middens, building in hollow squares, narrow streets, unconsumed smoke, and those other details which contribute to the great sum of aërial deterioration.

A short while ago, at my suggestion, the Health Committee of Glasgow resolved to give some assistance in the analysis of the air, in the healthy and unhealthy parts of the town, to Mr. Dixon, a gentleman who placed his personal services at our disposal without fee or reward. He has expended much time, ingenuity, and skill in devising an apparatus for the collection of the impurities of a large quantity of air in a short space of time. Even if it were prudent, at this stage, to enter upon any description of his arrangements or account of his analytic processes, I should only spoil an interesting subject through lack of chemical knowledge. Mr. Dixon will probably be in a position to make some provisional communication on the subject at the meeting of the British Association in Glasgow in September next. The quality of their air is well worth the attention of all large towns. We may shortly expect some interesting and valuable results from the city of Paris, which, in April last, resolved to devote an annual sum of 12,000 francs for meteorological observations in various districts of the city. They are to be carried out under M. Marié-Davey, director of the observatory of Montsouris, on the outskirts of Paris, and, besides the ordinary facts of meteorology, are to include atmospheric electricity and the comparative composition of the air. Before receiving this commission from the municipality of Paris, M. Marié-Davey had been gradually introducing air-analysis into the routine work of the observatory, both directly, by automatic continuous air-washings, and indirectly, by the analysis of the rain-water. Since 1865, indeed, ozone estimations have been continuously made at twenty different stations in that city, of the results of which M. Marié-Davey gives a diagrammatic summary in the monthly report of his observatory for May last. From this it appears that while ozone abounds towards the periphery and in the open parts of Paris, it is present only as a trace in the denser central quarters. The fact of the recognisable presence of ozone, even in the populous parts, is something to boast of. The contents of the Montsouris monthly reports are very interesting. Much attention is being given to the photographic delineation of the microscopic particles of the atmosphere, as well as to the products of culture experiments with the living organic portion; and it looks like progress in the right direction to find a systematic table of "Matters contained in the air and rain" of each month, showing opposite each day, for the period of the day and the night, the proportion, in 100 cubic metres of air, of ozone, carbonic acid, ammonia, nitric acid, and organic matter, and per litre of rain-water, of ammonia, nitric acid, saline residue, and organic matter. Similar systematic comparative information, collected at different points in the same city, will soon supply a solid structure of fact regarding its comparative hygienic conditions. The next step in the use of air-analysis will be as evidence in the enforcement of sanitary work, in matters of ventilation, defective structure, and nuisance removal, which at present are decided on the evidence of the senses or of experts—authorities which may differ. We have only to imagine that, to prove the impurity of the water of a well sunk in the neighbourhood of a cess-pit, we were deprived of the assistance of chemistry, to understand how great is the want of this assistance in the parallel case of air in alleged pollution from whatever cause.

Statistical Society—"Howard Medal."—The following is the title of the essay to which the medal will be awarded in November, 1877; the essays to be sent in on or before June 30, 1877: "On the Condition and Management—past and present—of the Workhouses and similar Pauper Institutions in England and Wales, and their effect on the Health, Intelligence, and Morals of the Inmates." Further particulars or explanations may be obtained from the Assistant-Secretary, at the rooms of the Statistical Society, Somerset House-terrace (King's College entrance), Strand, London, W.C.

School for Pauper Imbecile Children.—The old London Orphan Asylum at Hackney is at present temporarily occupied by the Metropolitan Asylums Board; and although it is far from being a fit building in a sanitary sense, it is filled with 500 imbecile pauper children of the metropolis, who would otherwise be in the various workhouses, or the imbecile establishments of the Board at Leavesden and Caterham. On Saturday last the Board, under the presidency of Dr. Brewer, accepted the tender of Messrs. Perry and Co., at £59,000, for the erection of new school buildings at Darenth, a most salubrious spot on the chalk formation, about two miles to the south of Dartford, in Kent. The buildings are designed by Messrs. A. and C. Harston, architects, whose plans have received the approval of the Local Government Board.

ORIGINAL COMMUNICATIONS.

CLINICAL STUDIES.

By Sir JOHN ROSE CORMACK, Chevalier of the Legion of Honour; F.R.S.E., M.D. Edin., M.D. Paris;
Fellow of the Royal Colleges of Physicians of London and Edinburgh; Physician to the Hertford British Hospital of Paris.

II.—Recovery in a Case of Insanity accompanied by Incomplete Hemiplegia.

Paralysis, hallucinations, delirious conceptions of grandeur, and other symptoms, after being carefully examined and weighed by the physician, frequently lead him to adopt an unfavourable prognosis in the cerebral affections of patients whom he has afterwards the supreme satisfaction of conducting to complete recovery. The study of such cases is intensely interesting and instructive. They tell us cheeringly, moreover, that there are circumstances in which we are justified in hoping against hope. The case about to be described is one of the many which strongly teach this lesson, so beneficially sustaining both to patients and practitioners in every department of therapeutics.

The case to be described may be read as a little supplement to a valuable series recorded by Baillarger in the fourth chapter of his unfinished work on the Symptoms of General Paralysis in their Relations to Insanity.(a) This chapter is entitled "Insanity from Congestion, attended by severe symptoms of General Paralysis, and terminating in Recovery" ("Folies congestives avec symptômes graves de Paralysie Générale, terminées par la guérison"). The thirty-six cases recorded in that chapter, and fifteen others described in the third chapter of the same work, furnish examples of different forms and varieties of insanity which the author groups together under the term "congestive." In some of the cases there occurred delirious conceptions of grandeur, associated with inequality of the pupils, and muscular excitement. In other cases there occurred hypochondriasis, trembling of the limbs, stupor, unequally dilated pupils, and cutaneous anæsthesia. In other cases, again, along with the symptoms now enumerated, there existed an intermittent thickness of speech, and a shuffling, dragging gait, suggesting that there was a greater amount of pressure consequent upon a greater amount of congestion. Baillarger regards "congestive insanity" as frequently curable, and maintains that it is different from primary paralytic dementia, commonly designated the "general paralysis of the insane" in English works. The greater number of Baillarger's cases of congestive insanity are considered by many as cases of the general paralysis of the insane in its first stage. The opinions of Baillarger regarding congestive insanity (*folie congestive*) and general paralysis (which latter he considers as entirely different from lunacy) are personal to that eminent physician; they have not yet been adopted by the profession in France or elsewhere. Whatever view is correct as to the pathology of cases now under consideration, it must be admitted that they can seldom be distinguished, except by the fact of being cured, from hopeless cases of the general paralysis of the insane. The practically important matter is to study the circumstances under which the recoveries take place, and to inquire whether nature has suggested a rational means of cure.

On March 12, 1875, I received a telegram requesting me to visit that evening, at a certain address, Miss A. B., a lady stated to be then on the road from a distant town to Paris, accompanied by a female attendant, who was the bearer of explanatory letters. When I reached the house indicated in the telegram, I was informed that the patient had arrived about half an hour previously, much exhausted in body and very excited in mind. With difficulty she had been induced to go to bed. As the attendant could not leave her charge, even for a few minutes to speak with me in private, I was at once ushered into the presence of my patient without receiving any information as to the symptoms or nature of her malady. Certain letters, however, as I entered were placed in my hands. The room, when I entered, was imperfectly lighted by a candle at some distance from the bed on which the patient lay, and to which I advanced to reciprocate what I erroneously had supposed to be her courteously offered hand of welcome. I almost at once discovered my mistake, and concluded that the lady was in an unsound state of mind. As I approached, she implored me to keep away from the bed lest I should hurt her sleeping baby. I said that I would avoid touching the baby, which quieted her for a few minutes. She soon, however, began in an excited manner to address me on a variety of subjects, sometimes as her husband, and sometimes as her banker—her great wealth and her social position being the burden of her discourse. Her articulation was thick and difficult. She was an elderly maiden lady of comfortable means; but she believed that she was a married lady travelling in great state, with a very rich husband and first-born son. I soon discovered that she had several hallucinations and delusions, the idea which dominated being that she was the mother of an infant, once stolen, and constantly in danger of being taken from her. This she knew, she said, from having overheard the servants and others conversing on the subject during the night. Aided by a good light, I carefully examined her. She had distortion of the muscles of the face, and a dribbling of saliva from the mouth. The right arm and leg were colder than the left, and had very little muscular power. There was scarcely any grasping power in the right hand. The head was hot, the face flushed, and the pulse feeble and quick. The radial arteries were hard and rigid under the ordinary pressure of the finger exerted in feeling the pulse. The tongue was dry and loaded. I was told that the bowels were confined, and that the urine was scanty. During her journey of thirty hours she had scarcely slept, had taken very little to eat or drink, and had all the time been more or less excited.

The immediate indications being to induce sleep, calm excitement, and support strength, I ordered some good soup with a little brandy to be given at once, and cold beef-tea abundantly during the night as a drink when she was awake. I also prescribed cold to the head, a mustard foot-bath, and a mixture containing fifteen grains of chloral and thirty grains of bromide of potassium and thirty drops of the Brit. Ph. solution of the hydrochlorate of morphia. One-third of this mixture was ordered to be given every two hours, unless sleep were previously obtained.

It is here important to mention that the attendant assured me, in reply to repeated and variously put questions, that the patient had not exhibited any difficulty in articulation, nor any signs of paralysis of the face or limbs, up to the time of her leaving for Paris, and that neither had been remarked till about an hour before I saw her. She admitted, however, that for a month or six weeks the lady had been sleepless and troublesome at nights, sometimes violent and noisy, full of strange fancies, feeble in walking, and subject to a dribbling of saliva from the mouth.

On my visit next morning, about ten o'clock, I found that the patient had taken the whole of the calmative mixture, and that after the last third she had fallen into a quiet sleep of nearly two hours. She was calmer in manner, cooler in the head, less flushed in face. Her bowels had not been relieved. The urine passed was scanty and turbid. The hallucinations differed very little in character, though considerably in expression, from those of the previous evening. The baby was no longer with her in bed; it had been "taken out to the beach by the nurse." She apparently fancied herself in an hotel at Biarritz. She sometimes spoke of her husband as absent on a journey, and the next minute she declared he was in an adjoining room. Her condition was that of excited bewilderment, which she herself admitted, explaining it by saying that she had been travelling so much and so rapidly for weeks past, and had been in such constant fear of her infant being stolen, that she hardly knew where she was or who she was. As there had been no alvine evacuation, I prescribed a cathartic draught, to be followed, if necessary, by an enema in three hours.

I returned in the afternoon. She had had an abundant stool, and was stated to have been much quieter since that occurrence. In other respects she was very much as in the morning. I told her my name when she was addressing me as her husband. She at once said that she had seen me casually three or four years ago, when I was visiting a friend's child in consultation with another physician. She recounted the circumstances pretty accurately, and then suddenly relapsed into her bewilderment.

The dying condition of a near relation prevented any of the family coming to Paris. Under these circumstances, I was-

(a) "Des Symptômes de la Paralysie Générale, et des Rapports de cette Maladie avec la Folie." Par le Docteur Baillarger, Médecin de la Salpêtrière. Appendice au "Traité des Maladies Mentales" du Professeur Griesinger. Paris, 1869. Baillarger's appendix to Griessenger stops short in the middle of a sentence, as if the author had, in despair at the difficulty of his subject, abandoned it.

requested to act as I thought best. Accepting the responsibility, I asked Dr. Magnan to receive the lady into that department of his institution (Château de Suresnes) reserved for non-certificated patients; and on the evening of the day after the lady's arrival in Paris, she was installed at Suresnes, where I visited her from time to time in consultation with Dr. Magnan. When the lady had been there three days, we drew up the following opinion of her case, and transmitted it to her family:—

"We, the undersigned Doctors of Medicine of the Faculty of Paris, met in consultation in the case of Miss A. B., having examined her condition with care, find that she is stricken with incomplete hemiplegia of the right side, accompanied by dementia.

"Miss A. B. has obviously enfeeblement of the intellectual faculties, with confusion and sometimes incoherence of ideas. She has periods of mental excitement, followed by periods of depression. Hallucinations, sometimes of a joyous and sometimes of a painful character, cause her to be at times restless, loquacious, and turbulent. These manifestations occur more frequently by night than by day; they are usually within moderate limits, and Miss A. B. is generally calmed by judicious intervention, and will often give correct answers to questions. From time to time she has attacks of giddiness, noises in the ears, with transient flushings and pallor of the countenance. Together with the occurrence of these symptoms, there is increased mental obtuseness, and sometimes drowsiness, and sometimes a kind of automatic excitement, during which she gets up, walks about without definite purpose, upsets everything, and is evidently not accountable for her actions. These apoplectiform phenomena are transient, and evidently depend upon derangement of the cerebral circulation arising from congestion or ischæmia.

"Miss A. B. has intervals of nearly perfect lucidity, during which, however, we can recognise an impaired mental condition, unaccompanied by delirium. At times she knows what is going on around her, and takes a correct view of the same.

"The derangement of her physical is as obvious as the derangement of her mental state. Her gait is unsteady, and she cannot walk without leaning on some one or on a stick. Her speech is slightly thick. The right arm and leg are the most feeble. Miss A. B.'s general health is much at fault: her appetite is indifferent; her gums are spongy and bluish; her digestion is feeble; her extremities are cold, and her ankles are swollen; the skin is dry, and acts badly. The urine, tested by heat and nitric acid, and by Barwell's solution, gives no indication of albumen or sugar. The arteries at the wrists are rigid. The pulsations of the heart are regular; at the apex, accompanying the first sound, a slight blowing is heard.

"The group of symptoms now described—namely, incipient dementia, transient phases of excitement and depression, apoplectiform phenomena, and incomplete hemiplegia of the right side—lead us to conclude that there is a general lesion dependent on an atheromatous state of the cerebral vessels, and having as its proximate cause a circumscribed lesion—hæmorrhage or softening in the left *corps opto-strié*.

"The prognosis is unfavourable, not only on account of the existing cerebral lesion and the anxious state of Miss A. B.'s physical health, but likewise on account of the possible production or present existence of cerebral hæmorrhage or softening.

"John Rose Cormack.
Magnan."

Weeks elapsed after our opinion was drawn up before the complete materials were received from which the subjoined medical history of the patient is derived. The narrative is simplified by introducing this history before proceeding with the progress of the case from the date of its reception into Dr. Magnan's house.

Miss A. B., till recent years, throughout life enjoyed good health, her only trouble having been a tendency to constipation. Five years prior to her illness in 1875, the menstrual function ceased suddenly without deteriorating the health or causing any inconvenience. About a year after the menopause, she suffered severely from an eruption, which extended over the lower half of the body, and was stated by her medical attendant to be of an eczematous nature. Since that date she has had several attacks of urticaria.

In May or June, 1873, whilst at Schwalbach, she first manifested undue excitement and had hallucinations. For these symptoms she was medically treated. In July, 1874, when at the baths of Ragatz, the symptoms recurred. At this time Miss A. B. managed to elude the observation of her family, and to go away from her home. Two days elapsed before any trace of her was obtained. She was found in an hotel near Zürich. Her peculiar behaviour, and the fact of her arriving without any luggage, excited the suspicions of the landlord, who detained her. She was brought back as soon as found to Ragatz, where she was treated, in the first instance with bromide of potassium, and afterwards with vegetable tonics. She seems to have soon regained her health, and to have then gone to England. In November she returned to the Continent. Her ailments, if they existed, did not attract notice till January 14, 1875, when she was at Mentone. Dr. Siordet was called in on the 17th. That physician, in answer to my inquiries as to some points in the history of the case, wrote me a very interesting letter regarding it on March 29, 1875, from which, in continuation of the narrative, I make an extract.

"I first saw her professionally," writes Dr. Siordet, "on January 17. I was then told that she had been out of sorts for a day or two. On the previous night she had maintained that there were some armed men concealed in the hotel for the purpose of murdering her friends. Under the influence of this delusion she refused to go to bed, went into the bedroom of one of her friends, and there crouched under the bed. I found her dressed, sitting at an open window, the outer jalousies of which were closed. She complained of pain at the top of her head, to which situation she had applied rags soaked in cold water. Her eyes were congested, and her tongue furred. Her articulation was slow, but she conversed in a perfectly rational manner regarding her alarms and fancies of the previous night. She could take no solid food, having a repugnance to it. I prescribed bromide of potassium in repeated doses, and the compound powder of jalap as a purgative. As it was very desirable that no one in the hotel should be disturbed, I also prescribed thirty grains of hydrate of chloral to be taken at bed-time. Next day I found the patient suffering less pain, and decidedly better; she had slept several hours.

"She gradually improved. The chloral was taken for two or three nights only. The bromide was gradually decreased till it was finally given only three times in the twenty-four hours. One of the three doses, given at bed-time, induced sleep. Chicken, subsequently mutton-chops, were eaten at midday. On January 20 and 21, Miss A. B. was able to drive out in an open carriage. On the 22nd I found her quite convalescent, suffering only from weakness, which was indicated by her languid manner. I nevertheless feared a return of the hallucinations, and began to have misgivings as to the issue of the case.

"Early in February she wrote a letter to ——, which betrayed no illness nor failure of mental power. Before Lent she attended a fancy ball at the Hôtel des Anglais. Soon after this her symptoms increased in severity in a very marked manner, the hallucinations being chiefly towards evening. She now became completely insane, and daily lost strength. A special female attendant was engaged, under whose charge she was sent to Paris."

During the two or three weeks which immediately preceded her coming to Paris to be under my care, Miss A. B. was seen by the late Professor John Hughes Bennett, then resident at Nice, and by another English physician, who happened to be at the hotel when the patient was at her worst, just before her departure for Paris. From letters now before me, I gather that both of these physicians looked upon the case as likely to prove one of general paralysis. Their diagnosis and prognosis were very similar to the diagnosis and prognosis afterwards arrived at by Dr. Magnan and myself. Fortunately, we were all in error in our gloomy foreshadowing of the issue.

The treatment of the case was regulated by Dr. Magnan and myself in frequent consultations, and was skilfully and watchfully carried out by Dr. Magnan and his colleagues, Drs. Bouchereau and Lolliet, at the Château de Suresnes, where the patients—lunatic and non-lunatic—have, besides the medical treatment suited to their various necessities, the auxiliary advantages of domestic comfort and an extensive surrounding of beautiful groves and gardens for exercise and solace.

Our first object in the medical treatment was to produce resolution of the circumscribed cerebral lesion and its surrounding hyperæmia. With this view we prescribed 150 centigrammes (thirteen grains and a quarter) of iodide of potassium to be taken in the twenty-four hours. We also

prescribed the regular employment of aloetic pills to the extent requisite to keep the bowels open and induce revulsive action in the pelvic organs and hæmorrhoidal vessels. We also agreed that the patient should take an alkaline general warm bath every third day, and a mustard foot-bath every second night immediately before going to bed. We decided that the diet should be varied in kind and sustaining in its nature, consisting of meat-broth, pounded raw meat, roast meat, fresh vegetables, and a moderate allowance of sherry wine.

From the 15th to the 30th March, no notable change occurred in the patient's intellectual state; the mental faculties remained obtunded. Miss A. B. had occasional fits of automatic movements; she went hither and thither without knowing what she was doing. Sometimes the agitation was caused by various delusions and hallucinations. She continued, for example, to imagine that she was a married woman, and fancied she heard the voices of her husband and children calling her. Several times during the night she endeavoured to leave her bed to go to them. She would at other times clasp her pillow in her arms, caress it, and talk to it in endearing language, as if it were her infant son. When abruptly addressed in an authoritative tone, her mind for a few minutes often seemed to become much more lucid, as was evinced by the tolerably correct answers she then gave to the questions addressed to her. When let alone, after having been interrogated in the way described, she soon relapsed into incoherence and bewilderment.

During the same period—that is, between March 15 and 30—the general health improved. The gums became less spongy. The patient either swallowed or ejected the saliva; it no longer collected in her mouth and dribbled down on her chin and breast. Her appetite was improved. After a period of alternations of diarrhœa and constipation, digestion proceeded in a more normal manner, and the involuntary alvine and vesical evacuations became more and more rare. Her walk became less shuffling, and she raised the right foot better from the ground.

Towards the end of March, a furuncular eruption was visible on the chest, hips, and thighs, as well as on other parts of the body, and ultimately an enormous carbuncle appeared at the nape of the neck. At this period the urine was repeatedly tested for sugar and albumen, without either being found. During April the furuncular eruption continued; some of the boils suppurated and healed, whilst others, their successors, appeared in the neighbourhood. The carbuncle was treated by free incisions, followed by opiated bread-and-milk poultices.

Towards the end of April, Miss A. B.'s intelligence began to awake; her hallucinations were less frequent; she isolated herself less, and did not seek seclusion so much as she had done; she conversed more willingly—followed better a train of ideas—and showed interest and pleasure in the society of those by whom she was surrounded. She asked me many questions of a very natural and proper kind about her friends, and proposed to draw a cheque that I might get money for her to pay her current expenses. Her mind was still at times very confused, and occupied with her approaching marriage. Her husband and infant son seemed at this period to have faded away; and in their room was installed an imaginary lover, to whom she fancied she was betrothed. She repeatedly asked permission to take a railway-ticket that she might go to him. This confused matrimonial delusion was not constant; it seemed to come over her with a bewildering excitement once or twice for a short time in the twenty-four hours, and then to cease or to become so mild as not to attract notice.

She now had better nights; her sleeps were longer and calmer. The muscular debility left her; without fatigue, and with a keen sense of enjoyment, she walked for hours daily in the grounds attached to the institution. Occasionally she took carriage exercise in the neighbouring Bois de Boulogne.

To April 25 she had a weekly alkaline bath. To the same date the iodide of potassium and aloes were continued. During the first fifteen days of May she took an infusion of quassia mixed with her claret at meals. During this period she also took arseniate of soda in daily doses of five milligrammes. From May 15 her improvement was rapid, both in respect to mind and body. Her appetite was good, and from day to day she regained flesh and strength.

During the latter half of May, hardly a vestige of her former delusions could be detected; there was more and more precision in her ideas; her memory became more and more accurate. She began to consider the situation in which she was placed; and received the visits of her relations, with whom she conversed intelligently and discreetly regarding her pecuniary arrangements and future plans. In the many conversations which I had with her during this fortnight I failed to detect any delusions. The resident physicians, however, observed at times a recurrence, in a very modified form, of some of her hallucinations; but she was always able to recognise them, and dismiss them and occasional transient delusions as residuary morbid phenomena pertaining to the state from which she had emerged.

On May 23 I had a long conversation with her regarding her late illness and her then state of health. She urged upon me, as she had on previous occasions, the importance, on account of family affairs, of her leaving the institution in a day or two, and she likewise represented that her physical and her mental state were now quite sound, and did not justify separation from her family; but still she said that if I thought a few weeks longer were required to confirm her cure, she would consent to remain.

On May 31 she drove with me from Suresnes to her banker's and to several shops in Paris, and then, accompanied by her maidservant (who had not been in the asylum with her), left in the evening for Brighton, which she reached next morning without experiencing the least fatigue. To prove that I had done right in sanctioning her journey, she wrote to me, a few hours after her arrival, giving a short account of her comfortable state on the way, and expressing herself very gratefully for the kindness she had received from Dr. Magnan, his wife, and myself.

In October, 1875—more than four months after the patient left Dr. Magnan's house—I had the great pleasure of seeing her in Paris in perfect health of mind and body. She was then travelling with a family party to winter quarters in the South of France. I have since that time heard of her occasionally, and up to this date (July 26, 1876) I have ascertained that her health and state of mind have not given any anxiety to herself or others. The issue of this case may, I think, be correctly called *recovery*. At the same time, it must be remembered that there was observed in this case a state of the arteries which probably led to the effusion of the blood and consequent symptoms; and from the same state of the arteries we may almost expect the occurrence of an attack, or attacks, more or less similar to the first. In subsequent attacks there may be a greater blockade or rupture of vessels, accompanied by a softening of brain-tissue, and leading to incurable disease. There need not necessarily, however, be any new attack: and the clinical teaching of the case is not lessened by admitting this probability.

(To be continued.)

SYMPTOMS OF PATIENTS AFFECTED BY DRINKING CONTAMINATED MILK

SUPPLIED FROM KERSHAW'S FARM (EAGLEY) IN THE EARLY PART OF THIS YEAR.

By EDWARD SERGEANT, L.R.C.P., M.R.C.S.,
Medical Officer of Health, Bolton.

In investigating the epidemic of enteric fever which caused so much havoc in Bolton and the neighbouring village of Eagley, one was struck by the suddenness of the outbreak, by the constant prevalence of certain marked symptoms, and by the direct connexion of attack with the drinking of milk supposed to be contaminated. By far the larger majority of the patients dated their illness from the week ending February 6. Before this several isolated cases had occurred, and after there was a gradual diminishing of cases until February 23, when the epidemic appears to have ceased. The commencement of attack was in almost all cases the same, the symptoms being rigors, pain in head (in more than one instance so intense as to have led the medical attendant to suspect meningitis), pain in the back and limbs, and abdominal pains, usually very severe. The bowels were at first constipated; the tongue was coated with numerous papillæ projecting as red points. Fever, as shown by the pulse and rise of temperature, was always present. In some cases, after two or three days' suffering, intense delirium came on, followed not

unfrequently by coma. Vomiting occasionally directly after drinking the milk was another marked feature at the commencement of attack. In a few patients, evidence of gastric irritation, with the above-mentioned symptoms, more or less severe, composed the entire disease; in others, recovery did not take place until the patient had passed through a disease marked with all the symptoms characteristic of enteric fever. The temperature increased, with remissions night and morning; the tongue became dry and covered with sordes; the urine heightened in colour, and had a higher specific gravity; the abdomen enlarged, and became resonant, with greater sensitiveness on pressure, especially in the right iliac region; diarrhœa came on; and in some of the worst cases the acute febrile condition was succeeded by great prostration, with low muttering delirium and subsultus tendinum. The eruption of rose-coloured spots, so characteristic of typhoid fever, was present in only a small proportion of the cases, but when noticed it was very copious, mostly covering the abdomen, thorax, and thighs. Hæmorrhage from the bowels or nose was very exceptional; in only one or two cases was this observed. Pulmonary complication was not at all uncommon—in two patients the mischief was so great as to be the immediate cause of death. Relapses were of frequent occurrence; one patient, who at first, apparently, had a mild form of the disease, died after a third relapse with suspected perforation of the intestine. Recovery was the most frequent termination of the disease. Out of 111 patients whose illness was clearly traceable to the infected milk, only six proved fatal, namely, two males and four females, of the ages 15, 11, 17, 18, 50, and 34 years respectively. As is usual in cases of enteric fever, the period of convalescence varied; in some the disease was gone through in from ten to fourteen days, while in others convalescence was delayed for weeks, the patient being troubled with some of the sequelæ which so often retard the recovery of typhoid patients. The average duration of illness at all ages was 30·3 days. This varied somewhat according to the age of the patient—for instance, under five years of age the average duration of illness was 29·8 days; between five years and twenty years, 32·5 days; and at twenty years and upwards, 30·3 days. Of the 111 patients attacked, 46 were males and 65 females. The ages were as follows:—

Under	5 years				.	15
Between	5 years	and	10 years		.	11
„	10	„	15	„	.	11
„	15	„	25	„	.	29
„	25	„	35	„	.	19
„	35	„	45	„	.	12
„	45	„	55	„	.	8
„	55 years and upwards				.	3

As is usual with such epidemics, the largest proportion of cases took place below twenty-five years of age, and these were made up principally of women and children. The decreased susceptibility with advance of years was also observable.

The following are brief notes of a post-mortem examination made on March 7, on the body of a patient, aged eleven years, who died three days previous, having suffered from the effects of the milk-poisoning fifteen days:—Body emaciated; great post-mortem discoloration, extending along sides of chest; bedsores commencing over sacrum; teeth and gums covered with a black coating; abdomen contained a small quantity of fluid; intestines distended with flatus; mesenteric glands swollen and vascular (some of the glands near the ileo-cæcal valve were specially enlarged and congested). About a foot from the commencement of the ileum, separated by a few inches, I found two Peyer's patches, each measuring about one inch long by half an inch wide; they were considerably indurated, and elevated about a line above the surrounding intestine. One of the patches had a portion about the size of a split-pea rather more raised than the rest, and covered with a black slough. In close proximity to these there were three other portions of indurated gland-tissue; one, about the size of a horse-bean, was surrounded by an inflamed areola, and in a state of slough. Kidneys congested, apparently undergoing fatty degeneration. Spleen enlarged, of a blackish-red colour and pulpy. Lungs: Both bases were in a state of red hepatisation; the right base on being cut showed a muco-purulent infiltration; proceeding to the upper lobe of both lungs the congestion faded into healthy lung-tissue. Liver enlarged and congested. Heart contained no blood; healthy. The other organs presented a healthy appearance.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

LONDON HOSPITAL.

STRUMOUS DISEASE OF KNEE, HIP, AND ELBOW-JOINTS.

(Under the care of Mr. MAUNDER.)

[Reported by S. H. FISHER, House-Surgeon.]

MR. MAUNDER pointed out how the three patients seen in the theatre to-day (June 10) illustrated three stages or conditions of gelatinous disease of synovial membrane.

Case 1.—*Gelatinous Disease—Favourable Progress—Tenotomy.*

John L., aged sixteen, was admitted November 30, 1875. The patient says that just before Christmas of 1874 he slipped, and hung by his knee from a ladder, after which it became tender and stiff. These symptoms have persisted. On admission the knee-joint was much increased in size, very hot, tender and painful, while the leg was at an obtuse angle to the thigh, with a slight tendency to rotation outwards. Mr. Maunder discussed the natural history of this disease, and hoped to conduct this case to a favourable termination—fibrous anchylosis. He divided the biceps tendon to prevent displacement backwards and outwards, and perfect rest was maintained by a M'Intyre splint. Cold lotions, pressure, and friction have been used, and although there is still much synovial thickening, all heat, pain, and tenderness have disappeared, and the lad can bear some weight upon the limb. He is now to have change of air and be carefully watched. Mr. Maunder expects that the boy will be well in eighteen months' time, with more or less fibrous anchylosis as a natural result of this disease.

Case 2.—*Disorganised Hip—Excision.*

Henry H., aged nine, admitted August 13, 1875. There is a history of a blow on the left hip about two years and a half ago. Afterwards he was observed to walk lame. On admission he walked lame; the pelvis moved with the thigh; neither pain nor abscess. On April 19 an abscess was opened, and about six ounces of pus discharged. Repair did not take place, and as the child became feeble and emaciated, excision was performed on June 10, 1876.

Operation.—A longitudinal incision over the great trochanter, and a little dissection around this, allowed the operator, using the femur as a lever, to protrude the upper end of this bone at the wound, when it was readily removed with the saw; also a small portion of carious acetabulum was removed by the gouge. An interrupted straight splint was applied. Mr. Maunder remarked that although a very large majority of patients with hip-joint disease recover after the lapse of months or years, still occasionally disorganisation was so thorough, and the power of repair so feeble, that operation became necessary to save life. This was an example of the last and most severe stage of gelatinous disease, in which all the structures of a joint participated. The simplicity of the operation was remarkable.

Case 3.—*Strumous Disease of Elbow-Joint—Excision.*

Daniel K., aged fourteen, admitted May 31, 1876. For several months last year this patient was under Mr. Maunder's care for hip-joint disease, and left cured. During the last six months his left elbow has become gradually swollen and stiff. On admission the joint is found rounded and shapeless, and the limb is useless, and is also becoming hot and tender. Mr. Maunder regarded the case as one of gelatinous disease (white swelling) about to run on to suppuration.

Operation.—To-day Mr. Maunder performed excision after the manner which he has advised,(a) in order to preserve *active extension* by the triceps muscle. Mr. Maunder remarked—"Surgeons often say to me, 'Your method is by longitudinal incision, is it not?' 'Yes,' I reply, 'of the deep structures, but not necessarily of the skin: the structures running between the back of the arm and of the forearm on either side between the point of the olecranon and the condyles must on no account be severed. *Preserve these, and you will have a most useful limb; cut these, and you will damage your patient very seriously.*'"

(a) *British Medical Journal*, July 29, 1871; Maunders's "Operative Surgery," second edition, 1873, page 129.

This case is an example of the first stage of the disease running into the second or suppurative; and although it is probable that after the lapse of months or perhaps years, disorganisation of the joint would, and repair might, occur, yet excision offers so little risk to life, and such grand results, as to be justifiable at an early period in this situation.

BRITISH HOSPITAL FOR DISEASES OF THE SKIN.

CASE OF GENERAL (NON-SYPHILITIC) PSORIASIS CURED IN SIX DAYS BY THE WEARING OF VULCANISED INDIARUBBER UNDERCLOTHING.

(Under the care of Mr. BALMANNO SQUIRE.)

THE PATIENT, a boy, aged eighteen (a Jew, from New York), has been subject to psoriasis since the age of fourteen, having experienced in all four separate attacks of this disease. His first attack, which commenced at about the age of fourteen, lasted about five months; his second attack began at the age of sixteen, and lasted two months; his third attack began at the age of seventeen, and lasted seven weeks. For this attack he was admitted into the Boston Hospital (U.S.A.), and was there cured by frictions with *huile de Cade* and olive oil in equal proportions. He was then free from the disease for a few weeks, which, however, soon reappeared, and has lasted since then—namely, from December, 1875—till his admission here.

March 23, 1876.—Admitted as an in-patient at the British Hospital for Diseases of the Skin. He is now covered pretty generally with patches of psoriasis. His head, forehead, and eyebrows are completely encrusted with thick micreous encrustations, deeply fissured here and there with painful, bleeding cracks. The disease is abundantly distributed in large patches over the trunk at both back and front, and on the lower limbs, but is comparatively scanty on the arms.

Seven days after his admission the patient commenced wearing indiarubber underclothing, being clothed in a complete suit, consisting of shirt and drawers. These garments he continued to wear night and day for six days, at the end of which time he was perfectly well of his disease over the trunk and limbs—that is to say, the disease had completely disappeared from those portions of the body which had been covered by the underclothing. The disease at this time continued as before unchanged on the head, forehead, and eyebrows, which parts had not as yet been subjected to treatment of any kind. Three weeks after his admission he commenced wearing a vulcanised indiarubber cap, which was pulled over his eyebrows in evening and at night, and in daytime whenever he was indoors. This cap was worn in all about seven weeks.

April 24 (about fourteen days after beginning cap).—Applied vaseline to his head whenever the cap was off—*i.e.*, during greater part of the day. Continued in this way for about two weeks. The reason he did not wear the cap continuously night and day was because he objected to be seen about in it; the vaseline was, consequently, employed to prevent the scalp becoming dried up and stiffened when the rubber was removed. From this date, also (April 24), till his dismissal, he used to his eyelids (which have been from childhood affected with ophthalmia tarsi) hydr. oxid. flav. gr. vij., adipis ℥j., with much benefit, but not so as completely to cure them as yet. Then, since the cure of the eruption over the head and forehead seemed to hang fire, he next used vaseline with tar (the proportions being the same as in the pharmacopœial tar ointment). However, he objected to this, as being too "drying" in its effect.

May 10.—He applied, in place of the tar ointment, an ointment consisting of creasote ℥ij., with lard ℥j.

17th.—Applied vaseline with tar, equal parts. This was not greasy enough, and matted the hair together so that he could not apply it easily.

24th.—Instead of the vaseline and tar an ointment is ordered consisting of hyd. iod. rub. gr. xv., ung. simplex ℥j. He used this for two days only. It excited considerable redness and desquamation, and a good deal of smarting. It seemed, however, to have done a great deal of good.

25th.—Vaseline again simply, in place of the iodide of mercury ointment.

26th.—Now all trace of eruption has disappeared, except a few patches at the back of the scalp. He is, therefore, dismissed from being an in-patient, and ordered to apply the iodide of mercury ointment, as before, for a day or two.

LIVERPOOL WORKHOUSE HOSPITAL.

REMARKABLE CASE OF FISTULA.

(Under the care of Drs. ALEXANDER and IRVINE.)

RICHARD K., aged sixty-four, a hard-working labourer, of moderately temperate habits, was admitted into the Liverpool Workhouse Hospital, August 4, 1875. Patient had been a healthy man up to the beginning of the year, when he felt a "coldness" in the right hypochondriac region—a feeling that was at first more unpleasant than painful, and not confined to any particular spot. A month after, a "pain" began, which gradually increased in severity, and was soon followed by a "swelling" at the junction of the last two or three ribs, with the sternum on the right side. This swelling rapidly increased in size, and extended to the right and left, forming a hard painful ridge across the upper part of the epigastric region. In June last, an opening formed a little to the right of the tip of the ensiform cartilage, whence, to his great relief, a whitish fetid matter was discharged. A few days, after a persistent and troublesome pyrosis commenced, the fluid regurgitated being hot, glairy, and sometimes semi-flocculent.

State on Admission.—Patient is a very much emaciated and debilitated old man, with a yellowish cachectic appearance, but no jaundice; appetite good; tongue slightly furred; skin cool, and pulse quiet. There is a ragged opening at the ensiform cartilage, with a ridge to the right and left, as above described. The discharge from the abscess is variable in quantity and in character, being sometimes thick, at other times thin and watery. Complains of pyrosis. Bismuth and kino prescribed. There was no change in his state until August 21, when a gall-stone, three-quarters by a quarter of an inch, and oval in shape, was found on the poultice by the nurse. On October 1, another, similar in shape, but about three times larger, was found jammed in the opening; after its removal, small quantities of food were seen to return by the opening for the first two days; on the third day, all his food was so returned immediately it was swallowed, and this state continued until October 6, when death put an end to his sufferings.

Autopsy, twenty-four hours after Death.—The stomach was dilated to twice its normal size; the cardiac region healthy; the pylorie region, for two inches above pylorus, presented several small excavated ulcers; the pylorie ring was firm and prominent, its mucous membrane ulcerated; the first part of the duodenum was much dilated, its right extremity adherent to the liver-substance, completely concealing the gall-bladder, its peritoneal coverings smooth, its mucous membrane ulcerated and thickened, and its cavity full of a mixture of pus and food. At the place where the duodenum had become applied to the gall-bladder and liver, an opening existed, whence the finger could be passed from the duodenum into a large irregular cavity bounded by indurated hepatic substance, and extending at one point to the upper surface of the liver, whence a fistula ran to the left between the upper surface of the liver and the abdominal wall to reach the external opening. No trace of the gall-bladder could be found. The hepatic duct and common bile-duct were normal, and a small piece of the cystic duct still pervious ran to where the liver and duodenum adhered to each other. Behind the dilated duodenum the fibrous tissue was thickened and matted, and some glands were enlarged, but there were no signs of active peritonitis anywhere. The horizontal portion of the fistula passed through the centre of a fibrous mass that had cemented the liver to the ribs. The hepatic substance in the region of the affected parts was fortified by a thick layer of effused material. Microscopical examination of the liver-substance at various distances from the abscess showed more or less complete destruction of the secreting tissue, fibrous tissue having taken its place.

Remarks.—It may, we think, be fairly concluded that the gall-stones were the originators of the evil in this case. By obstructing the cystic duct, ulceration and absorption of its walls would be produced at the same time. The contiguous wall of the duodenum would become adherent to the surface of the gall-bladder, so that in the end the gall-bladder would be converted into a large abscess pressing on one side on the enveloping duodenum, on the other upon the liver-substance. In this case it burst in both directions, the matter reaching the surface by the fistulous opening by the mouth and by the

rectum. In a post-mortem a short time ago we found an illustration of the preliminary step, in which, the gall-bladder being slightly distended, the duodenum was adherent to all its unattached surface, from which, however, it could be peeled off. In the *Lancet* of March 11, 1876, Dr. Ramskill makes some remarks on a case very similar to the one above described, but where the liver was only encroached upon by a small abscess the size of a walnut. The gall-bladder, as in this case, was completely absorbed. His patient lived a long time, and the case presented rather doubtful symptoms for the formation of a certain diagnosis.

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Medical Times and Gazette.

SATURDAY, AUGUST 19, 1876.

THE VIVISECTION BILL BEFORE THE COMMONS.

The Vivisection Bill in a somewhat modified shape has passed the second reading, gone through Committee, and been read the third time, and passed in the House of Commons. The amendments of the Commons have been accepted by the Lords; and the Act has received the Royal Assent. But the Act is not satisfactory. It was brought before the House of Commons for the second reading by Mr. Cross in a judicious and conciliatory speech, in which he enumerated the concessions he was willing to grant, certain of which were of considerable value. The first of these related to registered places. It was a great grievance that men high in point of scientific attainments and of unblemished character should be compelled to forego all investigations save those carried on in physiological laboratories, or else have their private residences registered as such. Mr. Cross accordingly consented to grant that in the licences given in such cases the private residences need not be registered. This, of course, will interfere with inspection, but in such cases it is little likely to be necessary.

One of the most grievous clauses of the proposed Act, it has been felt by all who know anything of physiological research, has been the dog and cat clause. This, it must be remembered, was founded on no part of the Royal Commissioners' Report, but was entirely due to the sentimentality of Mr. Hutton. Moreover, it was a clause which specially appealed to the fancies of old women of both sexes, who have made themselves so conspicuous as agitators in this matter. To it was opposed the fact that without experiment on such animals many kinds of research would be completely stopped, especially as regards the action of remedies which often affect carnivorous and herbivorous animals very differently. Let us take a well-known case for example—that of belladonna. Mr. Cross, however, went so far as to promise to grant special licences for experiments on such animals on the usual recommendation, provided all experiments were carried on under the influence of anæsthetics.

The third point was a decided and important concession. It was to the effect that no licensed person could be prosecuted for offences against this Act without the consent of the Secretary of State. Unlicensed persons would be under the control of the police. This removed one very great objection to the Bill, namely, the liability to be prosecuted by any common informer—a position extremely repugnant to any class of men, but especially to one which is supposed at least to be composed of gentlemen.

The last point yielded was also an important one, but we are sorry to see that, on the motion of Mr. Forster, it has been modified in Committee. The Government were willing to yield their point as to the application of the Bill to all cold-blooded and invertebrate animals; to these the measure was not to apply. Now, considering that the greater part of all ordinary physiological experiments, some of them of the slightest kind, are conducted on cold-blooded vertebrates, this action on the part of Government was of importance. But we deeply regret to see that in committee the group of cold-blooded vertebrates was again brought under the regulations of the Act. Here it is that the shoe pinches most. The most barbarous cruelty may be practised against these animals in the most wanton manner, but the moment a scientific man steps in to take a drop of blood from the tail of a newt, or to scrape a frog's palate with a sharp knife, he is under the restrictions of the law. Had anything like cruelty been proved against medical and scientific experimentalists, we could not have so strongly protested against this injustice, but in the face of what has been proved beyond a shadow of doubt, it is impossible to keep down a feeling rebellious against such an unequal exercise of authority. We have never been fond of the *tu quoque* argument, but in the face of such treatment rankling thoughts will arise. Were the laws against cruelty to be extended to all animals, and under all circumstances, we should have nothing to say; or if even, as Mr. Forster shrewdly remarked, the simple provision were adopted, "that sport should not be practised by unskilled persons, or by anybody with insufficient instruments," our position would not be so marked. We can therefore only hope that, as has been indicated, this special legislation against our profession as a body may lead to the abolition of much cruelty abhorrent to them.

The time at which this Bill came on for discussion in the Commons was most unfortunate; had it come on earlier, still more might have been done to modify objectionable clauses. For this reason we had hoped that the proposition of the Ministers as to cold-blooded animals might yet stand in the Act as passed. The Bill had been shorn of many objectionable features; and we trusted that this too might be removed. This was all the more important as there will be extreme difficulty in obtaining any subsequent modification of the Act. The Government had given a distinct promise, they having, it can hardly be doubted, the power of carrying it out, and they ought to have done so. The opposition to the Bill was in great measure withdrawn after Mr. Cross's statement, and, trusting that what he promised would be effected, many determined opponents of the measure, as it then stood, kept silence, when the Bill could have been easily talked out. But the Government were determined that the Bill, in some shape

should pass, and as not one moment of the last dying moments of the session could be spared for discussion, the Government accepted an amendment nullifying one of their most important concessions, rather than peril the Bill.

THE BRAVO INQUIRY.

After an inquiry, which we trust will long remain without a parallel, the jury summoned for the second inquest as to the cause of death in the case of the late Mr. Charles Bravo have separated. By a majority composed of twelve jurymen a verdict of wilful murder against some person or persons unknown—for to this it practically amounts—was returned. We shall not here attempt to designate the character of this inquiry. The horrid scandals laid bare by it, the spectacle of men of a certain position employing their talents apparently for no better end than the cultivation of pruriency among the public, and the abominable revelling in filth which has been only too common throughout the length and breadth of the land, are sorry spectacles to a cleanly mind. Nevertheless, out of all this wallowing in the mire there may, from a professional point of view, be derived a modicum of information which is not the less valuable that it springs from a polluted source.

It is not denied or doubted that Mr. Charles Bravo died from the effects of antimony, and as the well-authenticated cases of poisoning by this substance are rare, the history which can be elicited from the statements made before the coroner's jury may be of some use in any subsequent case which may arise.

We will not here enter into any preliminary details as to the antecedents of Mr. Bravo, but shall at once proceed to give in chronological order the facts proved as to the illness which carried him off. Mr. Bravo was a young barrister of about thirty, strong, healthy, and hearty. He had hardly ever suffered from ill-health, was a remarkably cheerful man, and of exceedingly temperate habits. On Tuesday, April 18, after breakfast at his own house at Balham, he drove with his wife —then recovering from the effects of a miscarriage—into town. On their way, according to her statement, they had an extremely unpleasant discussion. He had a Turkish bath, lunched with a relation of his wife's at St. James's Hall, and walked on his way home to Victoria Station with a friend and fellow-barrister, whom he asked out for the following day. He arrived at home about half-past four. Up to this time, or even later, no evil such as ultimately proved fatal could have well befallen him, but from this time his actions become of greater interest.

Shortly after his return home Mr. Bravo went out for a ride, in the course of which the cob on which he was riding bolted with him, and carried him a long distance. From this he returned tired, ill, and exhausted. According to the statement of the butler, when seen by him at half-past six, Mr. Bravo was sitting, leaning forward, on his chair, looking ill, and with his head hanging down. Mr. Bravo ordered a hot bath, and in moving to get it, according to the same authority (Rowe, the butler), he cried out very loud with pain, and put his hand to his side. After his bath he did not appear very much better, but seemed to suffer pain all through the time of dinner, though he seemed to avoid attracting the attention of his wife and Mrs. Cox, her companion, who dined with him.

The dinner-hour was half-past seven, but Mrs. Cox had been absent seeking a furnished house at Worthing for the reception of the family, and had just returned. Mr. and Mrs. Bravo were waiting for her when she came downstairs, and in this way the dinner-hour was delayed for a few minutes. The dinner consisted of some fish, some lamb without mint-sauce, and some poached eggs on bloater-toast. Mr. Bravo took no fish; the others did. All took lamb. Mrs. Cox and Mr. Bravo took the eggs on the bloater-toast; Mrs. Bravo did not. In this way each of the articles composing the food eaten at dinner was partaken of more or less in common.

As regards drink this was not the case. Mr. Bravo drank burgundy only; Mrs. Bravo and Mrs. Cox only sherry and marsala. Burgundy was the wine Mr. Bravo usually drank, and this had been decanted by the butler some time before dinner,—how long he could not say. The butler noticed nothing unusual in the wine; and Mr. Bravo, who would only drink wine of a good quality, and who seemed, moreover, a connoisseur of wine, remarked nothing as to its taste and quality, but drank it as usual. The quantity of wine he commonly took at dinner was about three or four glasses. If he had burgundy for luncheon he finished the bottle at dinner; but if not, as on the day in question, the remains of the bottle were put aside in an unlocked cellarette in the dining-room. Whether or not any wine was left after dinner on this day cannot be found out; the butler cannot remember. At all events, no remainder of the wine then consumed has been discovered. This cellarette was opened at least twice subsequently to this, and prior to Mr. Bravo's illness—once by Mrs. Cox, and once by the housemaid.

As regards the food itself, Mr. Bravo seems to have eaten a fair quantity of meat, and two of the eggs with toast. It is clear, therefore, that the adventure on horseback had not completely destroyed his appetite; but it is also clearly on evidence that he was not himself, from whatever cause. It is said he had been suffering from toothache or neuralgia, and he had just received a vexatious letter.

Here the element of time assumes a greater and greater importance. There is no reason to believe that Mr. Bravo had swallowed any poison up to half-past seven o'clock or twenty minutes to eight. The dinner lasted till past eight, there was some talk, and then the three people who partook of dinner passed into the morning-room, where conversation was continued up to about nine o'clock. Then Mrs. Bravo and Mrs. Cox went upstairs, leaving Mr. Bravo alone. It was at this time that Mrs. Cox went to fetch Mrs. Bravo some wine-and-water from the dining-room.

Upstairs Mrs. Bravo undressed and made ready for bed Mrs. Cox still being with her, and she drank the wine-and-water brought up.

Fortunately for our purpose, the next point of time is exactly fixed. The housemaid was accustomed to take up each evening some hot water for washing before the ladies went to bed. On this occasion the bell did not ring, and the housemaid, looking at the clock, and finding it half-past nine, of her own accord proceeded to take up the hot water. Mrs. Bravo then asked the girl to fetch her some marsala, which she proceeded to do, taking the glass which had contained the wine-and-water for that purpose. On her way back to the dining-room she encountered her master at the foot of the stairs. He looked "queer"—that is, "he looked very strange in the face, but did not appear to be in pain." He looked twice at the servant, yet did not speak, though that was his custom, but passed on. She thought "perhaps he was angry."

Mr. Bravo was alone after the departure of his wife and Mrs. Cox until the time when he passed on upstairs before the housemaid. He entered his wife's dressing-room, and the maid Mrs. Bravo's bedroom. In the dressing-room, according to Mrs. Cox's statement, Mr. Bravo spoke to his wife in French, upbraiding her for taking too much wine. This had frequently been the subject of unpleasant remarks before; but Mrs. Bravo did not remember his saying anything on this occasion. This must have brought the time down to twenty minutes or a quarter to ten.

After this, Mr. Bravo left his wife's dressing-room, went to his own bedroom, and closed the door. The maid left Mrs. Bravo's bedroom, and met Mrs. Bravo in the passage, undressed, and on her way to bed. Mrs. Bravo and Mrs.

Cox entered their bedroom, and Mrs. Bravo drank the marsala brought up by the maid, and went to bed. The interval between the point of time when Mr. Bravo left his wife's bedroom and entered his own and the next point in the history of the day is not easily measured. This helps us:—First, the maid had time to collect and put away Mrs. Bravo's day-apparel, to enter Mrs. Bravo's bedroom, where she had a few words of conversation with Mrs. Cox, who was sitting at the bedside, to leave the room, and to reach the foot of the stairs leading to Mrs. Cox's own bedroom upstairs, when the door opened, and Mr. Bravo, in his night-dress, shouted out, "Florence! Florence! hot water." All this could hardly have been done in less than a quarter of an hour, but after this for some time confusion reigned supreme.

The maid ran into Mrs. Bravo's room calling out that Mr. Bravo was ill. Mrs. Cox, yet dressed, rose hastily and went to him. She found him standing at the open window apparently vomiting, and this the maid also saw. Mrs. Cox states that Mr. Bravo said to her, "I have taken poison for Dr. Gully. Don't tell Florence" (his wife). (To this confession of having taken poison, on the part of Mr. Bravo, Mrs. Cox has adhered throughout.)

After this, Mr. Bravo vomited, and some hot water was brought by the maid. After vomiting, Mr. Bravo sank on the floor, became insensible, and remained so for some hours. Mrs. Cox tried to raise him, procured for him some mustard and hot water to make him sick, but this he could hardly, if at all, swallow. Mustard was also applied to his feet, and camphor liniment to his chest. After the mustard-and-water he again vomited in a hand-basin. The vomited matters "looked like food, and were red." These were unfortunately thrown down the sink, and so disposed of. Meanwhile coffee had been procured, but Mr. Bravo was unable to swallow.

On the first alarm, Mr. Harrison, a well-known neighbouring practitioner, who had previously seen Mrs. Bravo, was sent for, but he lived at some distance. Mrs. Bravo, who had been roused from sleep by the maid, and who seems to have been greatly excited, insisted on a nearer practitioner being sent for, and in no long time Mr. Moore, a practitioner residing not very far off, arrived. Here again we have a point of time fixed. Mr. Moore arrived about half-past ten, and from this time the history assumes a more scientific aspect.

As already said, Mr. Bravo became insensible almost immediately after being seen; but about this insensibility there seems to have been a good deal of misconception. Mrs. Cox seems to have rushed at the conclusion that Mr. Bravo had swallowed laudanum, chloroform, or some narcotic, and to this end to have given the mustard-and-water to get rid of the poison, and coffee to obviate its effect. The insensibility was not due to narcotism; it was the insensibility of utter collapse, of almost complete syncope.

Mr. Moore, on his arrival, found the patient sitting or lying on a chair. He was completely unconscious, the heart's action was almost suspended, and he was almost pulseless. His pupils were dilated. Mr. Moore caused him to be laid on his bed, and tried to give him some hot brandy-and-water, but he could not swallow.

In twenty minutes or half an hour Mr. Harrison arrived. He was met by Mrs. Cox, who said she was sure Mr. Bravo had taken chloroform. This was taken in the sense that the chloroform was in a poisonous dose. Both Mr. Harrison and Mr. Moore early came to the conclusion that their patient was in a most dangerous state, and that in all probability he would not recover from the collapse from which he was then suffering. They, however, tried to administer stimulants, first by the mouth, but that failing, they gave him an enema of brandy-and-water. Seeing the dangerous nature of the case, other medical aid was suggested, and Mr. Royea Bell, cousin of the deceased, was sent for, with a request to bring some physician with him. He brought Dr. George Johnson, also of King's College Hospital, and the two arrived at Balham about half-past two.

Meanwhile the case had begun to clear up. About two o'clock Mr. Bravo "began to vomit a bloody fluid"; the pulse rose, and he passed a bloody fluid in bed. There could no longer be any doubt that the patient was suffering from the effects of irritant poisoning.

Mr. Bravo had thus been as nearly as possible four hours without any other symptom of poisoning than profound collapse.

Shortly after the arrival of Dr. George Johnson and Mr. Royes Bell, consciousness began to return, and at three o'clock Mr. Bravo was again conscious and able to be questioned. Soon after the arrival of these two gentlemen, Mrs. Cox requested an interview with Mr. Bell, and then told him that Mr. Bravo had said, "I have taken poison; don't tell Florence." Mr. Bell, who seems to have been somewhat angry at this tardy statement on the part of Mrs. Cox, summoned Dr. Johnson, who also heard it; so that when Mr. Bravo returned to consciousness, almost the first question asked of him was, "What have you taken?" From first to last—and this is an important feature in the case—the dying man (for he early felt that he was doomed) persisted in declaring in the most solemn manner that he had taken nothing except some laudanum for toothache. Yet he expressed no surprise at being thus taken ill, though he knew quite enough of medicine to appreciate the effects of opium, and to know that they were very different from those he was now suffering from.

At an early period Mr. Bravo's bedroom was searched, but nothing was found save the laudanum bottle, a little chloroform, and camphor liniment, which had been brought from another room. There were no remains or indications of any solid poison, no paper or anything else which could have contained it, no traces of a dirty tumbler or drinking-glass—in short, nothing. It must, however, be remembered that great confusion had prevailed; that many things, including vomited matters and dirty glasses, must have been removed; and that a fire was burning in Mr. Bravo's room. Mr. Bravo himself, on being questioned, mentioned, as poisons in the place, the laudanum, the chloroform, Condy's fluid, and "rat poison in the stable."

After recovering consciousness, Mr. Bravo did not again lose it to the time of his death. He remained collapsed, suffered fearful pain, vomited and purged matters of various descriptions, was severely convulsed, especially in his upper extremities; but he remained conscious throughout.

When Dr. George Johnson first saw Mr. Bravo he was "lying on his back in bed in a state of unconsciousness, and there were no symptoms beyond to define his condition." This, however, did not last long, and consciousness soon after returned. On Thursday both Mr. Henry Smith (who gave remarkably good evidence on the inquiry) and Sir William Gull saw the sick man. Sir William Gull says he saw him "pulseless, but quite mentally coherent." On Friday morning, at half-past two, the vomiting and purging ceased, and at half-past five Mr. Bravo died, having thus been fifty-five and a half hours ill.

On Saturday, the 22nd, Dr. Payne, of St. Thomas's Hospital, made a post-mortem examination of the body. "There was no appearance of inflammation, congestion, or ulceration. The stomach contained about eight ounces of thick, gruel-like matter, of a yellowish colour, containing small solid lumps, and had the odour of alcoholic fermentation. The œsophagus or gullet was natural, and contained some of the same matter as the stomach. The first portion of the bowels was very soft, being torn in tying it, but subsequent careful examination showed no perforation or ulceration. The surface was pale and yellowish, like that of the stomach. The whole of the small intestine was like this except the lower part, where

there were some red spots. This part of the bowels contained yellow pasty matter without any admixture of blood. The large intestine at its commencement was of a deep red colour, and contained clots of blood. Subsequent examination showed, in the portion called the cæcum, several small ulcers from which the bleeding had evidently taken place, but there was no perforation. The remainder of the large intestine was very deeply blood-stained, but without ulceration. The contents were soft, dark-red material, composed of fæcal matter mixed with blood. The liver and spleen were natural, as were also the pancreas or sweetbread, kidneys, and other abdominal organs. There was no appearance of hernia or rupture. On opening the head, the skull and the membranes of the brain were found quite natural, containing only the usual amount of blood. The brain-substance was also natural, and contained no excessive amount either of blood or of watery fluid. The mouth and lips were natural, except that the papillæ at the back of the tongue were somewhat more prominent than is usual. There was no other appearance of disease in the body except what has been noted."

Such is the medical history of this extraordinary case; but it would be incomplete without some account of the chemical examination which was made by Professor Redwood, of the Pharmaceutical Society. Most extraordinary to relate, the matters which were vomited at the very beginning of the attack of illness which proved fatal to Mr. Bravo remained undisturbed on the leads of the house from Tuesday night till Thursday, and they were seen then both by Dr. Johnson and Sir William Gull. On that day they were directed to be removed, and they were handed over to Professor Redwood. Meanwhile, much rain had fallen, and a great part of the vomit, especially the liquid matters, had been washed away. No doubt in this way a large quantity —probably the larger quantity—of the poison had been lost. Nevertheless, in the vomit a great amount of antimony was discovered. Antimony, too, was discovered in the contents of the great gut after death, in the liver, and in smaller quantities elsewhere. Altogether the conclusion come to was that something like forty grains at least had been swallowed. This estimate we hold to be far under the mark; for if we bear in mind the quantity of matter vomited and thrown away, the quantity passed in the stools, and the quantity of antimony left in the tissues, over and above that detected and estimated, it is clear that an enormous dose had been taken.

That being so, we are driven to the conclusion that the poison must have been swallowed after half-past eight, when the party adjourned to the morning-room; probably after nine, when Mrs. Bravo and Mrs. Cox went upstairs; and very likely indeed after he himself had retired to his bedroom. This last notion is by far the most likely. A large dose of antimony had been taken; sickness followed in a few minutes. Mr. Bravo, feeling this, shouted for hot water, and so great was the prostrating effect of the antimony, that in a few minutes he fell to the ground utterly collapsed. During the period of collapse and unconsciousness, which lasted from ten o'clock till three, but little of the poison would be absorbed, and thus all the more would be ejected in the matters vomited just after.

The post-mortem condition was most extraordinary. That there was great gastric irritation at one time, was evidenced by the vomiting of bloody matters to which Mr. Harrison and Mr. Moore bore testimony, but that must have been completely overcome before death.

We wish we could stop here, but duty forbids us. We shall only allude to the quarrel between Dr. Johnson and Sir William Gull. This, we can hardly help thinking, must have arisen from a misconception on one or both sides. Dr. Johnson is not a man to make capital out of such a case. Sir William Gull's position raises him far above such a suspicion. The matter will, we trust, be satisfactorily explained.

Not so the other. The spectacle, which has now been for weeks before the world, of that coroner's court sitting at Balham will, we trust, never be forgotten. We there see displayed melancholy incapacity on the part of the coroner, browbeaten and submissive to the counsel in his court—counsel arrogant beyond precedent, seeking to penetrate into the hidden lives of those before them, apparently only to gratify the pruriency of the public mind. The nature of the connexion between Dr. Gully and Mrs. Ricardo being once admitted, we cannot, for the life of us, see what good further inquiry into it was to do. Nay, more, the horrible pertinacity with which the legal examiners tormented the unfortunate woman before them was revolting in its cruelty. The effect of this has been terrible. Florence Ricardo and Dr. Gully might have been two very commonplace sinners, though the latter of them would always have seemed a specially dirty specimen of the class; but torture such as that to which this unfortunate woman has been subjected could not but rankle in an English breast. From something like detestation, the whole country has turned round to a feeling of pity for a poor woman whose life has been miserably wasted, and who has been most unmercifully persecuted. To give any kind of sanction to conduct such as hers is not good, but to turn her into a martyr is a gross mistake.

Of Dr. Gully we will not speak,—he is at once beyond and beneath contempt; words would be wasted on him.

But of the prime cause of all this, Mr. Carter, Coroner for East Surrey, we are bound to speak in terms of the severest reprobation. Had he done his duty on the first occasion, no second inquest would have been necessary. He refused the medical evidence offered to him, as he has done over and over again. Not long ago he applied for a rise of salary, as he had held upwards of 800 inquests during the preceding year. If they were all slurred over like the first Bravo inquest we can readily appreciate their value, both from a legal and scientific point of view.

After all, the only verdict which can be come to is that Mr. Bravo died from the effects of antimony.

THE THEORY OF SUICIDE IN THE BRAVO CASE.

English society is very humane—far too humane to allow the vivisection of a cat; but it loves sensation, and has found it of late in the vivisection of Mrs. Bravo,—in the utter remorseless dissection of all her inmost thoughts and cherished frailties. It has been circulating the most atrocious statements respecting the three persons whose lives and characters were involved in the "Balham Mystery," and has been dangling the hangman's rope before them, as the cat plays with a mouse.

We propose here only to consider how far the theory is tenable that the unhappy Mr. Charles Bravo committed suicide, and shall avoid any details not bearing on this theory, although, of course, this involves the guilt or innocence of the persons who, if he did not kill himself, are suspected of having killed him.

Florence Campbell, a beautiful and accomplished girl of nineteen, married Captain Ricardo in 1864. After three years of happiness he fell into habits of drunkenness; delirium and ill-conduct followed; and at last the couple were separated. He went to Cologne, accompanied by some woman, and there he died in April, 1871. His wife had not been under the same roof with him since November, 1870. This disposes of the current slander that the vomitings which followed Captain Ricardo's debauches were the effects of antimony administered by his wife, and that the Captain's corpse had been "had up" for analysis.

During the latter part of her married life, Mrs. Ricardo

visited Malvern, and there met her evil genius in Dr. Gully. She had, in fact, known him from childhood, liked him for his kindness, and admired his intellectual gifts. He, on his part, combining the character of paternal and professional protector and adviser, of "guide, philosopher, and friend," seems, after the husband's death, to have inspired the widow with what her mother justly called an "infatuation." The result was, that down to last October they were almost constantly in each other's society: they travelled together, he lived near her and had a key of the garden gate; in fact, this young and handsome woman gave up the society of her family and her good name for the sake of a man older than her father. She would, doubtless, have married him had not Dr. Gully's aged wife been in the way.

But in October, 1875, Mrs. Ricardo seems to have felt her estrangement from the members of her own family, and determined to give up the society of Dr. Gully in order to be admitted again into the family circle. About the same time she made the acquaintance of a young barrister, Mr. C. Bravo. He seems to have become enamoured of herself and her fortune, and, after about six weeks' acquaintance, married her. It appears that he knew of the intimacy with Dr. Gully, but was not deterred from the match.

Four months only of married life followed, and then a catastrophe. On April 18, Mr. C. Bravo came home to dinner, sat a short time after dinner with his wife and her companion Mrs. Cox, and before half-past nine went to bed, according to his habit. His wife, who was scarcely recovered from a miscarriage, also retired early, was undressed with the help of Mrs. Cox, and went to bed in another room at about the same time. Very soon there was an alarm that Mr. Bravo was ill; he appeared at the door of his chamber, calling loudly for hot water. Mrs. Cox and the housemaid came to him, and found him standing by an open window, out of which he had vomited on to some leads below, and he soon became unconscious. It is not our purpose to give a history of what followed—how Drs. Moore and Harrison were sent for, next Mr. Royes Bell and Dr. G. Johnson, and Sir W. Gull on the following day; how the practitioners who came first found the patient almost dying of collapse and heart failure; how, when consciousness returned, they recognised the symptoms of poisoning by some metallic irritant, the dose of which had been sufficient to produce at first an almost fatal collapse; and how the patient lingered in great agony, but with a clear intellect, till death occurred in about sixty hours. Antimony was found in the vomit and in the fluids of the corpse, and was without doubt the cause of death.

Then the question came, How was the antimony taken? Was it taken by the deceased as a means of suicide? Was it given him by others with murderous intent? or was it swallowed by accident, mistake, or misadventure? The coroner's jury, after a lengthened investigation, have decided that the antimony was given with murderous intent by some person or persons unknown, and have emphatically negatived the theory of suicide; but considering the character of the proceedings, and the evidence which may have influenced their judgment, it will be no mark of disrespect to them if we say that the theory of suicide has a good deal to be said for it.

Now, forasmuch as suicide is an act depending on the moral condition of the person committing it, it will be worth while to sift the evidence given as to the moral and mental character of the unhappy deceased: and in so doing we discover two pictures of the same man—one drawn as he appeared in public or in the society of his acquaintance; the other as he was known to his family and at home,—each picture true so far as it goes, but each requiring to be combined with the other before it is taken as evidence of so grave a matter as the probability or not of suicide.

According, then, to his outside acquaintance, and what may be called his public, he was an intellectual, bright, active, pushing, ambitious man; determined to rise in his profession; very frank and outspoken; very happy; proud of his marriage with a rich, accomplished, and beautiful widow; high-spirited, courageous; with plenty of money,—the whole summed up in the evidence of Mr. Joseph Bravo, his step-father, who swore that, "knowing him intimately, he could aver that he was a man not likely to commit suicide." Mr. Royes Bell, a relation and intimate friend, described him as "full of fun," truthful, and "outspoken to a fault," and said, "from my knowledge of him I can say he was not a man likely to commit suicide." Mr. M'Calmont (who described himself as a barrister) swore that deceased was quite happy about his wife, and spoke affectionately of her; "he was the last man to commit suicide." Miss Bell, "from intimate knowledge," would swear that "deceased was not a likely man to commit suicide." Mr. Hope knew the deceased as a high-spirited and cheery person, and "decidedly a man not likely to commit suicide." Mr. Willoughby and Mr. Atkinson, barristers, deposed to the same effect in the same words; and so did Mrs. Campbell, the unhappy mother of the unhappy widow.

Now, it never seems to have occurred to these gentlemen that the value of an opinion depends on the knowledge and experience of the person who gives it; and we may ask what knowledge had any one of them of the mental condition of a person likely to kill himself? The number of suicides is very small; how many had these barristers seen? Had they ever seen any? And if not, what is the value of their judgment that deceased was the last person likely to destroy himself? But all this worthless testimony is disposed of by three words of common-sense evidence from blunt, honest Henry Smith, who, though he reiterated the formula, "I do not think from my knowledge of him that he was likely to commit suicide," yet added with perfect fairness that it was difficult to say what frame of mind indicated suicide; and that of two friends of his who had done so, one was of the jolliest, the other always miserable. There is, in fact, no outward demeanour that excludes the possibility of suicide.

But, as we have said, there is a reverse to this flattering picture of Mr. C. Bravo's character. Mr. Henry Smith describes him as of a morbidly excitable nature; apt to lose his temper from trivial causes—in argument, for example,—"from causes which should disturb no sane man." Of his two sisters, one is deaf and dumb; the other with a nervous system so feeble as not to allow of her going into society. The same witness (H. Smith), like Mr. Royes Bell, deposed that deceased was a "truthful" man, "far too communicative and outspoken." Thus we are led to suppose that deceased kept nothing secret from intimate friends; yet H. Smith, though intimate, was not told by deceased that Mrs. Bravo took too much wine. Mr. M'Calmont, the gushing barrister, who swore that Mr. Bravo was not a man likely to commit suicide, and that he spoke cheerfully and affectionately of his wife, yet knew nothing of the Gully affair, and confessed that he should not have thought deceased likely to marry a woman whose name had been mixed up with such a scandal.

In fact, if we look a little under the very surface, we shall see evidence that this cheery, genial, good-tempered fellow, glowing with happiness, and outspoken to a fault, was at bottom a very poor devil—a *miserable*, as the French say; a spoiled child, unable to act on the manly doctrine that a man should leave his father and mother and cleave to his wife; quarrelling with his wife, and striking her; threatening to leave the house and go back to his mother; always harping upon Dr. Gully; and annoyed by dastardly anonymous letters reviling his wife as Dr. Gully's mistress, which he believed to emanate from the doctor. He found that his wife was not only compromised by Gully (which he did not seem to care for, so long as his mother did not know it), but that she took

too much wine. And then as to her money, with which he hoped to get on at the bar, and to get into Parliament; if he was not embarrassed, he was not flush of cash; was obliged to borrow from his step-father and had just parted from a female "establishment" at Maidenhead.

Now, with these things before us, we may ask why such a man should *not* commit suicide? Rousseau says that self-respect is the only thing that makes life bearable. Could Bravo respect himself? Truly the wise man said, "The heart knoweth his own bitterness, and a stranger cannot intermeddle with his joy." How could his briefless brethren, who heard him brag of his marriage, and saw him calculating how to save £300 a year by discharging his wife's companion, and were invited down to Balham to lawn tennis and champagne, know that all this outward show was hollow as the apples of Sodom?

We have evidence that there had been a kind of squabble in the morning whilst he was driving to town with his wife on the fatal 18th; that at and before dinner he was dissatisfied with everything, and appeared to Rowe, the butler, ill and out of sorts, and said (according to Rowe) that he should never go to Worthing—to which place Mrs. Cox, the companion, had been that morning to take a house. Keeber, the housemaid, said that he complained on the 17th of being very cross, and on the 18th looked very queer when going to bed; his wife described him as looking ill and angry at dinner, with his face working. All these things betoken a disturbed and unhappy state of mind. If we want additional evidence that something was evidently amiss, we find it in a question which Mr. Gorst, Q.C., who appeared on behalf the Crown, allowed himself (and was allowed by the Coroner without rebuke) to put to the witness Rowe, the butler. Rowe had described the deceased's manner and looks before and at dinner (when, we should observe in passing, he was also complaining of stiffness and soreness from riding a runaway horse), and Mr. Gorst asks, "Now, tell us, do you think deceased was poisoned before dinner?"

A more unfair question can hardly be conceived, inasmuch as it involves a statement that deceased was "poisoned" by some one—which was the thing to be determined, not to be assumed. But this is a very mild specimen of the interrogatories practised at this (so-called) legal inquiry. Anyhow, it shows that the Crown was ready to admit that the deceased was ill before dinner, though it involves the monstrous notion that a man would eat a good dinner with twenty-five grains of tartar emetic in his stomach.

As further evidence that the theory of suicide, though enveloped in prodigious difficulties, is yet worth considering, we may adduce the fact that deceased when seized called out for hot water. Now, we will venture to say that this is unusual, unless the patient is conscious of having swallowed something noxious; and, secondly, the profound collapse which must have come from something swallowed very quickly before. It is only a killing dose that would produce such collapse, and it would not be long about it.

We purposely omit in this place more than a passing reference to what Mrs. Cox affirmed—viz., that the deceased said he had taken poison, and repeated this again and again; and to the intricate history of what deceased admitted or not, and the conversations with Dr. G. Johnson and Sir William Gull. If the deceased said what Mrs. Cox avers, it tells in favour of suicide; if not, there is but one more added to the intricacies of this unhappy business.

If the deceased did not kill himself, the hypothesis occurs that he might have been poisoned by his wife, or by Mrs. Cox, or Dr. Gully, or by any two, or all three of them conjointly.

Let us say first, as regards the wife, that, after all due allowance for the prejudice arising from her past conduct, nothing can equal the malignant—the almost more than feminine—ingenuity with which every jot and tittle of her actions, even the most irrelevant or insignificant, was raked up and turned against her. As for her husband's mother, she disapproved the match, and we can only wish that she had dissuaded her son from it. She is said to have meddled with their household affairs, and the kind of feeling towards her daughter-in-law was well expressed by that happy and most delicate feminine phrase, "She hoped to like her in time." This is quite intelligible and natural; but Mr. Joseph Bravo, who tells it to us, was not above petty insinuations, as, for instance, that "dinner was served as usual" (at The Priory during deceased's illness) *in several courses*, but that *he* remained upstairs with his son. A man can know but little of the ways of well-to-do families who supposes that in a house full of relations the servants will not provide and send up dinner as usual, spite of the illness, without waiting to be told. The unhappy widow is placed in this strange dilemma. If Bravo was cheerful and happy in his married life, there was no reason why he should have poisoned himself; *ergo*, she did it. On the other hand, if the married life was unhappy, she poisoned him to get rid of him. There was not a vestige of mercy or consideration for this woman; and if the inquisitors have failed to discover the cause of Mr. Bravo's death, they have anyhow been successful in torturing his widow. They proved that she dyed her hair, though they did not prove that she poisoned her husband. But as for evidence, what need of it?—they relied on blasting her character, so that anything should be believed of her. What a parody there was of legal proceedings, outdoing anything we hear of foreign questionings, is evident from one specimen. An old nurse, Amelia Bushel, was made to depose that "she did not know any reason why deceased should not have told everything to Mr. Royes Bell"! The same statement is found in the reports of the evidence of Miss Bell. How were these people to have known what they were asked? and what did it matter whether they did or not?

Spite of a protracted public investigation, and the most unscrupulous public inquisition which has been known in England since the Stuarts, nothing has been adduced against the widow—neither time, place, opportunity, material, nor motive for the crime.

As for Mrs. Cox, considering that she was known to be under the deepest obligations to the Bravo family, who had treated her with the greatest generosity, and that she was on the point of starting to see a well-to-do relative in Jamaica, it is difficult to discover a motive, and equally an opportunity. No means of administration by any person save the deceased can be easily conceived. The dinner was eaten by all three persons. The deceased was a judge of wine, according to Rowe, and the presence of tartar emetic in the burgundy he drank seems incredible. As for the water in his bedroom, of which he usually drank at bedtime, that could not have been tampered with, according to the evidence of the housemaid, and of Drs. Moore and Harrison. However the poison was taken, not many minutes passed before it took effect.

As for Dr. Gully, the fact that the Crown thought it worth while to prove the purchase of antimony by his coachman in 1869, shows how worthless is any direct evidence against him. It seems to be forgotten that, supposing a conspiracy existed to murder Bravo, it could have been but of very short duration. Is it likely that Gully carried antimony with him whilst a favoured lover, in order to poison any man who should marry Mrs. Bravo?

On the whole, there is such a conflict of evidence, such deliberate perjury on one side or the other, such motiveless, useless, and gratuitously devilish wickedness, that the question between murder and suicide remains insoluble. We should prefer the theory of accidental poisoning—a thing not impossible, or unknown in the history of antimony; and if this

be objected to because mere speculation, so, be it remembered, is it with the other two suppositions. Of course, suspicion falls naturally on one of the three persons named. But, as in a chess problem, what seems an obvious move at first sight seldom leads to a solution.

Lastly, our object is not to screen the guilty, but to protest against proceedings which are a disgrace to jurisprudence, which pervert justice at its source, and which, if repeated, would be as terrible to the innocent as to the guilty. And we must in fairness point out a series of indiscretions which justly gave a point to suspicion. That Mrs. Bravo should consult Dr. Gully; that she should receive medicine, or, in fact, hold any communication with him after her marriage; that Mrs. Cox should also repeatedly converse and consult with him, and be the bearer of medicine and "treatments," are acts of indiscretion which deserve the severest reprobation. But what shall we say of Dr. Gully? How was he justified in prescribing for Mrs. Bravo in April? Above all, why did he get medicine (laurel-water) and send it in a roundabout way to Mrs. Bravo—an act quite unnecessary, unusual, and derogatory in any physician, and fraught with the worst suspicions to him? Moreover, as a matter of professional conduct, why did he, being her lover, treat Mrs. Ricardo for miscarriage, alone and without another practitioner in consultation? Why did he prescribe for her in 1874, for the restoration of the uterine function, medicines not homœopathic, but such as are discredited with the power of doing away with the fruit of illicit love? No man, however high and pure he may be, can commit such indiscretions without risk.

THE WEEK.

TOPICS OF THE DAY.

In accordance with a provision of the Public Health Act, the Richmond Rural Sanitary Authority recently summoned a market gardener at Barnes to show cause why an order should not be made upon him to close a well which supplied several cottages with water. The defendant was represented by his son, who stated that the water was not used for house purposes. Mr. James Adams, the Medical Officer of Health for the district, was called to prove that the water was unfit for domestic use. He said it was very foul with cesspool matter, and five or six times worse than the Thames when flowing. The son said he should like the magistrate to taste the water, which, however, Mr. Paget declined to do. Mr. Adams then proceeded to test the water for ammonia, and it immediately changed to a light brown colour, depositing a thick sediment. This change showed the presence of sewage matter, and a sample of water from the Lambeth Company's mains was tested to show that if the water was pure no change would occur. In reply to the magistrate, Mr. Adams said he did not know where the particular cesspool was situated which contaminated this well water, as the neighbourhood was full of cesspools. Mr. Paget adjourned the summons for a fortnight, to give the defendant an opportunity of closing the well. This case shows the importance of tracing out and closing all polluted sources of water-supply.

The Vestry of All Saints, Lambeth, have, it appears, determined to establish a dust-yard on a spot within a few yards of the south-east corner of Westminster-bridge. The inhabitants of the neighbourhood have petitioned against this site being chosen, but the Vestry have declined to reconsider the subject. No doubt dust-yards are necessary evils, but they should be moved as far as possible from crowded localities. On this particular spot a smaller establishment of the kind was abolished twenty years ago, from a decided conviction that it had conduced to an outbreak of cholera; and the health of the people who are unlucky enough to live near will not be benefited by the re-opening of this yard on an increased scale of magnitude. The turning-out in one unsavoury heap of all the decayed refuse of all the dust-bins of a parish is a thing to be vigorously resisted, and we should recommend the petitioners to enlist the advice and assistance of the medical officer of health for the district, who will certainly be able to cancel the decision of the Vestry if it be possible to do so.

A paragraph in the *Newcastle Chronicle* states that the Royal Commission to inquire into the subject of noxious vapours intends to sit at the centres of chemical industries, and will visit Lancashire and Cheshire in October; and will probably make Warrington and Widnes their head-quarters.

Last week the Works Committee of the Metropolitan Board of Works presented their report on the memorial received from the Council of the Society of Arts, the following resolution amongst others having been passed:—"That the protection of public health from typhoid and other diseases demands that an amending Act of Parliament be passed as soon as possible, to secure that all house-drains connected with public sewers in the metropolis and towns having an urban authority should be placed under the inspection and control of local sanitary authorities. The memorialists also state, although considerable powers in this direction have been conferred by law upon local authorities, yet that in practice such powers are not sufficiently carried out at the present time. It appears to your Committee, on inquiry, however, that extensive powers are conferred upon the vestries and district boards of the metropolis to compel owners of house property to provide for drainage. The vestries have also large powers under the Nuisance Removal Acts. An examination of all the statutes relating to this subject points to the conclusion that the vestries and district boards have ample powers as regards the matters complained of by the memorialists; but, should they be able to demonstrate that there is a deficiency of such powers, your Committee apprehend that no difficulty would be made by Parliament in granting all needful amendments; and they recommend that a communication in the terms of this report be addressed to the Society in reply to their memorial."

It will be seen from last week's *London Gazette* that the clause in the late Army Medical Department Warrant making retirement at the age of sixty compulsory has begun to be carried out, and those Surgeons-General and Deputy Surgeons-General who have reached that age have been retired on half-pay. The first examination for candidates since the promulgation of the new Warrant also took place this week, but we fear that Mr. Gathorne Hardy's short service system for the army doctors has not been the success that was anticipated. The next attempt to popularise the service should show, at any rate, a partial return to the regimental system; if only one medical officer were attached to each regiment for a stated period, we think a large amount of satisfaction would be secured.

Six of the Keighley Guardians who have refused to carry out the Vaccination Act were arrested in that town last week, for having disobeyed the writ of mandamus issued against them by the Queen's Bench Division of the High Court of Justice. The crowd prevented the officers from taking the guardians to York, but the guardians pledged themselves to meet the officers at Leeds the next day. The crowd afterwards carried the defaulting guardians through the town. A telegram from Leeds reports the arrival of the guardians there according to promise. At the Queen's Hotel they held a small *levée*, and a large crowd assembled at the North-Eastern Station to witness their departure for York Castle. All the persons in the crowd were not sympathisers, however, for many expressions of scorn could be heard, and the cheers raised at the departure of the train were not numerous.

At the Blackburn Police-court, last week, a man was summoned for exposing two of his children who were suffering from

small-pox, and a woman for allowing her daughter, who was afflicted with the disease, to expose herself. The authorities said they brought the case as a warning to the public; both the defendants were fined 10s., and costs. Three fresh outbreaks of small-pox were reported in the town, making the total number of cases at that time twenty-three.

The Madrid correspondent of the *Times* telegraphs that the heat in Spain is fearful, and exceeds any recorded since the year 1800. In Madrid there are hundreds of persons sleeping on the roofs of houses and in balconies. In Seville people sleep in the open streets; the temperature is 101° in shady rooms. Madrid is wholly deserted, and its streets are silent. A further telegram adds that the heat in Andalusia is increasing, and forty field labourers have died at Seville of sun-stroke or heat-apoplexy. The vines are failing owing to the scorching heat.

An inquest which has lasted several days, respecting the death of Mr. Frederick William Kimberley, a surgeon, who was found dying, with twenty-one ribs fractured and his breast-bone broken, at Camberwell House Lunatic Asylum, was concluded last week at Peckham. Mr. Joseph Lees, of St. Thomas's Hospital, said he examined the body of the deceased, and he believed that there had been fractures and re-fractures of some of the ribs going on for a considerable period. He believed that the peritonitis, which was the immediate cause of death, arose from the giving way of a chronic ulcer of the stomach, and not from external violence. The jury returned a verdict of "Death from peritonitis following perforation of the stomach," and that such death had been accelerated by violence by some one in the Asylum, but whom the evidence failed to show.

At a general meeting of the St. Pancras Sanitary Board, held last week, Dr. Stevenson, Medical Officer of Health, stated that an inspection of the places most likely to be included in the provisions of the Artisans' and Labourers' Dwellings Improvement Act had led him to the conclusion that at present he could not make any official representation to the Board. He had rarely found the Nuisances Removal Acts inadequate to deal with the class of houses in St. Pancras which were found to be in an insanitary condition. If, however, at any time he found those Acts insufficient, he should not hesitate to avail himself of the advantages afforded by more recent legislation. There was a large area in Somers Town to which the Act of 1875 might be applicable, as it embraced the worst portions of the parish, in a sanitary point of view, but the houses in that area were to be removed to make room for the Midland Railway extension, and the company were bound to erect new buildings elsewhere to accommodate the persons so displaced. A resolution by Dr. Pearse, therefore, to the effect that the present insanitary dwellings in the parish could be dealt with by the Nuisances Removal Acts, was adopted.

Vaccination appears to be encountering much opposition in the North. The *Liverpool Daily Post* says three strong anti-vaccinators were brought before the magistrates there, on Saturday week, upon charges of failing to comply with the provisions of the law, and a fine was inflicted in each case. On the same day, according to the *Manchester Courier*, a sale took place before the police-station of Denton of the goods of a man which had been seized by the police in discharge of a penalty inflicted upon him by the Ashton county magistrates for refusing to vaccinate his child. A large number of people assembled, as the anti-vaccinators had announced a public meeting in the open air previous to the sale. The Rev. F. Prest, Primitive Methodist minister of Ashton, condemned compulsory vaccination, and asked the meeting to subscribe to buy in the man's property. He then made a collection, and having obtained a sum of money, the anti-vaccinators went to the sale and bought in the articles seized. After the sale a second meeting was held, and the man's effects were publicly returned to him. Speeches denouncing the Vaccination Acts were made, and petitions were adopted to the Ashton Board of Guardians and the Local Government Board in favour of the repeal of the law making vaccination compulsory. The Ashton Board of Guardians are rigidly enforcing the Acts, and the anti-vaccinators are as determined in their resistance; the result is that fine after fine is being inflicted upon the same persons for contumacy. In the face of such a state of things it is reported that small-pox has broken out badly at Blackburn, and the town has been placarded with notices requesting the inhabitants to give immediate information of all cases to the authorities. A temporary hospital is being provided, into which all sufferers are to be removed. Three of the streets of the town have been placed in quarantine by being boarded off, and all ingress and egress are completely cut off. The epidemic is said to have caused great alarm throughout the town.

The usual annual return of the deaths of merchant seamen, so far as they are reported to the Board of Trade, gives an account of 5393 deaths, reported in the year 1875. As many as 3263, or considerably more than half these deaths, occurred by drowning; but two-thirds of them by drowning when vessels were wrecked. An eighth of the whole number of deaths happened from fever, yellow fever causing the majority of this class of deaths; one in eighteen of all the deaths was from cholera, diarrhœa, dysentery, and diseases of that class; one in twenty-four was from consumption, bronchitis, or other diseases of the lungs; one in thirty-seven was from diseases of the brain and nervous system; and one in thirty-nine from diseases of the heart and great bloodvessels. As many as forty-one of the deaths were suicides, and there were five deaths from murder or homicide.

HEALTH OF ENGLISH WATERING-PLACES.

Just at the present season, when everyone is making for some seaside retreat, it will be interesting to learn that the Registrar-General has compiled his usual summer return, showing the recent rate of mortality in the districts or sub-districts containing the principal English watering-places. The return relates to the second quarter of 1876. The deaths were at the (annual) rate of only 10·9 per 1000 of the estimated population in Deal sub-district, which includes Walmer; 11·5 per 1000 in Hanley Castle, which includes Malvern; 12·4 in Lowestoft; 13·3 in Margate; 13·5 in Banwell, including Weston-super-Mare; 14 in Littlehampton; 14·1 in Teignmouth, including Dawlish; 14·2 in Weymouth; 14·8 in Tunbridge Wells; 15 in Yarmouth, and the same in Prittlewell, which includes Southend; 15·4 in Scarborough; 15·5 in Worthing; 16·1 in Exmouth; 16·2 in the Isle of Wight; 16·3 in Dover; 16·8 in Hastings and St. Leonard's; 16·9 in Cheltenham; 17·2 in Clifton; 17·4 in Leamington; 17·5 in Penzance; 17·7 in Buxton, and the same in Herne Bay; 17·9 in Ottery St. Mary, including Sidmouth; 18·2 in Bath, and the same in Eastbourne and Seaford; 18·6 in Crenddyn, including Llandudno; 19 in Torquay; 19·5 in Whitby; 19·8 in Folkestone; 20·5 in Wallasey, including New Brighton; 20·7 in Ramsgate and Broadstairs; 21 in Brighton and Hove, and the same in Lyme Regis; 21·1 in Matlock; 21·4 in Aberystwith; 22·1 in Beaumaris; 22·4 in North Meols, including Southport; 22·5 in Dartmouth; 23·5 in Ilfracombe, and the same in Bangor; 23·6 in Harrogate; 24·1 in Poulton-le-Fylde, including Blackpool and Fleetwood; 24·2 in Tenby; 25 in St. Asaph, including Rhyl; 32·5 in South Bersted, including Bognor. This list includes 37 seaside places and 9 inland towns. The mortality in the former averaged 18·3, and in the latter 17·3 per 1000 persons living. The deaths from the seven principal zymotic diseases ranged from *nil* in Deal, Littlehampton, and Lyme, to 9·6 per 1000 persons

in South Bersted, measles being the most fatal of these diseases. The rates of mortality above given are in almost every instance marked as having been corrected by a due distribution of the deaths in hospitals and workhouses.

THE DISTRIBUTION OF THE HOSPITAL SUNDAY FUND.

The Committee of Distribution of the Hospital Sunday Fund have already made their awards to the various metropolitan hospitals and dispensaries, although the full amount collected on June 18 last has not yet been received at the Mansion House. Of the sum received the Committee have awarded £23,943 10s. to sixty-nine general and special hospitals, and £2336 16s. 8d. to forty-five dispensaries. This gives a total of £26,280, which is nearly £1000 more than was available for distribution last year, but fully £2000 less than was distributed in 1874. It is believed that several hundreds of pounds will yet be paid in to the credit of the Fund before the end of the year, and be made the subject of a supplementary distribution, but it must be confessed that the result of this year's collection is somewhat disappointing, considering the immense efforts that have been put forth to make the movement popular.

With the awards we do not see much room for complaint. It is impossible to give satisfaction to everyone where there are so many antagonistic interests, but the Distribution Committee (as they have decided to admit all special hospitals to the benefits of the Fund) appear to have adjusted the claims of rival institutions with a due regard to the merits and necessities of each.

In the following table we give the amounts awarded to some of the larger hospitals last year and upon the present occasion :—

Institutions.	1875.	1876.
Charing-cross Hospital	£797 10 0	£816 13 4
French Hospital	108 15 0	122 10 0
German Hospital	601 1 6	632 4 4
Great Northern Hospital	286 19 8	259 14 0
King's College Hospital	1,266 13 0	1,164 3 10
London Hospital	2,404 13 4	2,307 16 8
Metropolitan Free Hospital	280 6 8	291 13 4
Poplar Hospital	314 3 4	350 0 0
Royal Free Hospital	531 13 4	641 13 4
St. George's Hospital	2,175 0 0	2,100 0 0
St. Mary's Hospital	954 11 8	1,050 0 0
Seamen's Hospital	845 16 8	816 13 4
Middlesex Hospital	1,741 1 8	1,633 6 8
University College Hospital	930 8 4	862 4 9
Westminster Hospital	725 0 0	758 6 8

The hospitals for diseases of the chest and those for diseases of children have, as usual, been dealt with very liberally—thus, the Victoria-park Hospital for Diseases of the Chest has been awarded £700; the Brompton Hospital for Consumption, £888 9s. 5d.; the North London Hospital for Consumption, £239 3s. 4d.; the Hospital for Sick Children (Great Ormond-street), £408 6s. 8d.; Evelina Hospital for Children, £348; the East London Hospital for Children, £235; the Victoria Hospital for Children, £190 7s. 1d.; the Hospital for Hip Disease in Childhood, and the North-Eastern Hospital for Children, each £140; and the Belgrave Hospital for Children, £105. Of the Women's Hospitals, the Samaritan Free takes £327 16s. 8d.; and the Soho-square Hospital, £175. The special hospitals, pure and simple, have been treated with the utmost consideration, or, we might say more correctly, generosity; and it is to be hoped that those particularly interested in the financial condition of these institutions will be content with the awards of the Committee of Distribution. Our space will not permit of our giving the complete list of awards to the group of "specials." Of the best known among them St. Peter's for Stone takes £35; the Cancer Hospital, £75; the Throat Hospital, £102 18s.; and the Hospital for Paralysis and Epilepsy, £303 6s. 8d. The awards of the Distribution Committee were adopted by the Council of the Fund, with the exception of a sum of £233 specially awarded to St. George's Hospital on account of the expenses incurred by the tank accident. The Committee had invited the representatives of each hospital and dispensary to confer with them in every case in which it was proposed to fix the award below the arithmetical basis; and while some of the institutions concerned intimated their wish to leave the decision entirely with the Committee, others availed themselves of the opportunity of a conference thus afforded them.

CRIMINAL LUNATICS.

From the annual report of the Medical Superintendent of the Broadmoor Criminal Lunatic Asylum, it would appear the number of criminal lunatics remains about stationary. At the commencement of the year 1875 there were 506 patients in the Asylum, of whom forty-two were either discharged or died before the end of the year; but an exactly equal number of patients were admitted during the year, so that the total number of inmates remained unaltered. Of the admissions, sixteen were persons charged with the commission of homicide, nine of whom were men, and seven women. With respect to the women, the victims were in every case their own children; and of the men, the majority had killed persons nearly related to them—three had killed their own children, one had killed his wife and child, another his father and mother, and another his nephew. In three instances only the victims were not related to the murderers. It is satisfactory to note that although there was a daily average of 503 patients in the Asylum, and these all of the most dangerous class to be found in any establishment, there were no instances of the commission of premeditated acts of violence. No form of mechanical restraint was used in any part of the Asylum during the year, but, in order to insure the safe custody of the patients, seclusion was at times resorted to, especially during those portions of the day when the attendants were occupied in cleansing the wards and serving the meals.

HEALTH OF THE CAMP AT WIMBLEDON.

The report of the health of the Camp at Wimbledon from July 10 to 23, by Surgeon-Major Footner, M.B., who was in charge of the field hospital during the late meeting, states—"The general health of the Camp has been remarkably good, the number of sick who have required treatment for more than a day only amounting to twenty-three—a percentage of sickness to strength of 0·5. Although the weather was excessively hot—the temperature for several days exceeding 80° in the shade, and on two consecutive days (the 16th and 17th) rising to 88°—only one case of sunstroke necessitating treatment in hospital came under notice. The volunteer who was the subject of this attack omitted to wear the usual white cap-cover. A soldier received a slight wound of the leg from lead splashing when marking at the 'Running Deer'—an iron target; injuries from this cause were somewhat frequent before the introduction of the canvas targets. The applicants to hospital for temporary treatment for slight ailments not necessitating going on the sick-list have numbered 154—a percentage to strength of 0·38; a very small average. The sanitary arrangements and condition of the Camp have been excellent; the water-supply generally has been abundant and of good quality."

ROYAL COLLEGE OF SURGEONS.

At the last meeting of the Council, Mr. C. G. Wheelhouse, of Leeds, the recently elected member of the Council, was sworn in, and took his seat. A letter was read, signed by Dr. Little and Messrs. T. Spencer Wells and W. Mac Cormac, the members of the Executive Committee of the testimonial to

Dr. Stromeyer, of Hanover, offering on behalf of the subscribers, for the acceptance of the College, a bust of the late Dr. Stromeyer, which had been executed by W. Engelhard, of Hanover. The Council heartily accepted with best thanks the bust of the distinguished surgeon, and it may now be seen on the staircase leading to the library. It is considered an admirable likeness. The library and museum were ordered to be closed during the month of September, as usual, for cleaning and re-arrangement. The Council will not reassemble until October 19. The preliminary examination in Arts for the diplomas of Fellow and Member of the College will take place at Burlington House on the 12th, 13th, and 14th prox., and already the number of candidates is considerably in excess of the last occasion.

A FRENCH LADY M.D.

CONSIDERABLE curiosity was felt on Saturday last to witness the examination of Madame Ribard for the degree of Doctor of Medicine, when a large number of persons assembled in the amphitheatre of the School of Medicine at Paris. Madame Ribard entered the hall in a black robe and white band, and seated herself until her turn arrived. She is about twenty-seven years of age, and the mother of two children. She appeared a little disturbed at the beginning of the examination, but soon recovered, and her replies were marked with much perspicacity. The examiners decided that Madame Ribard merited the diploma of doctor, and she was complimented by the President on the extent of her knowledge.

THE "THUNDERER" DISASTER.

ONE officer and twelve men are still in Haslar Hospital. Four men present symptoms of gastritis, and two at least give cause for anxiety as to the result; all the others are convalescent. The coroner's jury assembled at the Hospital on Tuesday and received the medical evidence, and at its conclusion spoke in terms of the highest praise of the kindness, skill, and attention with which the sufferers have been treated by the surgical staff of the Hospital.

PARLIAMENTARY.—POLLUTION OF RIVERS—ARMY MEDICAL DEPARTMENT—CRUELTY TO ANIMALS—EAGLEY EPIDEMIC.

IN the House of Lords, on Friday, August 11,

The amendments to the Pollution of Rivers Bill were considered and agreed to.

In the House of Commons,

Mr. Hardy, in reply to Mr. Dunbar, said that the number of vacancies in the Army Medical Department was fifty-seven, and that fifty appointments were announced as open for competition at the competitive examination to be held this month.

The House went into Committee on the Cruelty to Animals Bill.

Sir Wm. Barttelot said that if such a Bill as the present had been brought before the House early in the session, he ventured to say it would have met with a very different fate from that which now threatened it.

A new clause was inserted, that no prosecution against a licensed person should be instituted, except with the assent of the Secretary of State.

The Bill passed through Committee.

On Monday, August 14,

Mr. Sclater-Booth, in reply to Mr. Charley, said that no steps could be taken with reference to the reports of the Commission upon the Eagley epidemic without further legislation.

The Lord Advocate said it was not the intention of the Government to consider the Poor-Law Medical Relief Bill for Scotland this session.

The Pollution of Rivers Bill, with the amendments from the Lords, was reconsidered, and the amendments approved.

PATENT MEDICINES.—The Government stamp duty on patent medicines, in the year ending March 31, amounted to £123,136 9s. 10½d.

"OUR OWN CORRESPONDENT" IN SERVIA.

BELGRADE, August 12.

I ARRIVED at Belgrade on Wednesday night, after a journey of six days, travelling by way of Sheerness, Flushing, Cologne, Mayence, Wurzburg, Vienna, and Pesth. The journey was not without its interest, as it afforded a view of the Rhine scenery, and the still more beautiful scenery of the Upper Danube between Passau and Vienna. This country is very mountainous and thickly wooded, affording some of the most charming views. At Vienna I visited the principal hospital (*Krankenhaus*), and am greatly indebted to the kind courtesy of Dr. Hausenbichler, who allowed me to accompany him in his round. The place appears to be divided into six large quadrangles, and is capable of accommodating 2000 patients. The wards are large, lofty, and well ventilated, the general arrangements being very similar to what we are accustomed to in our London hospitals. The quadrangles are well supplied with trees, affording grateful shade for the convalescents, and the whole place is a miracle of cleanliness and good order.

The bedsteads have wire-netting bottoms, which are elastic, cool, and easily cleansed. The sanitary condition of Vienna is good; the streets or boulevards are broad and well shaded by trees; the houses are lofty and handsome. There were not many very serious cases in the hospital—a few cases of scarlatina, and a case of dysentery for which tannin and opium were prescribed. Altogether this hospital is far superior to the Hôtel Dieu in Paris, which I inspected twelve months ago, and is characterised by the order and method peculiar to our own institutions.

At Belgrade I expected to find the town full of wounded, and, from what I had previously read in our English papers, I anticipated gangrene and dysentery as the prevailing condition of things. There is nothing of the kind here. Only about 400 men are in the various hospitals. Dr. Steiner, of Vienna (a pupil of Dr. Billroth), who is personally known to many of our chief English physicians, is the principal physician in charge of the wounded, and he is very badly off for qualified assistants. I had the pleasure of accompanying him yesterday, and saw him dress a stump which had sloughed subsequently to amputation (it was an amputation of the arm above the elbow in the middle third). It had done well at first, but, being neglected, became gangrenous. Dr. Steiner cauterised it with carbolic acid crystals, with the best effect, and yesterday he applied nitric acid. The wound is now looking healthier. The majority of the cases are gunshot wounds, principally in the legs. The surgeons dress them very simply with dilute carbolic lotion, and most of them appeared to be doing well, but the dressing is very primitive indeed. Nobody seems to know how to put on a bandage properly, and the extravagant use of materials would frighten our surgeons in the London hospitals. However, all are doing their best, and there is a grave earnestness about the people in the discharge of their duties which augurs well. Madame Rosen, a Prussian lady of considerable experience in the Berlin hospitals, is here, waiting for an appointment; and Miss Pearson and Miss Maclaughlin, from England, are daily expected.

A SANITARY NECESSITY.—The Vestry of Bethnal-green has accepted a site for a mortuary in the parish churchyard of St. Matthew, and a contract has been entered into for the erection of the building.

SUFFOCATED IN A SEWER.—Our contemporary, the *Times*, has given publication to a melancholy accident, illustrative of the peculiar dangers attendant on work in our sewers. On Wednesday, last week, it states, two sewer men employed by the Lambeth parochial authorities to clear out a sewer in the New-road, Battersea, met their deaths under very strange circumstances, into which an inquiry will be made by the Government authorities. Mr. Wallace, a vitriol and chemical manufacturer, occupies some factory premises in the New-road, Battersea, and complaints have been made by the inhabitants of the offensive vapours alleged to be given off during the manufacturing processes. About a week ago a gang of men were sent by the parish authorities to clear the sewer of some refuse which was said to come from Wallace's premises, but they refused to work on account of the poisonous gas, as also did another gang on Friday. On the Wednesday four men undertook the task, and two were suffocated.

FROM ABROAD.

The Geneva University.

According to the *Gaz. Hebd.* (August 11), students are to be admitted into the Medical Faculty of the Geneva University (which is to be opened in the ensuing autumn) after furnishing proofs of having attained a certain proficiency in letters and arts, as ascertained by examinations. The course of medical study will extend over six years, the subjects of study being distributed according to the following curriculum.

The *first* year will be devoted to botany, physics, chemistry, comparative anatomy, and zoology, the students working in the chemical and comparative anatomy laboratories. In the *second* year they will commence descriptive anatomy and physiology with dissections, continuing their studies in organic chemistry and medical physics. In the *third* year descriptive anatomy is continued, and lectures are delivered on embryology, normal histology, and regional anatomy. Supplementary courses of lectures are also to be delivered on the subjects taught during the preceding years, which students who find themselves defective in any of these will be enabled to attend. They must, too, during this year pursue the practice in the laboratories of histology, comparative anatomy, physiology, and chemistry. At the end of this year, the examination termed *Baccalaureat ès Sciences Médicales* will have to be passed. The *fourth* year will comprise pathological anatomy, pathological physiology, and pathological histology, internal and external pathology, and pharmacology, together with medical and surgical clinical practice, dissections, and pathological micrography. In the *fifth* year will have to be studied therapeutics, hygiene, legal medicine, and theoretical obstetrics, together with pathology and operative surgery, and medical and surgical clinical practice. In the *sixth* year the student will add to his other clinical practice, clinical obstetrics, polyclinical (dispensary) practice, ophthalmoscopy, psychiatry, etc.

Privat-docenten are specially appointed for preparing students for the examinations for the doctorate, and to this end will go over with them any portions of the theoretical or practical courses in which they find themselves defective. In order to obtain the diploma, five examinations will have to be undergone. It is obvious that for so comprehensive a scheme of teaching, and so many preparations for the examinations, a large staff of professors and their assistants will be required. And these teachers will have to devote much time to their tasks; for, besides the practical exercises which they personally direct, most of the professors will devote at least six hours a week to theoretical teaching. There are also numerous "free courses" instituted on various subjects, as gynæcology, ophthalmology, balneotherapeutics, dentistry, the diseases of the urinary organs, otology, etc. The students will be at liberty to join any of the courses of lectures they please, on the condition that the courses so chosen comprise at least twenty hours of lectures per week in each session. We suppose that the "free courses," or extra academical lectures, are charged at the same rate as the academical, viz., five francs per session for lectures of one hour per week. These fees belong to the lecturers, and all Swiss auditors above thirty years of age are to be admitted gratuitously.

Dr. Bulkley on Herpes Zoster.

Dr. Bulkley, of New York, the well-known dermatologist, has contributed an interesting paper to the July number of the *American Journal of the Medical Sciences*, entitled a "Clinical Study on Herpes Zoster," which he terminates in these conclusions, slightly abridged:—

"If my line of thought and illustrations have been clear, I trust that I have assisted in bringing forward prominently certain facts in regard to the etiology of herpes zoster but little considered hitherto, which, together with our knowledge respecting this disease, may be thus briefly recapitulated:—

"1. Whatever may be the cause of the nerve irritation, herpes zoster is always of nerve origin—that is, it is an inflammatory lesion of the skin, wherein the local cell action, resulting in the production of vesicles, is but a result of nerve influence; a perverted cell action caused by perverted innervation.

"2. From the almost constant changes found in the ganglia of the posterior roots of the spinal nerves of the affected region, we must infer that the trophic changes observed in the skin have to do with the sensitive nerves.

"3. We are not to conclude, however, that herpes zoster is the result of inflammation of the sensitive ganglia alone, for the entire nerve on the distal side of the ganglion has been also found to be inflamed; and abundant proof exists of eruptions of zoster due to various nerve lesions, peripheral and central, injuries and disease of the transmitting nerves, and of the cord and encephalon.

"4. In certain cases the origin may be shown to be idiopathic inflammation of conducting nerves, or these may be affected by pressure or other alteration caused by the presence of a tumour, or the disease may be the result of surgical or other injury.

"5. The origin of herpes zoster, therefore, is a direct nerve irritation and inflammation, and in ordinary—apparently idiopathic—cases the explanation is to be sought for in the same causes that give rise to neuralgias in general, some of which are traceable, many are not. The gouty habit inducing neuralgia can likewise give occasion to herpes. The direct exposure to cold of the terminal branches of a nerve may cause painful excitation of the nerve itself, or neuralgia, and is equally a cause of zoster. Malaria can originate neuralgia; and may not some of the cases of zona be attributed to a malarial influence? The prompt action of citrate of iron and quinia in some cases might point to a malarial element.

"6. In considering the true nature of herpes zoster, we are rather led away from the skin lesion to the antecedent neuritis, whose manifestations are more or less marked neuralgia and disturbances of sensation in the area of nerve distribution, represented by hyperalgesia, hyperæsthesia, and anæsthesia; while at the same time other results of nerve disturbance may occur, as paralysis of muscles, trophic alterations in the tissues, and even necrosis and separation of bone. In other words, the eruption of zoster is an epiphenomenon to a primary neuritis and neuralgia.

"7. The clinical history and therapeutics of herpes zoster are in themselves almost convincing proofs of the neurotic nature of the disease. In most cases, especially in the younger patients, the treatment is expectative; while in severe cases, and in elderly persons, the neuralgia is the principal element requiring attention, and this is remedied by measures directed to the nervous system. In the majority of instances the nerve irritation or inflammation subsides spontaneously, the whole train of morbid phenomena occupying about the same length of time taken by other self-limited inflammations—as pneumonia and erysipelas,—while the sequelæ require attention as in other diseases. The local destruction of tissue is sometimes a troublesome feature in the way of ulceration or necrosis of the skin, or the neuralgia persists to a distressing degree even under the most intelligent treatment.

"8. Three therapeutic agents seem to have marked control over herpes zoster, whose cutaneous manifestations, as well as painful element, they appear to arrest—1. Phosphorus, which, used in the form of phosphide of zinc (a third of a grain, with the same of extract of nux vomica every three hours), will pretty certainly 'abort' the disease, if given early as recommended by Dr. Ashburton Thompson. I should think that the tincture of phosphorus, or what is known as Thompson's solution of phosphorus, now used so successfully for neuralgias, would have the same effect. I have not tried them, but have used the phosphide repeatedly with most excellent results. 2. The galvanic current, if passed directly through the affected nerves, their trunks and peripheral distributions, will either have the effect of causing the eruption to abort if used early, or will make the newly formed vesicles dry up much sooner than otherwise, and will pretty certainly check the pain. 3. Quinia, with iron, will, I think, if pushed early in the disease, much shorten its duration, and relieve many unpleasant symptoms. Whether ergot, which has been of great service in neuralgia in the hands of some, would check this congestive neurosis, I cannot say, but should hope much from it. The hypodermic injection of morphia, as we know, relieves neuralgia, and, if used early and repeatedly, might abort this disease by checking the nerve irritation, especially if conjoined with atropia. Painting the surface with collodion, or colloid coating containing morphia, would serve the same purpose, and some assert that it is a very valuable measure. Ordinarily, the only local treatment required is protection of the inflamed surface; and this is best accomplished by powdering it with starch and keeping a single thickness of muslin firmly applied and left on until the vesicles are dried."

REVIEWS.

The Student's Guide to the Practice of Midwifery. By Lloyd Roberts, M.D., M.R.C.P. Lond., Physician to St. Mary's Hospital, Manchester, etc. London: J. and A. Churchill, New Burlington-street. 1876. Pp. 299.

In the attempt to compress all that it is absolutely necessary for a student to know of the science and practice of midwifery into a small volume of less than 300 pages, Dr. Roberts undertook a most difficult—we might say an almost impossible—task. Although, however, the space at his disposal would not permit of his dealing exhaustively with any one branch of the subject, he has succeeded in producing a work which will serve as a very excellent introduction to obstetric practice; though we should be sorry if any student were to rest content with having digested all the information it contains. The anatomy of the pelvis and female organs of generation is dealt with very briefly, but the author assumes that the student is already practically acquainted with the details of this branch of the subject. It is to be hoped that this conjecture is correct, as the student will not then be misled into the belief that the true pelvis is that portion of it above the ilio-pectineal line, and the false that portion below it (page 4). There are one or two other slips of the pen in this part of the work; for instance, it is not strictly accurate to say that the "ossa innominata are two irregularly shaped bones divided into three parts." The chapter on the development of the ovum is very condensed, and the information to be gathered from it is too meagre either for examination purposes or to give the student a fair idea of the subject. It would perhaps have been better if the reader had been recommended to study development from Dalton or some other physiological work where the subject is adequately dealt with. The practical part of the work, which includes the description of the mechanism and management of labour, the operations of midwifery, and the diseases of the puerperal state, is worthy of all praise. Conflicting opinions and speculative theories are carefully avoided, nothing being advanced but that which is reliable as the result of extensive and long experience, and close observation.

On Tracheotomy, especially in relation to Diseases of the Larynx and Trachea. By W. Pugin Thornton, Surgeon to the Hospital for Diseases of the Throat. London: J. and A. Churchill. Pp. 70.

There was certainly an opening for a book on this subject, for, as far as we know, there is no other separate monograph in the English language. Coming as it does from a specialist, we have a right to look forward to something really good and exhaustive, but we are bound to admit that our first impressions were not altogether favourable, nor were we better pleased with the work after a careful perusal of its pages. The work is not exhaustive in any sense of the word; it is even far from being complete. We think that it might very properly have been prefaced with a historical account of the naturalisation of tracheotomy among surgical operations, giving a few words of acknowledgment to those who have done so much to overcome the prejudices which for centuries have kept the operation almost in abeyance. The great master Trousseau, who at the time of his death had probably performed more tracheotomies (and certainly more successful ones) than any other man in the profession, and whose labours in this department have so successfully laid the foundations on which younger and subsequent workers might build, is scarcely alluded to. Nor is any mention made of the various treatises on the subject which have been published in France and Germany, nor of the thousand-and-one instruments, including tracheotomes, trocars, and the like, which have been invented in order to render the operation more easy and its performance more expeditious. We think that a book which has an exhaustive title ought to be exhaustive in its contents. Passing on from these general remarks, we will proceed to the book itself, such as it is.

In the introduction, our author says:—"In the course of my remarks it may be deemed desirable to allude to other modes of treatment applicable to some of the more important diseases, with the view of obviating the necessity of having recourse to tracheotomy." Is it desirable, in a book on "tracheotomy," to diverge to such topics? Do we not take up the book to learn how best to perform the operation, *all other means of cure having previously been fruitlessly exhausted?* But we will let this pass; we must, however, strongly join issue about the use of chloroform. Mr. Thornton says —"I never employ chloroform"; "and for this reason, that it is of vital importance, as soon as the trachea is opened, that the patient should be able to cough up any blood which may have passed down into the air-passages." True; but with a skilled operator very little blood gets in, and the patients are never so anæsthetised that reflex irritation is abolished. We strongly advise chloroform for all cases, and especially for children. We are sure that it is less obnoxious to the child than being "wrapped in a sheet and forcibly held down"; and it is certainly more convenient to the surgeon, as it allows him to work deliberately.

There are some very well executed woodcuts, but they are, for the most part, unnecessary. We think that a good drawing of the anatomical relations of the trachea, showing also the proper position for the head during the operation, would have been much more acceptable to the general practitioner, who might thus have refreshed his memory while on his way to the patient's house. Drawings of various kinds of tubes are no doubt useful, though we should prefer to see substituted or added woodcuts of some of the other instruments which are generally used.

We find that Mr. Thornton does not approve of keeping his patients enveloped in steam. In this we partially agree, though we think that a moist and warm atmosphere is exceedingly grateful to such patients as are old enough to express themselves. In croup and diphtheria, he says, "it may be found beneficial to render the atmosphere moist." "If it is considered desirable, Dr. Gee's apparatus answers best for this purpose." But what is Dr. Gee's apparatus? Here we think that a woodcut and a slight description would be a real addition to the book.

The chapter on "Dangers during and after Tracheotomy" is not bad, though it is not so full as it might be. The next chapter, "Diseases and Injuries requiring Tracheotomy," is the best in the book, and may be truthfully said to be a concise *résumé* of the subject. It is illustrated by some photographs, which literally show nothing, and which, even if they did exactly represent the condition of the diseased larynx referred to, could not add in any way to the utility of a book which is intended to be a practical exposition of a surgical operation.

We have thrown out sundry hints to our author, the carrying out of which would make future editions of this work more practical and more useful to those for whom it is written. The book is obviously the work of a surgeon who knows his subject well, and whose unrivalled opportunities have thoroughly familiarised him with throat disease and its treatment.

Second Annual Report of the Condition of the Combined Sanitary District of West Sussex. By Charles Kelly, M.D. Lond. Horsham: Price. 1876. Pp. 56.

Dr. Kelly is doing good service in his own department by the publication of such annual reports as the one before us. He gives an account of the sanitary condition and vital statistics of the individual towns and villages within his combined district, and then a general and critical summary of the whole. Apart from the statistics, which are carefully compiled and arranged, there are some interesting observations on the zymotic diseases, their mode of origin, the means adopted for their suppression, and the final results obtained. Speaking of scarlet fever, Dr. Kelly says:—

"It is worthy of notice how few among the poorer classes were attacked. It is only amongst this class that, at present, any definite information can be obtained: the slight mortality and the limited spread of the disorder may, in some measure, be due to early knowledge of the infected places and the adoption of simple sanitary measures.

"Scarlet fever is constantly being spread about the country by the carelessness of people, and this is chiefly done by the wealthy and upper classes. Amongst the poor the disease is easily traced out; the children are kept from school, and the washing is done at home; the neighbours, afraid of the fever, keep away as much as possible; and so isolation is pretty well secured, and the disease does not spread. Very different is the case with the wealthy. It constantly happens that when one child is attacked, the rest are at once sent away. But since these children have been exposed to infection, it results that in a few days the other children fall ill in their new lodgings, one by one, and thus a new centre is formed for the disease to spread from."

There is, no doubt, a solid substratum of truth in this reasoning, though from the fact that the "wealthy and upper classes" are very much less crowded in their dwellings, and that "neighbours" as carefully avoid infected houses in this class of society as elsewhere, we are not disposed to accept Dr. Kelly's reasoning as absolutely correct. We think it more probable that the greater amount of scarlet fever among the wealthier classes is due to the fact that it is more certainly detected and treated, and we venture to think that Dr. Kelly's experience as a London physician will bear us out somewhat in this view. Whatever be the true explanation, we believe that the publication of such reports as these, with the details of any very obvious neglect of common sense precautions, will in time work the desired reform. Our space prevents a more lengthy notice of this very excellent report.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are lists of candidates who have passed the recent examinations:—

FIRST M.B. EXAMINATION (ENTIRE).

First Division.—Baddeley, Charles Edward, King's College; Boyd, James Stanley Newton, University College; Clark, Chas. Alfred Dagnall, St. Bartholomew's Hospital; Collier, Mark Percell Mayo, St. Thomas's Hospital; Gabb, James Percy Alwyne, University College; George, George Aldridge, University College; Heath, William Lenton, St. Bartholomew's Hospital; Lory, William Manley, University College; Matthews, Valentine, King's College; Neale, John Edward, University College; Phillips, Sidney Philip, University College; Saunders, John Charles, Downing College, Cambridge, and St. Bartholomew's Hospital; Sheppard, Charles Edward, St. Thomas's Hospital; Smith, Kenneth Rawlings, University College; Stewart, Howard Douglas, King's College; Uhthoff, John Caldwell, Guy's Hospital; Wainewright, Robert Spencer, Guy's Hospital; Whitney, Neville Scott, University College; Williams, David James, University College.

Second Division.—Andrews, William Stratford, University College; Berry, Frederic Haycraft, Guy's Hospital; Culhane, Frederick William Slater, University College; Dymott, Donald Frederick, University College; Faulkner, John Thomas, Owens College; Hadden, Walter Baugh, Liverpool School of Medicine; Jewell, Charles Coleman, University College; Jones, Roger Hughes, Liverpool School of Medicine; Juler, Henry Edward, St. Mary's Hospital; London, Alfred Austin, University College; Mackern, George, Guy's Hospital; Manby, Herbert Lynsey, Guy's Hospital; Marsh, Joseph Henry, St. Thomas's Hospital; Notley, William John, B.A., University of Edinburgh; Russell, George Hannah, Guy's Hospital; Salter, John Reynolds, University College; Sheldon, Thomas Steele, Guy's Hospital; Tuke, William Samuel, University College.

EXCLUDING PHYSIOLOGY.

First Division.—Meek, John William, Guy's Hospital.

Second Division.—Barker, Frederick Rowland, St. Thomas's Hospital; Clark, James Richardson Andrew, University College; Hughes, Richard, Owens College; Shaw, George, Westminster Hospital; Vincent, John Hinks, Queen's College, Birmingham; Williams, Dawson, University College.

PHYSIOLOGY ONLY.

First Division.—Blake, William Henry, University College; Cuming, Charles Henry, University College; Plumbe, Samuel Thomson, St. Bartholomew's Hospital.

Second Division.—Drysdale, Alfred Edgar, University College, and Liverpool School of Medicine; Pickup, William James, University College; Ryley, James, University College; Smith, Herbert Urmson, St. Thomas's Hospital.

UNIVERSITY OF ABERDEEN.—During the past year the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

THE DEGREE OF M.D.

Henderson, Colin, M.A. Edin., L.R.C.P.E., etc., London; Morton, Thomas Henry, M.R.C.S., L.M., etc., Sheffield.

At the same time the following gentlemen received promotion to the degree of M.D.:—

Aldridge, Charles, M.B., Plympton, Devon; Barnard, Charles Edward, M.B., Gulgong, New South Wales; Burness, Alexander George, M.B., London; Connor, Louis Richard, M.B., Leicester; Cossham, William Raymond, M.B., Clevedon, Somerset; Fairweather, Alexander F. A., M.B., Pocklington, Yorks; Gray, John Roubel, M.B., Thirsk, Yorks; Hallett, Henry Arthur, M.B., Kimbolton; Holland, Lucius, M.B., Newcastle-on-Tyne; Macdonald, John Davidson, M.B., Insch; Muil, William, M.B., Kirby Moorside, Yorks; Norton, John Alexander, M.B., Bristol; Reid, James Alexander, M.B., Sale, Victoria, New South Wales; Robb, John, M.B., Zanzibar, E. Africa; Russell, James, M.B., Croydon; Scatliff, John Milton Elborough, M.B., Brighton; Shivas, John, M.B., Millbridge, Yorks; Spencer, Francis Henry, M.B., Cambridge; Sutherland, James, M.B., Manchester.

THE DEGREE OF M.B.

Alexander, William Copland, Greenock; Anderson, Alexander Penrose Torry, Dundee; Barker, Henry Martyn, West Wick, Bedford; Bell, George Pearson, Liverpool; Bell, Henry Rufus, Hull; Bey, William, Tarland; Bower, David, Edinburgh; Brander, James, Urquhart, Elgin; Broomhead, Charles, Old Machar; Burnet, Robert William, Huntly; Calder, Robert, Edinkillie, Forres; Cameron, Nathaniel, M.A., Abernethy; Cheyne, Walter Smith, Aberdeen; Christie, Alexander Livingston, Aberdeen; Churton, Thomas, London; Clippingdale, Samuel Dodd, London; Craib, James, Coull; Cran, James, Cabrach; Cran, Robert, Kildrummy, Mossat; Drew, Clifford Luxmoore, London; Duirs, David Peter, M.A., Kinneff, Bervie; Ewart, Alexander Barclay, Kingston, Jamaica; Fiddes, Thomas, Fovran; Giblin, Edward Owen, Hobart Town, Tasmania; Glyn, Herbert Arthur, London; Guild, Robert Keith, Aberdeen; Hales, Robert Turner, Holt, Norfolk; Hatch, William Keith, Shrewsbury, Salop; Hawkins, Frederic Mortimer, London; Heelas, James, The Holt, Wokingham, Berkshire; Hodgson, Alfred, Snaith, Yorkshire; Hunter, John, Kilbirnie, Ayrshire; Jack, Robert Mathers, Manchester; James, Walter Culver, London; Jones, Timothy Siddall, Swansea; Kibbler, William Ambrose, Hackney, London; King, Nathaniel Thomas, Lagos, West Africa; Kyngdon, Frederick Henry, Croydon, Surrey; Low, Frank Harrison, London; M'Ewen, Finlay Alexander, Assyat, Sutherlandshire; Macgregor, George Robert, Canisbay, Wick; Mackenzie, Alexander William, M.A., Logie Easter, Ross-shire; M'Leod, Patrick Brodie Henderson, Strathy, Sutherlandshire; M'Pherson, Alexander, Glenlivet; Mills, Robert James, Norwich; Moir, John Munro, Aberdeen; Pirrie, James Miller Gordon, Aberdeen; Reid, William, Auchindoir; Seymour, Charles, Odiham, Hants; Shapley, Harry Thomas, Torquay, Devon; Simpson, James, Aberdeen; Simpson, James Herbert, Pontefract, Yorkshire; Simpson, Wm. John Ritchie, Edinburgh; Smith, James, M.A., Tullos, Nigg; Smith, William Robert, Plumstead, Kent; Stuart, John Robert, Inverness; Thomson, John, Gartly; Trail, James Wm. Helenus, M.A., Aberdeen; Watson, Henry, Portsoy; Watt, George, Kennethmont; White, William, Nottingham; Williams, Alexander, Leochel Cushnie, Alford; Wilson, John Osbert, M.A., Huntly.

THE DEGREE OF C.M.

Anderson, Alexander P. T.; Alexander, William C.; Bell, George Pearson; Bell, Henry Rufus; Bey, William; Bower, David; Brander, James; Broomhead, Charles; Burnet, Robert William; Calder, Robert; Cameron, Nathaniel; Cheyne, Walter Smith; Christie, Alexander L.; Churton, Thomas; Clippingdale, Samuel D.; Craib, James; Cran, James; Cran, Robert; Drew, Clifford L.; Duirs, David P.; Ewart, Alex. B.; Fiddes, Thomas; Giblin, Edward O.; Glyn, Herbert Arthur; Guild, Robert K.; Hales, Robert T.; Hatch, William K.; Hawkins, Frederic M.; Heelas, James; Henderson, Colin; Hodgson, Alfred; Hunter, John; Jack, Robert M.; James, Walter C.; Jones, Timothy S.; Kibbler, William A.; King, Nathaniel T.; Kyngdon, Frederick H.; Low, Frank H.; M'Ewen, Finlay A.; MacGregor, George R.; Mackenzie, Alex. William; M'Leod, Patrick B. H.; M'Pherson, Alexander; Mills, Robert J.; Moir, John Munro; Morton, Thomas Henry; Pirrie, James M. G.; Reid, William; Seymour, Charles; Shapley, Harry Thomas; Simpson, James; Simpson, James H.; Simpson, William John R.; Smith, James; Smith, William R.; Stuart, John Robert; Thomson, John; Trail, James William H.; Watt, George; Watson, Henry; White, William; Williams, Alexander; Wilson, John Osbert.

Of the above-mentioned candidates, James Simpson, James William H. Trail, M.A., and Alexander Williams, received their degrees in Medicine and Surgery, with highest academical honours. David Bower, Robert William Burnet, Nathaniel Cameron, Robert Turner Hales, William Ambrose Kibbler, Harry Thomas Shapley, William J. Ritchie Simpson, James Smith, M.A., and William White, their degrees in Medicine and Surgery, with honourable distinction.

The John Murray Medal and Scholarship was awarded to James Simpson.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 10:—

Griffin, Charles Thomas, Ledbury.
Howat, George Rutland, The Poplars, Bounds Green.
Hudson, James, 50, Maitland-park-road.
Le Page, William, Brandon, co. Durham.
Morgan, John, Strata Florida, S. Wales.
Smith, William, Great Avenham-street, Preston.
Thain, Leslie Lachlan, Devonport.
Wilkinson, Arthur Thomas, King-street, Oldham.

The following gentlemen also on the same day passed their primary professional examination:—

Barker, Frederick Rowland, St. Thomas's Hospital.
Cannock, Charles Wathyn, St. Thomas's Hospital.
Ogle, Charles John, St. Bartholomew's Hospital.
Wilson, Joseph Henry, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BELFIELD, C. W., L.R.C.P. and L.M. Edin., M.R.C.S.E.—Medical Officer to No. 3 District of the Bristol Union, *vice* — Cooper, L.R.C.P. Lond., deceased.

HEX, HARRY—House-Surgeon to the Birmingham and Midland Eye Hospital, *vice* Henry Eales, resigned.

NASON, EDWARD—Dispenser to the Birmingham and Midland Eye Hospital.

STONE, WM. DOMETT, M.D. St. And., F.R.C.S., etc.—Honorary Physician to the Western General Dispensary, Marylebone-road, N.W.

BIRTHS.

AVERILL.—On August 9, at Bank House, Longton, Staffordshire, the wife of Alfred Averill, M.R.C.S., etc., of a daughter.

BARKER.—On August 4, at Fleetwood, the wife of Surgeon-Major Barker, 22nd Regiment, of a daughter.

BARROW.—On June 30, at Wellington, Neilgherries, Madras, the wife of Henry John W. Barrow, M.R.C.S., of a son.

CALDWELL.—On August 15, at Kennington-park, the wife of W. T. D. Caldwell, M.D., of a son.

CHERRY.—On August 7, at Ayers Villa, Upper Norwood, the wife of Surgeon-Major W. Cherry, Army Medical Department, of a son.

HAMMOND.—On August 12, at Nuneaton, the wife of Dr. W. Hammond, of a daughter.

NASON.—On July 27, the wife of C. A. Nason, M.R.C.S., of Asbford, Kent, of twin sons.

PAGE.—On August 7, at Netherfield, Kendal, the wife of David Page, M.D. Edin., of a son.

STEWART.—On August 8, at 19, Charlotte-square, Edinburgh, the wife of T. Grainger Stewart, M.D., F.R.C.P.E., of a son.

THURSTON.—On August 11, at Elwick-road, Ashford, the wife of Edward Whitfield Thurston, L.R.C.P. Lond., etc., of a daughter.

WHATELY.—On August 12, at Gainsborough, Torquay, the wife of Edward Whately, M.R.C.S., of a daughter.

MARRIAGES.

BAYLY—PITT.—On August 10, at the Church of our Lady of Victories, Clapham, John, second son of the late Alfred Henry Bayly, M.R.C.S., of Sloane-street, to Margaret Sophia (Maggie), only daughter of the late James Trapp Pitt, Esq., of Piccadilly, W.

BAYNES—WATERS.—On August 8, at St. Stephen's, Paddington, Donald, eldest son of Craig Baynes, Esq., of Montreal, to Rose Adelaide Florence, fifth daughter of the late John Waters, M.D., of Birr, King's County, Ireland.

BELL—OLLIFFE.—On August 10, at Trinity Church, Sloane-street, Thomas Hugh Bell, of Red Barns, Coatham, Redcar, Yorkshire, eldest son of Lowthian Bell, M.P., F.R.S., of Rounton Grange, Northallerton, to Florence Eveleen Eleanore, third daughter of the late Sir Joseph Olliffe, M.D., Physician to the British Embassy, Paris.

BLACKMORE—TOLKIEN.—On August 12, at the parish church, Chiswick, George H. Blackmore, M.R.C.S. Eng., L.R.C.P. Lond., of Hammersmith, to Charlotte, eldest daughter of Henry Tolkien, Esq., of Mornington House, Chiswick, and King William-street, City.

BUSH—EALES.—On August 9, at Yealmpton, Devon, Erasmus, only son of William Bush, M.R.C.S., of Circus, Bath, to Ada, daughter of the Rev. W. T. H. Eales, of The Vicarage, Yealmpton, Devon.

CABLE—BATES.—On August 10, at St. Mary Magdalene, Bermondsey, George Hughes Cable, M.R.C.S.E., of Royal-hill, Greenwich, to Matilda, widow of the late W. Bates, R.N., and only daughter of R. Marshall, Esq., formerly of Stoke, Devonport.

CAPES—HANKINS.—On August 9, at the parish church, Clapham, John F. J. Capes, of Chertsey, to Laura Neame, eldest daughter of the late Thomas Hankins, M.R.C.S., of Old Town, Clapham, S.W.

CHESSALL—FISH.—On August 10, at St. Saviour's, Paddington, W. Chessall, M.D., of Horley, Surrey, to Adelaide Eliza, eldest daughter of the late W. J. J. Fish, Esq., of Charlwood, Surrey.

DAVIES—COOTE.—On August 10, at the Congregational Church, Tenstanton, W. Morriston Davies, M.D., of Huntingdon, to Ellen, second daughter of Thomas Coote, Esq., of Oaklands.

DRUMMOND—ANGUS.—On August 10, at St. Paul's, Newcastle-on-Tyne, David Drummond, M.D., M.A., third son of David Drummond, J.P., of Dunfillan, County Dublin, to Margaret Horsley, eldest daughter of George Angus, Esq., of Beech-grove, Newcastle-on-Tyne.

GAWACK—WOOLCOTT.—On August 8, at the Catholic Apostolic Church, Gordon-square, Alexander Gawack, M.D., Surgeon-Major Madras Medical Service, to Louisa, widow of P. M. Woolcott, Esq., late of Basset, Southampton, and eldest daughter of Captain William Vincent, R.N., of Basset, Southampton.

LITTLE—WILLISTON.—On August 2, at St. Michael's-in-the-Hamlet, William Little, M.D., of Dingle-hill, to Miriam Sylvia, only child of John Sylvester Williston, Esq., of Elm House, Dingle, near Liverpool.

LYSTER—DARSIE.—On August 9, at Canning-street Presbyterian Church, Liverpool, C. E. Lyster, M.D., to Marion, eldest daughter of J. R. Darsie, Esq., of Grove-park, Liverpool.

PITMAN—EVEREST.—On August 12, at St. Paul's, Upper Norwood, William Pitman, Esq., of 25, Anerley-park, Upper Norwood, to Florence Julia, only daughter of the late Dr. George Everest, R.N.

DEATHS.

BUCKLE, THOMAS, M.B., at Douglas, Isle of Man, on July 22, aged 35.

GARLAND, HENRY, M.D., of 304, Walworth-road, on August 9, aged 40.

GIRTIN, THOMAS, eldest son of the late T. C. Girtin, M.R.C.S., drowned while bathing, at Porto d'Anzio, near Rome, on August 9.

HADOW, GILBERT BETHUNE, Surgeon-Major in H.M.'s Bengal Medical Service, at Aligurh, North-West Provinces, India, on August 9, in his 44th year.

RYAN, JOHN, M.D. Edin., LL.D., formerly Lecturer on Chemistry at the Charlotte-street School of Medicine, Professor of Chemistry at the Polytechnic Institution, and some time Editor of the *London Medical Gazette*, at 16, Lonsdale-square, Islington, on August 7, aged 66.

SANGER, THOMAS FREDERICK, M.R.C.S., at Alfriston, on August 9, aged 66.

THOMAS, MRS., widow of the late William Lloyd Thomas, F.R.C.S., of Hatfield, Herts, at The Vicarage, Hatfield, on July 8, in her 82nd year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIGHTON AND HOVE DISPENSARY.—Resident Medical Officer and Dispenser. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London or Licentiates of the Apothecaries' Company of London, and duly registered under the Medical Act, 21 and 22 Vict., c. 90. Diplomas and other testimonials to the Chairman, on or before September 4.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—House-Physician. Candidates must have a recognised medical or surgical qualification. Applications, with testimonials, to David Cannon, Secretary, on or before August 31.

NORTHAMPTON GENERAL INFIRMARY.—Surgeon. Candidates must be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin. Testimonials and diplomas to S. P. Bennett, Secretary, on or before August 28.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-UPON-TRENT.—Two Resident Medical Officers, viz., House-Surgeon and House-Physician. Candidates must be duly registered and possess a diploma or degree in Surgery from the College of Surgeons in London, Edinburgh, or Dublin, or from one of the Universities, and a diploma, degree, or licence in Medicine from a University or duly recognised licensing body of Great Britain or Ireland. Applications and testimonials to the Secretary, on or before August 30.

SUSSEX COUNTY HOSPITAL.—House-Surgeon. Election by ballot. Candidates must be registered as Members of one of the Colleges of Surgeons of the United Kingdom, and Licentiates of the College of Physicians of London, or of the Society of Apothecaries of London, unmarried, and, when elected, under thirty years of age. Salary £80, and £10 a year from each resident pupil, with board and lodging. Diplomas and testimonials to Lieutenant-General E. F. Bourchier, Secretary, Brighton, not later than August 23.

SWANSEA HOSPITAL.—Resident Medical Officer. Candidates must be registered in medicine and surgery. Applications, with testimonials, to J. W. Morris, Secretary, 23, Gower-street, Swansea, on or before August 16.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Junior Assistant Medical Officer. Candidates must be unmarried and under thirty years of age, and have a surgical and medical diploma. Applications, stating age and qualifications, to Dr. Parsey, Hatton Asylum, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATION.

Knighton Union.—Mr. J. Welsh has resigned the Brampton Brian District; area 7546; population 1060; salary £20 per annum.

APPOINTMENTS.

Ashbourne Union.—John Francis O'Connor, L.R.C.S. Ire., L.K.&Q.C.P. Ire., L.M. Ire., to the Longford District.

Banbury Union.—Richard L. Routh, L.F.P.&S. Glasg., L.R.C.P. Edin., to the Swalcliffe District.

Bath Union.—Frederick Hanham, M.R.C.S. Eng., L.S.A., to the Workhouse.

Clifton Union.—David Edward Bernard, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., to the Workhouse.

Dewsbury Union.—James Osborne, M.B. and M.C. Glasg., to the Mirfield District.

Preston Union.—Thomas Oliver, B.M. and M.C. Glasg., to the Second District.

West Ham Union.—James Reed, M.R.C.S. Eng., L.S.A. Lond., to the Third District. Richard John Carey, M.R.C.S. Eng., L.S.A. Lond., to the Fourth District.

Sussex.—Mr. E. H. Moore as Analyst for the Eastern Division for one year. Francis V. Paxton, M.D., as Analyst for the Western Division for one year.

Tiverton Union.—Francis L. Stephenson, M.B. and C.M. Glasg., to the Bradwinch District.

THE result of the bazaar just closed at Brocklesby is satisfactory. Upwards of £2204 has been paid in to the building fund now being raised for a new hospital, in aid of which the bazaar was held.

A FATAL ACCIDENT TO A SURGEON.—We regret to state that Mr. John Gilland Hunter, a surgeon practising in the Consett district, Durham, has been thrown from his horse and killed. He was galloping along the highway shortly before midnight, and in attempting to check the speed of his horse he was pitched over the animal's head.

AN IRON RENAL CALCULUS.—M. Laborde presented to the Société de Biologie a renal calculus, which chemical examination showed to contain 75 per cent. of peroxide of iron. Extraordinary as the fact may seem, of its authenticity there can be no doubt, for the calculus was passed by a *confrère* while taking a bath on account of intense nephritic colic. He was able to trace the migration of the calculus, which, during an abundant hæmaturia, he received in his hand.—*Gaz. des Hôp.*, August 8.

FORMULA FOR MIGRAINE.—M. Fort recommends the following:—Sulph. quin. gr. xv., pulv. bellad. gr. iv., ext. digital. gr. vijss., ext. valerian gr. xv., mel. q. s., ut f. pil. xx. Whatever may be the length of the interval which separates the paroxysms—whether a week, or month, or more—the patient should take the twenty pills, commencing four days before the expected recurrence of the paroxysm, when he will take one in the morning fasting, and one at bed-time; next day he takes three—two in the morning, and one at night; the day after that he takes six—three in the morning, and three at night; on the day before the paroxysm is expected he will take nine—four in the morning, and five in the evening. If the expected paroxysm be not in this way prevented, it will, at all events, be mitigated, and the patient will recommence his course of pills four days before its expected successor.—*Union Méd.*, August 8.

Treatment of Hysterical Paroxysms.—Professor Thiry, of the St. Pierre Hospital, Brussels, arrests hysterical paroxysms by what he calls "torsion of the abdominal walls." He grasps in his hands the entire walls of the abdomen, either in their bare state or covered with the chemise, and imparts to them a certain amount of torsion, which he gradually increases, and which he maintains until the paroxysm has passed away, and the woman come entirely to herself. This practice promptly succeeds in aggravated, as well as in simple cases.—*Presse Méd. Belge*, August 6.

A Pulse of 21.—A remarkable instance of slow pulse is at the present time in M. Tillaux's service at the Lariboisière. The patient, a *chiffonnier*, seventy-seven years of age, came in to be treated for hydrocele, in all other respects seeming well, and jovial in his manner. It was almost by accident discovered that he had a pulse only of 21. It is regular, the two sounds of the heart and the short interval of silence that separates them occupying scarcely half a second. But the "grand silence" is extraordinarily prolonged, so as to continue nearly two seconds and a half. During this absolutely nothing is heard in the heart—not the slightest souffle. But with the first sound a very distinct souffle is heard, which, continuing during the "petit silence," terminates suddenly with the valvular clap which constitutes the second sound. The heart seems large, its apex beating more externally and lower down than in the normal state. There is some emphysema of the lungs. The pulse was counted carefully four days in succession, and the intervals were found to be perfectly equal, and the same on both sides. The patient, who entered the hospital on August 5, has had some attacks of syncope since then, and at the present time he is suffering from considerable œdema of the legs.—*Gaz. des Hôp.*, August 12.

The Employment of Bibulous Paper.—At a recent meeting of the New York Medical Association, Dr. G. H. Fox gave an account of the utility of bibulous paper, of which there are two varieties—the French, which is used by dentists in absorbing the saliva while operating; and the Japanese. The former will absorb at least five times its weight in water, and although this may not exceed what good lint will do, yet it acts much more rapidly. The Japanese, when moistened, does not reduce to a pulp like the other, but it can be rolled into cylinders, and passed into sinuses, the urethra, etc., being capable also of easy removal. Dr. Fox regarded the French paper as a cheap and convenient substitute for lint, cotton, or absorbent powders. In bleeding surfaces it would form an excellent substitute for sponges. Its greatest use has been the treatment of venereal sores, and it has been of service in eczema of the breast from nursing. When rolled into pellets it forms an admirable means for bringing fluid caustic substances in exact contact with the surfaces to be cauterised—*e.g.*, for the application of nitric acid to the surface of a chancroid. This spongy paper readily absorbs the discharge of sores with which it is brought in contact, and if often renewed keeps the sore and surrounding parts clean without washing. It may be medicated with carbolic acid, peroxide of iron, and other substances.—*New York Med. Record*, June 10.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

John Forster, Adelaide, South Australia.—Your letter, with inclosure, has been received.

Criminal Lunatics and the Legal Tests of Insanity.—We are sorry that we cannot find space for the republication of Dr. J. Tasker Evans' able article on the Legal Tests of Insanity. But we regret this the less as the arguments he uses are now not unfamiliar to the profession, while the public, to whom Dr. Evans has already addressed his article, do need to have the subject-matter of it repeatedly placed before them.

Identity.—The establishment of identity is frequently a matter of infinite difficulty. Sir Walter Scott's lines are—

> "Danger, long travel, want, and wo,
> Soon change the form that best we know;
> For deadly fear can time outgo,
> And blanch at once the hair.
> Hard toil can roughen form and face;
> And want can quench the eyes' bright grace;
> Nor does old age a wrinkle trace,
> More deeply than despair."

St. Mary's Hospital.—There is no such appointment as "Beadle" to the College.

F. M., Canterbury.—"Mr. W. J. Cooper, surgeon and apothecary," of the Medical Hall, Canterbury, whose extraordinary advertisement appeared in the *Kent County News* of the 12th inst., is *not* a Member of the Royal College of Surgeons.

Hereditary Genius.—True genius, say Spurzheim, Virey, Lordat, and their disciples, is always isolated. "The extremes," says Dr. Elam, "are solitary—that is, do not transmit their characteristics. The lowest grade of intellect, the perfect idiot, is unfruitful: the highest genius is unfruitful, as regards its psychical character: true genius does not descend to posterity. There may be talent and ability in the ancestry and in the descendants, directed to the same pursuits even; but from the time that the development culminates in true genius it begins to wane."

A Relic.—In the Brussels Exhibition there is a cinerary urn, with the inscription, "The ashes of an Italian gentleman, sixty years of age, cremated in two hours. He weighed fifty kilogrammes."

Red Cross.—It is said that a very large sum, amounting to many thousands, remains in hand of the fund collected for the wounded during the Franco-German campaign.

Tacitus.—M. Comté's remark was. "In every operation that man undertakes, be must imagine before he executes, as he must observe before he imagines. He can never produce a result which he has not conceived first in his own mind."

> "Image the whole, then execute the parts.
> Fancy the fabric
> Quite, ere you build, ere steel strike fire from quartz,
> Ere mortar dab brick."

Dr. Williams.—No place has been decided on for the next meeting of the Association. There was a rumour at Sheffield that Cork would send an invitation. There has not been a meeting in Ireland since the brilliant and most hospitable one in Dublin in the year 1867.

Enlargement of the Spleen, or Ague-Cake.

To the Editor of the Medical Times and Gazette.

Sir,—As, perhaps, it is not generally known that enlargement of the spleen is frequently easily reducible to its proper size, I take this opportunity of bringing the fact to your notice.

The treatment is antiphlogistic, and consists in either the local abstraction of blood, or by epispastics applied to the left hypochondriac region, with, if necessary, a smart purgative or two in conjunction with the above.

As generally the enlargement is of febrile origin, I may state (having had so many cases of ague under my care when in Guzerat, India) that unless the local affection is especially attended to medically there is no chance of curing the fever. But at the same time it is right to observe that it is not every case of ague that is accompanied with this enlargement. Far from it, for sometimes the enlargements are very common, and at other times they may be very uncommon, perhaps according to peculiarities in different seasons. I have known, however, the spleen to be so enlarged as to eclipse the liver in size, but when properly treated it may soon regain its normal capacity, and no disease seems more under the control of the medical practitioner in ordinary cases. What symptoms there are may be frequently absent, though sometimes there is slight pain in the left hypochondriac region, with preternatural fulness and hardness there. The disease must generally be sought for, and the same is soon perceived by a digital examination. Rarely, in my own experience, is the enlargement more protracted and persistent. I am, &c.,

Wallingford. Willoughby Aading, M.D.

A Medical Officer's Opinion of Sanitary Boards.

An animated debate took place last week at the Sheffield Town Council on the opinion which their Medical Officer of Health holds respecting the Sanitary Boards of the country; and which he expressed before the meeting of the British Medical Association—namely, that 95 per cent. of the members don't know the meaning of the word "sanitary," that 90 per cent. cannot write it decently, and that 75 per cent. cannot spell it correctly. Dr. Griffiths' charges against the Health Committee were characterised as untruthful, scurrilous, and insulting. A resolution was unanimously adopted expressive of great dissatisfaction at the doctor's remarks—that a copy of the resolution be forwarded to him, and also to the Local Government Board; the letter to be accompanied by a copy of the remarks complained of.

Iced Water.

The following amusingly tremendous philippic against immoderate drinking of iced water is from the columns of the *New York Times*. There is no doubt some amount of truth in our contemporary's statements, but his denunciations of the practice attacked are as extreme as the abuse against which they are directed:—"It is an abuse of language to style a man temperate merely because he does not drink ardent spirits. While there is no doubt that intemperance in the use of ardent spirits is one of the most deadly evils incident to civilisation, it is equally true that intemperance in the use of ice-water is rapidly undermining the constitution of American men and women. Strange as it may seem to the conscientious man who comprehends the deleterious effects of cold drinks, there are thousands of our best and noblest citizens who are victims to the cold water habit. They begin the day with one or more glasses of ice-water before breakfast. During that meal they frequently turn from the coffee, which cheers but does not inebriate, in case it is sufficiently adulterated with the simple and healthful bean—and satisfy their depraved thirst for water. On their way to their business they stop at the numerous drug stores which shamelessly flaunt their soda-water fountains in the face of the public, and hastily pour down the deadly ice-water which perverted ingenuity makes palatable with cream and syrups. In the office or the store, the water-cooler, filled with the stomach and tooth destroying beverage, is always at hand; and when the water-drinkers return home after a day of constant drinking they too often spend the greater part of the night in solitary and aquarial debauchery. The result of this pernicious practice has been to fill the country with a class of stomachs that are incapable of any earnest digestive efforts, and to crowd the chairs of busy dentists. American stomachs and American teeth are gradually

growing feebler. The deadly effects of ice-water are particularly noticeable just at present. When an overheated man desires an attack of congestion of the brain, there is no plan which he could devise that would be better adapted to secure the end desired than that of drinking water of or below the temperature of 32°. Yet this is precisely what scores of so-called temperate men are continually doing. It is sufficiently irrational and dangerous for men to drink brandy and whisky in hot weather, but it is a question whether ardent spirits are really more immediately dangerous to health than are the ice-cold beverages which even the most earnest 'teetotalers' pour into their astonished and indignant stomachs. Water is undoubtedly the most wholesome beverage which we can use, but there is a vast difference between water at a safe and natural temperature and the ice-water which alone satisfies the abnormal cravings of the American throat. Let us by all means drink water, but let us decline to endanger our health and degrade ourselves below the level of the beasts by drinking inordinate quantities of ice-water. There is not a single animal—except man—which ever dreams of contaminating wholesome water with ice."

COMMUNICATIONS have been received from—

Dr. C. Bell Taylor, Nottingham; Mr. John Forster, Adelaide; Major A. Madureira, London; Mr. John Eberle, Easingwold; Dr. A. Carpenter, London; Dr. Allen Thomson, Glasgow; The Secretary of the Statistical Society, London; Dr. Bauce, London; Dr. Tasker Evans, Hertford; Mr. Harston, London; Mr. T. M. Stone, London; Dr. Edward Long Fox, Clifton; Mr. Charles Allen Fox, Stoke Newington; Dr. Alexandra, Liverpool; Dr. Robert Druitt, Christchurch, Hants; Mr. Edward Sergeant, Bolton; Mr. R. Druitt, Swanage, Dorset; Mr. John Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

Dr. Motta Maia, Report to the Medical Faculty at Rio de Janeiro upon the Medical Teaching in Paris—Reports of the Superintendent and Chaplain of Broadmoor Criminal Lunatic Asylum for the Year 1875—Frederick W. Lowndes, M.R.C.S. Eng., The Extension of the Contagious Diseases Act to Liverpool and other Seaports practically considered—Edward H. Sieveking, M.D., F.R.C.P., The Address in Medicine delivered at the Annual Meeting of the British Medical Association at Sheffield—Dr. F. Raymond, Etude sur l'Hémichorée, l'Hémianesthesie, et les Tremblements Symptomatiques—Dr. P. Reclus, Du Tubercule, du Testicule, et de l'Orchite Tuberculeuse—Bourneville, Recherches Cliniques et Thérapeutiques sur l'Epilepsie et l'Hystérie—John James Eberle, L.R.C.P., The Student's Manual of Medicine—Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1875—Frederic Semeleder, M.D., On the Treatment of Ovarian Cysts by Electrolysis—Surgeon-Major W. J. Moore, Malarious Fevers and Rainfall in Rajpootana—L. Duncan Bulkley, A.M., M.D., An Analysis of Six Hundred and Seventeen Cases of Skin Disease, with Cases and Remarks on Treatment; A Clinical Study on Herpes Zoster—Neil Arnott, M.D., LL.D., F.R.S., Elements of Physics—Transactions of the Odontological Society of Great Britain, No. 8—James Curtis, C.E., Fresh Air in the House and How to Secure it—Guy's Hospital Medical School, 1876-77.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—The Shield—The Navy—Melbourne Argus—Canada Lancet—Liverpool Daily Post—Dublin Journal of Medical Science, August—Chemist and Druggist, August.

APPOINTMENTS FOR THE WEEK.

August 19. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

21. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

22. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

23. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Woolf), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

25. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 12, 1876.

BIRTHS.

Births of Boys, 1119; Girls, 1127; Total, 2276.
Average of 10 corresponding years 1866-75, 2153·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	823	749	1572
Average of the ten years 1866-75	821·0	772 1	1593 1
Average corrected to increased population ...	...	...	1705
Deaths of people aged 80 and upwards ...	...	...	49

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	4	7	...	8	1	1	...	61
North... ...	751729	...	5	7	2	4	1	4	...	63
Central ...	334369	...	1	...	...	4	...	1	2	18
East	639111	...	5	11	...	3	1	1	1	61
South... ...	967692	9	7	17	2	6	...	3	3	91
Total	3254260	9	22	42	4	25	3	10	6	291

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·029 in.
Mean temperature	66·7°
Highest point of thermometer	91·2°
Lowest point of thermometer	47·9°
Mean dew-point temperature	54·6°
General direction of wind	S.W., N.E., & E.
Whole amount of rain in the week...	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 12, 1876, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Aug. 12.	Deaths Registered during the week ending Aug. 12.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489128	46·3	2276	1572	91·2	47·9	66·7	19·28	0·00	0·00
Brighton	100632	42·7	61	42	78·5	51·0	62·6	17·01	0·00	0·00
Portsmouth ..	124867	27·8	68	64	72·0	53·4	61·8	16·53	0·00	0·00
Norwich	83430	11·2	43	39	81·6	50·2	63·5	17·50	0·00	0·00
Plymouth	72230	51·8	27	24	74·0	51·0	61·6	16·45	0·00	0·00
Bristol	193539	44·8	142	88	85·8	45·7	64·7	18·17	0·00	0·00
Wolverhampton ...	72549	21·4	59	27	84·2	47·3	63·4	17·44	0·06	0·15
Birmingham ..	371839	44·3	309	166	...	...	...	...	...	...
Leicester	113581	35·5	90	83	87·0	48·5	64·6	18·12	0·03	0·08
Nottingham ..	93627	46·9	68	48	84·3	44·9	61·5	16·39	0·25	0·63
Liverpool	521544	100·1	412	247	78·0	50·4	61·5	16·39	0·06	0·15
Mancheater ..	357917	83·4	271	212	84·5	45·0	63·0	17·22	0·12	0·30
Salford	138425	28·8	127	79	83·4	42·7	61·2	16·22	0·08	0·20
Oldham	88609	19·0	102	45	...	...	...	...	...	...
Bradford	173723	24·1	143	76	76·8	47·9	60·6	15·90	0·03	0·08
Leeds	291580	13·5	236	163	82·0	48·0	61·7	16·50	0·00	0·00
Sheffield	274914	14·0	220	157	82·3	46·5	62·8	17·12	0·00	0·00
Hull	136933	37·7	107	77	80·0	48·0	61·3	16·28	0·00	0·00
Sunderland ..	108343	32·8	91	59	85·0	52·0	64·5	18·06	0·00	0·00
Newcastle-on-Tyne	139929	26·1	110	74	76·0	47·0	59·1	15·06	0·00	0·00
Edinburgh	215146	51·3	124	61	...	...	...	...	...	...
Glasgow	545141	90·4	402	247	75·8	46·9	58·3	14·89	0·52	1·32
Dublin	314666	31·3	182	121	76·9	44·1	62·1	16·73	0·06	0·15
Total of 23 Towns in United Kingdm	8028595	37·7	5573	3762	91·2	42·7	62·1	16·80	0·06	0·15

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·03 in. The highest was 30·19 in. on Friday morning, and the lowest 29·87 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON SPINAL HÆMORRHAGE.

By EDWARD LONG FOX, M.D.,
Physician to the Bristol Royal Infirmary.

Gentlemen,—The patient you have just seen is a labourer, aged thirty-four, of temperate habits. He has always had good health until two months ago. He was then carrying a heavy weight on his back up a ladder, and felt suddenly a pain across the loins. His left hip immediately gave way under him; he was unable to lift the left foot from the ground. At the same time his urine began to dribble away from him, and on the next day the fæces passed unconsciously.

On admission, there was found considerable wasting of most of the muscles of the left leg. He could bend the left knee, but not the left hip. He was able to stand with a little help, but manifestly depended chiefly on the right leg. His urine was passed unconsciously, and he had no power over the accelerator urinæ. There was entire paralysis of the sphincters of the anus. He had a bedsore as large as a crown-piece over the sacrum. His digestion was impaired. There was slight hyperæsthesia over the paralysed leg, and complete absence of galvanic excitability. No tenderness or pain down the spinal column. The temperature was a little raised, probably from the irritation of the bedsore. The temperature in the left groin one-fifth of a degree (Fahr.) higher than in the right. Urine ammoniacal and purulent.

He was given strychnia and quinine, the bedsore attended to, a nutritious diet ordered, and in a very short time he improved to the extent of being able, in bed, to move the leg very freely, to control completely the sphincter ani, and to use the accelerator urinæ, and, perhaps as an indirect result of doing so, the urine did not dribble away so incessantly. The bedsore got well, and the patient was able to digest a nutritious diet.

We have here—

1. Almost complete motor paralysis of the left leg, with slight hyperæsthesia, and with extinction of galvanic excitability.
2. Complete paralysis of the sphincter vesicæ and the accelerator urinæ and sphincter ani.
3. The occurrence of these paralytic symptoms *immediately* after the accident.
4. The gradual recovery from the motor paralysis of the left leg; complete restoration of the sphincters of the anus, and partial recovery after one month's treatment (three months after the injury) of the accelerator urinæ and sphincter vesicæ.
5. The sequence of cystitis, gradually alleviated by small astringent washings of the bladder.

The diagnosis is gathered from the mode of access on the one hand, and on the other from the consideration of the parts paralysed. The mode of access was absolutely sudden. A strain on carrying a heavy weight; a pain low in the back and along the few inches of the great sciatic nerve on its exit from the spinal canal; loss of power over the anus and bladder in the course of a few hours; the gradual occurrence of ammoniacal urine and ropy purulent mucus from the bladder, as a result of the inability of fully emptying this organ.

The consideration of the parts paralysed enables us to fix pretty accurately upon the seat of lesion. Thus, neither the upper extremities nor any of the muscles engaged in respiration are involved; the lesion, therefore, must be below the last dorsal vertebra. The first lumbar gives off the ilio-hypogastric and ilio-inguinal nerves; the second, the genito-crural and external cutaneous; the third the anterior crural, dividing into the middle cutaneous, the internal cutaneous, and the long saphenous; the fourth, the obturator, supplying the adductor muscles. Now, not only was there in this case no paralysis of the cutaneous nerves, but, even whilst unable to use the leg in any other way, the patient retained the power of bringing it towards the middle line, showing that the obturator was unaffected. Part, however, of the fourth lumbar, with the fifth lumbar and the first four sacral nerves, unite to form the great sciatic, the small sciatic and the pudic nerves, supplying not only most of the muscles of the leg and foot, but also the accelerator urinæ; whilst a branch of the fourth sacral supplies the sphincter ani. This muscle is also supplied from the inferior hæmorrhoidal branch of the pudic nerve. The sphincter vesicæ is supplied mainly from the sacral plexus, derived chiefly from the four upper sacral nerves. Both the sphincter vesicæ, and the external and internal sphincter ani, the latter especially, derive some of their nervous supply from the hypogastric plexus of the sympathetic; and this plexus, again, is mingled with nerves from the fourth and fifth lumbar ganglia and the four upper sacral ganglia, with nerve connexions with the fourth and fifth lumbar and the four upper sacral nerves. The seat of lesion is therefore tolerably plain. It is unilateral, confined to the left side, and situated not above the origin of the fourth lumbar nerve.

Such, then, being the mode of access, and such the position of the lesion, what is its nature? It cannot be spinal meningitis, for this lesion is not accompanied by paralysis; nor does the patient lie in any peculiar position, showing an instinctive dislike to being moved from fear of pain in the back and limbs that such movement would cause. It cannot be myelitis, though myelitis sometimes follows hæmorrhage, because the access was so sudden, the paralysis so one-sided; and there is no priapism. It cannot be congestion of cord, for, again, the mode of access is too sudden, and congestion only leads to very partial paralysis, and that of a paraplegic form.

I would say in all fairness that Professor Leyden throws doubt on the existence of spinal congestion as a lesion causing symptoms, from the difficulty of verifying it by post-mortem observation. Though doubtless congestion is difficult of proof, it is equally impossible to disprove; and the transient nature of the paralysis supposed to follow it, and its recovery under remedies known to influence the calibre of the vessels, such as ergot, belladonna, strychnia, etc., are reasons for accepting the real existence of this lesion.

The absence of tonic spasm, and the presence of paralysis, prevent any thoughts of tetanus. There is no tenderness down the spine; and this symptom is never absent in the so-called spinal irritation. Here again the paralysis is a diagnostic mark. The paralysis would be at once too sudden and too persistent to depend on pure shock. Under such circumstances the symptoms would scarcely be unilateral; and did they occur with such intensity from shock, whether that may mean spinal congestion, spinal anæmia, or some peculiar cell-change of a temporary nature, they could not well persist for several weeks, unless the shock had determined myelitis, meningo-myelitis, or hæmorrhage.

Locomotor ataxy differs from the lesion before us in that its progress is extremely gradual; it is accompanied with no true paralytic symptoms affecting either the limbs or the sphincters until a very long time has elapsed, if ever; and it is manifested by a want of co-ordination that is absent in our patient The ocular phenomena, also, so frequently met with in locomotor ataxy, are wanting in the case before us.

The suddenness of the access of paralytic symptoms, with the marked improvement of the patient under treatment, entirely forbids the idea of tumour of the spinal cord. And lastly, the absence of reaction in the paralysed muscles to galvanic stimulus is sufficient proof that the lesion is spinal, and not cerebral.

We are therefore led to the almost certain diagnosis of slight hæmorrhage of the spinal pia mater on the left side of the cord, about the level of the origin of the fourth lumbar nerve, dripping *guttatim* downwards, and never of sufficient amount to pass round the cord to the right side.

Is the prognosis favourable or otherwise? To form a right opinion on this point, we have three main data—the position of the spinal cord affected; the nature of the lesion; and the effects of treatment so far as it has gone. We have, however, to keep in remembrance the effects of the lesion on particular organs, and on general nutrition, and also the secondary sequelæ on the spinal cord that are sometimes the consequences of hæmorrhage. The position of the lesion is so far satisfactory, that it is too far down to cause any interference with the respiration. As a general rule, the higher in the cord the lesion, the more disastrous it is. It is also a good point for prognosis, that the paralysis is unilateral as regard the limbs. This being so, makes it probable that some of th nerves supplying the bladder and the sphincters of the anu

are also unaffected. The nature of the lesion—hæmorrhage, and that, too, to so limited an extent that it has evidently not affected the right side at all—is itself a satisfactory point. A small hæmorrhage ought, *primâ facie*, to be absorbed, and absorbed within a period that would render important sequelæ in the cord somewhat improbable. And then again, the effects even of very limited treatment enable one to speak, not with positive assurance, but with fair hope, of a good result. The state of the patient you have already heard and seen for yourselves; the sphincters of the anus have wholly recovered their power, and this was marked a few days ago, when accidentally the patient was purged ten times after drinking too much tamarind-tea; the leg can be moved in every direction, and although locomotion is not easy, yet marked progress has been made. Again, the patient has regained considerable use of the accelerator urinæ, and some at least of the sphincter vesicæ.

On admission, however, we found a small bedsore over the sacrum, and you know how serious such a lesion frequently is, when the spinal cord is in any way affected. The bedsore is now nearly well, and this is another proof of the gradual clearing up of the internal lesion.

One thing still remains, and is enough of itself to impress a very serious aspect on the case, and materially to influence the prognosis—I mean, of course, the cystitis. The man passes a highly ammoniacal urine; and, on standing, this urine deposits a thick bed of epithelium, pus, and triple phosphate crystals. It may be that this cystitis has existed from a very early period of the illness—within, perhaps, a few days of the accident; if so, it has been probably increasing in intensity during the two months before he submitted himself to treatment. Not only is it a grave condition by itself, but, as you know, it may indirectly induce that degeneration of the kidney (beginning first in the pelvis, and progressing backwards into the renal structure) which we know by the name of surgical kidney. As long as the urine is so alkaline, we are quite unable by the microscope to determine whether or not the kidney is yet affected; our ignorance on this point at the present time, and our fear of such a renal affection in the future, must necessarily make our prognosis, otherwise favourable, extremely guarded.

And, lastly, the pressure of a clot of blood will sometimes produce myelitis; and although the seat of the hæmorrhage in this case is below the cord, we might get an equally disastrous effect by the pressure on the nerves of the cauda equina. I show you a plate of a section of cord in which destructive myelitis was set up after an accident, in which the bodies of three vertebræ were more or less fractured, and a large hæmorrhage into the spinal cord had resulted. Opposite the seat of hæmorrhage, and pressed upon by a clot, the cord was inflamed in almost its whole depth. Such a condition would be improbable in the case before us, all the more so that the patient is improving; but its possibility ought somewhat to affect our prognosis.

Now as to treatment. There are two principles to be kept in view in the treatment of such a case—first, to place the patient in the best possible circumstances for the absorption of the hæmorrhage; and, secondly, to remedy the effects of the lesion. To obtain the first result, you have seen that we have simply endeavoured to keep the patient in tolerable health. Slight tonics and strychnia, good food, care against constipation, gentle exercise of the affected leg, turpentine dressing to the bedsore, and a water-cushion to lie on, have been the main details of our care of him. But in attempting to remedy the effects of the lesion on the bladder it has been necessary to do more; and here I have urged attention to the minute details insisted upon so wisely by Sir Henry Thompson. It is expedient to insure the passage outwards of the muco-purulent *débris* with which the membrane of the bladder is covered, and also to effect the complete emptying of this organ. For this purpose the bladder is every second day washed out under certain special conditions—(1) that not more than one ounce of fluid be used; (2) that the washing is done with the help of a non-metallic catheter—you have seen that the accidental substitution of a metallic instrument on one occasion caused vesical hæmorrhage and considerable irritation; (3) that when astringents are used (and we did use them here after three or four injections of tepid water) they should be of the mildest character. Our patient has had acetate of lead lotion in the proportion of a quarter of a grain to the ounce of water, gradually increased to a grain and a half. He is also taking now an infusion of the *Triticum repens*. Under this treatment he feels no pain from distension of the bladder, nor from the nature of the application used.

He is getting well—slowly, indeed, as to the cystitis, rapidly in all other ways; and it is probable that had he come under treatment as soon as he received the injury he would by this time have entirely recovered.

ORIGINAL COMMUNICATIONS.

CLINICAL STUDIES.

By Sir JOHN ROSE CORMACK, Chevalier of the Legion of Honour; F.R.S.E., M.D. Edin., M.D. Paris;
Fellow of the Royal Colleges of Physicians of London and Edinburgh; Physician to the Hertford British Hospital of Paris.

II.—Recovery in a Case of Insanity accompanied by Incomplete Hemiplegia.

(*Concluded from page* 200.)

The symptoms, progress, and issue of this case lead to the conclusion that there existed congestion of the left corpus striatum and optic thalamus, prior to and at the date of the lady's arrival in Paris on March 12, 1875. From the manner in which the symptoms gradually subsided, and finally disappeared, we cannot suppose that at the period referred to, or afterwards, there was any disorganisation of cerebral tissue. Most probably the symptoms arose from the congestion occasioned by blood extravasated, and most probably their disappearance depended on the absorption of the blood. Any conditions which occasion congestion in a similar situation of the brain will, no doubt, give rise to similar symptoms, which symptoms will cease on the congestion ceasing, provided always there be no other morbid condition except congestion.

Physicians very seldom have an opportunity of treating cases of the general paralysis of insanity, or, indeed, any form of mental unsoundness, in the incipient, or even in an early stage. This arises from two causes—*first*, the generally occult manner in which cerebral disease begins; and, *second*, the jealous care with which the patients themselves often, and still oftener their near relatives, strive to conceal the mental peculiarities so long as concealment is possible. Of the very many cases of general paralysis which have come under my notice in practice, and also in the many others which have become more or less known to me in ordinary social intercourse, few have been dealt with in their beginnings. In the incipient and most hopeful stage nothing was done, and treatment was not resorted to till the seclusion of an asylum had become a necessity. My experience in this matter—being also, I believe, the experience of the whole medical profession—sufficiently explains to my mind the prevalent belief that general paralysis is incurable. No doubt, among the cases admitted to asylums there are few real recoveries, and long intermissions mistaken for recoveries are also rare, though sufficiently frequent to have excited the particular attention of psychologists. On the other hand, it has been said that the majority of the cases supposed to have been successfully treated in private practice, however much they may have simulated the early stage of general paralysis, were proved by the very fact of recovery not to have been really cases of that disease. This objection has no practical importance, for it leaves uncontradicted the fact that cases which no diagnostic rules hitherto discovered can distinguish from general paralysis in an early stage are cured both in and outside lunatic asylums. It appears also that the recoveries and intermissions are so often coincident with derivation and counter-irritation instituted by nature that we are constrained to ask whether they may not be curative causes. Did the angry carbuncle in the case of Miss A. B. exert a beneficial influence? An examination of Baillarger's series of cases already mentioned induces me to answer this question in the affirmative. I invite my readers to make this examination for themselves, as a critical analysis of these cases would here occupy too much space.

The first case in Baillarger's series is a typical example of the class to which it belongs, both in respect to symptoms and the unexpected recovery. The following is a summary of the leading features of this remarkable case:(b)—

(b) The case was originally published by Morel at page 388 of the *Annales Médico-Psychologique* for 1858.

The patient was a working man—a dyer, of Nancy—who, after being the subject of melancholia, had an attack of mania. When admitted, under the care of Morel, he was in a state of great excitement. The existence of grandeur delirium rendered the prognosis very unfavourable, particularly from its being associated with a great hesitation in speech, and so much debility in the lower extremities as to cause him to reel like a drunken man. For seven months he exhibited all the phases of general paralysis, and at last his state of exhaustion and marasmus was such as to confine him to his bed. Under these circumstances an abscess of the liver declared itself, which, at the first time it was punctured, yielded more than a *litre* of pus, and which continued to discharge enormously for fifteen days by the opening which was maintained. His condition was such that death appeared imminent. However, twenty days after he was confined to bed the fever moderated, strength returned, and he ceased to rave about his grandeur; he was no longer Napoleon, distributing honours and places of command. He conversed with his family in a reasonable manner; his difficulty of speech went on diminishing, till it finally ceased.

On leaving the hospital after an eight months' residence he was not only able to resume his work as a dyer at Nancy, but soon afterwards removed to Paris, where he had carried on his business in a large way for three years (when the case was published) without the slightest return of the paralysis or other associated morbid condition.

"This case," to quote the remarks of Baillarger, "is a most remarkable example of the cure of general paralysis. The patient not only had every characteristic symptom of that disease, but had fallen into a state of marasmus, and was apparently doomed to die very soon. These were his conditions when recovery took place—*evidently under the influence of a large abscess in the region of the liver*. It appears, then, that the most formidable symptoms of general paralysis may exist without disorganisation of the nervous tubes, without softening of the cortical substance of the brain, and, in fact, without any other morbid condition than a state of congestion, still curable under the influence of powerful derivation such as was produced by the hepatic abscess. Let it be remarked that the patient who made this unexpected recovery was the subject of great excitement and of ambitious delirium of a violent character. Let it also be remarked that his maniacal attack was preceded by melancholia, as happens in many cases."

Whether we hold with some authors, that the first stage of general paralysis is one of simple congestion; with others, that it is a chronic congestion accompanied by exudation; or with others, that it is a true inflammation—a periencephalitis,—we must admit that there is a first stage of greater or less duration, in which *cures*, or, as some put it, very long *remissions* or *retardations*, have taken place under spontaneously established derivative influences, and under derivative influences produced by the therapeutic art. We have manifestations similar to those described as pathognomonic of general paralysis, likewise arising from hæmorrhages, thrombosis, and embolism. Cures are far more likely to take place when the cause is hæmorrhage, than when it is thrombosis or embolism. A clot may be absorbed without any destruction of brain-tissue having taken place from the pressure which it caused; but when vessels are stopped, anæmia and consequent softening of a part of the brain is the result. In Miss A. B. there existed congestion and a clot, but, I imagine, neither an embolus nor any hardening, softening, or other change of cerebral tissue.

Dismissing, for the present, questions of differential diagnosis and pathological difficulty, it appears that we may unhesitatingly adopt a clear rule of practice from the facts now stated, and from many others of similar import which might be adduced. When called to a patient whose ways and utterances are said to have become peculiar, whose mind is more or less excited, whose gait is dragging and unsteady, whose speech is hesitating, and whose pupils are unequal, or who, without having all, has some of these symptoms, we ought to institute a treatment having for its principal aim the relief of cerebral congestion. For that purpose we must not only prescribe a bromide, and resort to the usual measures to promote the healthful action of the skin, stomach, liver, and kidneys; but we must likewise maintain powerful derivation by purgatives and by various other means, such as issues, open blisters, and tartar emetic ointment. By such means, if summoned sufficiently early, we may perhaps cure patients who would have drifted down into the hopeless depths of general paralysis, or of some other form of brain disease.

PRACTICE OF PHYSIC IN SMYRNA.

By JAMES McCRAITH, M.D., F.R.C.S. Eng.,
Surgeon to the British Seamen's Hospital, Smyrna.

In addition to the cases of lithotomy published in your number of the *Medical Times and Gazette* of July 13, 1872, I beg to send you a report of eleven cases operated on since then, all successful—making twenty-three successful cases in succession. In all these cases (except one of lithotripsy, some details of which are given) I was assisted by Dr. Borg, who gave chloroform, and by Dr. Navick, who held the staff, both of this city. The case of lithotripsy (in the last two or three of the sittings for which I was kindly assisted by Dr. Von Eichtorff, of this city) deserves, perhaps, that some details should be noticed. I believe it is the first case of successful lithotripsy in Smyrna; at least, I know of no other. It is No. 59 in accompanying list. The patient was a healthy, powerful man, aged forty, when, three years since, being engaged in loading a ship, he fell from the deck into the hold, some twenty feet or more. He unfortunately fell on the edge of some stout planking, and injured his spine at the lower part of the dorsal region. The effect was "complete paraplegia of lower extremities and of the bladder." For many months the use of the catheter was necessary; but ultimately some power and sensibility of the lower extremities, with incontinence of urine, were the result. Things went on so for two years, when he began, twelve months since, to suffer from stone symptoms, which latterly had become intolerable. He consulted the chief surgeons here, who told him that his bladder was "plastered" (as he reports it) internally, and the stone attached to the bladder; and on consultation they declined to do anything for his relief. Present state of site of the injury: Lateral process of second last dorsal vertebra, at left side, displaced, forming a protuberance; must have been broken off by direct violence, and is now fixed in the abnormal position it was then forced into. The fourth lumbar vertebra apparently driven in, a considerable hollow existing in its place, and no remains of spinous process to be found; great emaciation of both lower extremities; sensibility of surface natural, but complains of great pain in soles of feet. With regard to muscular power, he can flex left thigh on pelvis, and can extend right thigh; can flex toes of left foot; both feet extended as in "pes equinus," the anterior muscles (flexors of feet) being the most paralysed. Urine clear, but occasionally turbid and ammoniacal; the kidneys most likely healthy; the bladder the diseased organ; the urine changed by mixture with its diseased secretions. Urine, when first passed, acid, but quickly becoming ammoniacal. On sounding, found a moderate-sized stone free in the bladder. Found no difficulty in crushing it, and in eight or ten sittings it had all come away; its composition urate, but mixed with phosphates from the bladder. A piece on being tested with nitric acid and heat gave the "purpurate," not of a bright colour, but rather dirty-looking. Weight of pieces preserved, when dry, two drachms; weight in its natural state probably four drachms. Found the inner coat of the bladder much diseased, traversed by bands, etc. Much mucus occasionally passed. He is at present undergoing a long course of treatment by electricity.

The prostate gland of No. 54 was developed to the size of that of an adult (the patient was only fourteen)—an unusual circumstance at his age—and a band like a cicatrix of a burn, of considerable size (say that of the wood of a lead pencil or thick goose-quill), extended from right lobe to neck of the bladder. Lying on this side was painful, and the boy always lay on left side. I have no explanation to offer of this enlarged prostate or of this band. Dr. Moore, Staff Surgeon of H.M.S. *Swiftsure*, held the staff. Dr. Graham, of the same ship, and Dr. Borg were present; the latter administered the chloroform.

In No. 60, a child of one year and a half old, much emaciated, the stone was a mass, soft as diluted putty or very soft cheese. Upon introducing the forceps and seizing it, from its feel I thought one blade of the forceps must have passed between the bladder and rectum, so I did not attempt extraction, but withdrew the forceps. The part brought away adhering between the blades showed me what I had to deal with, and I brought the mass away with the scoop. Put together, the mass formed a body the size of a pigeon's egg—urates.

No. 56 is an example of what is called "encysted stone,"

but of the nature and manner of being of which I have given quite another, and I believe correct, explanation. This will make the sixth instance of this peculiar complication which has fallen under my observation. Strange that so many of those very peculiar cases should have been met with in my limited experience—this being the third on which I have operated. I rather suspect that the cases are not rare, but have not been diagnosed. Now that attention, as I hope, is drawn to them, I expect that they will be distinguished and reported. The peculiar cases I refer to are reported and commented on in No. 1150, July 13, 1872, of the *Medical Times and Gazette*, to which I would beg to refer your readers, to make the observations I am about to offer on the present case more intelligible. On sounding and examining per rectum, the impression was as of two calculi in the bladder—the one fixed in the neck, and the other free in the bladder. In these cases the median is the only proper operation evidently, for the reasons given in the paper referred to of July 13, 1872. I suspect that a case mentioned in the *Lancet* (monthly number for May, 1875)—with all due submission to the opinion of the distinguished surgeon who explains the case differently—was an analogous case in the female to this I am now discussing, and that the "fistula" existing was produced by the calculus ulcerating its passage through the coats of the bladder; and was, in fact, an effort of nature to get rid of the offending body, and was not produced by the metallic sound, as there supposed. Upon proceeding with the operation in this case, I quickly came on the stone, which, apparently, lay very superficially. On removing it with forceps I brought away a body having two finger-like processes projecting nearly at right angles. The longer of these processes, which was lying forward, came away easily; but the other was in the bladder, and was the part struck by the sound. All the rest of the calculus was outside the bladder, and contained, as it were, in a cyst. Pressure on the stone through the rectum was painful. The surface of this calculus, *as is always observed in these cases*, having ulcerated a passage through the coats of the bladder, and not being contained in a regular cyst lined with mucous membrane, is not smooth or regular, but, as I stated in a former communication, extremely rough, porous, with anfractuosities, and stained with the colouring matter of blood. Its chemical composition, weight, etc., are given below (Case 56).

Case 52.—Age, 3 years; duration of disease, 1½ years; cured in 12 days. Weight of calculus, ʒ iij.; dimensions, 1¾ × ¾ in. Shape: long, roundish. Chemical composition: nucleus urate; body urate, with thin layers oxalate. General appearance: white and smooth surface.

Case 53.—Age, 3½ years; duration of disease, 2 years; cured. Weight of calculus, ʒ ij. ℈ j.; dimensions, 1¼ × ⅞ × ⅝ in. Shape: long, roundish. Chemical composition: thin layers oxalate, urate, with mass of phosphate at one side. General appearance: white when phosphate, and black when oxalate on surface.

Case 54.—Age, 14 years; duration of disease, 2 years; cured in 20 days. Weight of calculus, ʒ iv.; dimensions, 1¼ × 1 in. Shape: roundish, slightly flattish. Chemical composition: centre, urate; middle, oxalate; surface, thin phosphate layer. General appearance: surface extremely rough.

Case 55.—Age, 6 years; duration of disease, 3 years; cured in fifteen days. Weight of calculi: No. 1, ʒ iij. ℈ ij.; No. 2, ʒ iij. Dimensions: No. 1, 1¼ × 1 × ⅞ in.; No. 2, 1 1/16 × 1 × ½ in. Shape: No. 1, pigeon's egg (has four facets from friction); No. 2, quadrangular (has four facets from friction). Chemical composition: urate. General appearance: white and smooth, facets from friction.

Case 56.—Age, 5 years; duration of disease, 1 year; cured. Weight of calculus, ʒ ij.; dimensions, body 1 × ⅝ in., processes ¾ × ⅜ in. and ⅜ × ¼ in. respectively. Shape: irregular. Chemical composition: phosphate. General appearance: irregular, with a finger-like process at each end; porous surface.

Case 57.—Age, 12 years; duration of disease, 9 years; cured. Weight of calculus, ʒ ivss.; dimensions, 1⅛ × ¾ × ½ in. Shape: flat, oval. Chemical composition: urates; thin surface layer oxalate, black. General appearance: smooth, black surface.

Case 58.—Age, 7 years; duration of disease, 6½ years; cured. Weight of calculi: No. 1, ʒ iv.; No. 2, ʒ ss. Dimensions: No. 1, 2½ × 1 × ⅝ in.; No. 2, ⅝ × ½ in. Shape: No. 1, long round, slightly flattish; No. 2, prismatic. Chemical composition: No. 1, urate, layers of oxalate, one end covered with phosphate standing on end; No. 2, urate and oxalate. General appearance: highly polished black surfaces, except where phosphates are deposited on one end.

Case 59.—Age, 42 years; duration of disease, 1 year; cured. Weight of calculus: perhaps ʒ iv. Chemical composition: urate. Lithotripsy.

Case 60.—Age, 1½ years; duration of disease, 6 months; cured. Weight of calculus, ʒ iv. Chemical composition: urate. General appearance: soft putty.

Case 61.—Age, 7 years; duration of disease, 1 year; cured. Weight of calculus, ʒ iv.; dimensions, 1¼ × 1 × ¾ in. Shape: flat oval. Chemical composition: nucleus urate, with layer of oxalate. General appearance: tuberculate, reddish, yellow surface.

Case 62.—Age, 8 years; duration of disease, 6 months; cured in thirty days,—delayed on account of wound of rectum, but perfect. Weight of calculus, ʒ iij. ℈ ij.; dimensions, 1½ × 1 × ⅝ in. Shape: round, oval, flattish. Chemical composition: nucleus oxalate, formed of round tubercles agglomerated all through. General appearance: small tubercles on surface; rough.

Smyrna.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES UNDER THE CARE OF MR. MARSHALL.

[For the notes of the following cases we are indebted to Mr. Gould, M.B., B.S., Surgical Registrar.]

Case 1.—*Fall from a Height, followed by Irritation of Brain—Unconsciousness—Curious Movements, especially of Legs—Scalp Wound—Relieved.*

George C., aged twenty-six, admitted on March 25, 1876. Patient is single; he is a painter, and has followed his occupation for ten years.

Present Injury.—He was on a ladder painting, when the ladder broke, and he fell to the ground—a distance of forty feet,—and was picked up insensible, and brought to the hospital in a cab. He is a temperate man, very healthy, and well nourished.

Family History.—Father alive and healthy; mother died fifteen years ago under an operation; he has two brothers and four sisters, all alive and healthy.

On admission, there is a wound of the scalp just behind the middle of the vault of the skull, about two inches long; no fracture can be detected. Patient is quite insensible; pupils normal size, equal, fixed; no paralysis. Was put to bed, and within an hour symptoms of irritation came on. He lies on his left side, with his knees doubled up, his arms being straight down between his legs; if moved, he at once returns to this position. Grinding his teeth. Once or twice slight twitching of right side of mouth has been noticed. No hæmorrhage from ears or into orbit; no vomiting of blood; a small clot of blood in nostrils. No other injury can be detected. Is not able to swallow.

March 26.—Was restless all through the night, kicking and moving his arms about, grinding his teeth, quite conscious. This morning much more violent, and with difficulty retained in bed. Milk and beef-tea. ℞. Calomel. gr. v. statim. ℞. Pot. brom. gr. xx., chlor. hyd. gr. xx. 2 p.m.: Had to be tied down by sheet over chest and thighs; passes his water in bed. ℞. Chlor. hyd. gr. xv. at 6 p.m.

27th.—Is still quite unconscious; lies flat on his back, constantly moving his legs and arms, and turning his head about; no twitchings or paralysis. Pupils equal, normal in size, react readily to light. Pulse varies in frequency from moment to moment; occasionally intermittent, compressible, rather small. Passes his urine under him; swallows milk readily. Bowels not acted upon. Temperature 98·5°. ℞. Calomel. gr. v. statim. ℞. Ol. crotonis ♏ j. Rep. mist. pot. brom.

28th.—Remains in just the same condition; pupils act to light; perhaps he is, if anything, quieter than he was. Had two enemata last night, with four and five ounces of castor oil respectively; bowels acted well. Temperature 98·8°; pulse 104.

29th.—Has been slightly conscious at intervals; puts out his tongue when told; mumbles questions; movements almost constant, much less; tongue quite dry; pupils react to light; slight darkness of face; pulse regular, soft. Takes a little beef-tea. Temperature 100·1°; pulse 74.

30th.—Patient is decidedly more conscious; answers questions slowly; puts out tongue quite straight when told; still has twitchings of legs, the principal movement being an in-and-out rotation movement of thigh; pupils equal, react to light; speech not affected. Temperature 99·8° per rectum; pulse fuller, stronger, 85; tongue moist. ℞. Ol. crotonis ℥j. statim.

31st.—Patient is more conscious; intellect improving; movements not so marked, and much greater in left than in right deg. Temperature 98·4°; pulse 76. At night complained of pain and heat in head, and asked for ice. Ice-bag applied; head shaved.

April 1.—Patient still restless, and now repeats several times everything he says; is more sensible. Calomel. gr. v.

3rd.—Is quite conscious, fairly sensible; answers questions rationally, but does not quite realise where he is; is noisy; throws his arms about; not at all violent. Still has peculiar rotation of right femur. Pupils dilated equally; appetite good; bowels open on 1st.

4th.—Patient's condition is hardly altered; he has decidedly a vacant stare. Very jocular in his expressions, inclined to be witty. He repeats his observations, often fast; at times has a difficulty in getting out his words. Thoroughly understands all that is said to him. Passes all his water in bed, so that none can be examined. Bowels confined. Appetite very good; only liquid food and pudding. Pulv. cal. statim.

5th.—Patient has been very restless all night, and up to ten this morning, when a dose of castor oil was given; soon after, he went to sleep, but at eleven lay constantly twitching his legs about, but eyes closed. On asking him a question, he understood it, and answered it satirically, but soon relapsed into a semi-drowsy condition, with constant twitching of arms and legs. Face covered with cold sweat. Was able to get him to pass some urine this morning into a utensil, which proved on examination to be quite normal. Strait-waistcoat put on; feels it irksome, and asks for arms to be loosened. Ol. crotonis gutta ss., ol. ricini ℥ss. statim. ℞. Pot. bromid. ℥j., aq. ℥j., nocte mane f. s.

10th.—Patient is decidedly better and quieter; not tied down in any way. Still has a little of the same movements in his legs. Mental powers are not very good; he forgets who came to see him yesterday. He repeats himself a little. Bowels were freely open on 9th. Tongue moist and clean; pulse decidedly stronger, 96; temperature 98°.

12th.—Patient is very much better this morning; appears quite sensible. Passed a good night, and lies quite still, only moving his legs slightly now and then. Bowels have not been relieved since 9th. Tongue moist and clean. No pain in head. Pulse 84, stronger and more regular; temperature 98·6°. Calomelanos gr. v. statim.

17th.—Patient sitting up; quite rational, complaining only of weakness. Wound of head not healed; granulations somewhat exuberant.

18th.—Patient is in large ward this morning, sitting up. He is quite rational, but rather excited, talking loudly. He staggers very much on attempting to walk. Temperature 98·4°; pulse 92. Complains of great thirst.

21st.—Patient has gradually improved since last note. Is not so excitable; walks more steadily.

24th.—Patient generally improved, but gait still unsteady.

25th.—Discharged relieved, after a stay of thirty-one days in hospital. His legs were stiff, and he was somewhat stupid.

Case 2.—Fracture of Temporal Bone—Cerebro-Spinal Fluid escaped from Ear—Meningitis—Coma—Death.

Catherine D., aged fourteen, admitted July 30. Was in good health till the morning of July 29, when she fell down some stone steps leading to a kitchen. She was unconscious for a few minutes, and blood flowed from her left ear. She says it was "a little blood, and soon stopped." Then she noticed "water" coming from her ear, and on account of this she was brought to the hospital the same evening.

Present State.—July 29.—10 p.m.: Patient quite conscious. Pupils normal; react to light. A very slight pain in head. There is an abundant flow of watery discharge from left ear; it runs out, and an ounce has been collected in a very short time. The fluid faintly alkaline, slightly turbid, and that first flowing had a pink tinge from small quantity of blood mixed with it. It becomes slightly more turbid on boiling. After some time it reduces copper in Fehling's solution, giving slight red precipitate. With nitrate of silver it gives dense white precipitate (flaky). On examining left ear a stellate rent is seen in membrana tympani, through which watery fluid wells up; membrane opaque. Notably deaf in left ear; watch heard at three inches; tuning-fork heard louder on forehead than close to left ear. Tongue protruded straight. No sign of paralysis.

30th.—During night patient became unconscious, and is said to have had convulsions. 10 a.m.: Patient not quite unconscious; pupils normal, reacting to light; evidently pain in head; watery fluid less abundant. 10 p.m.: Patient quite conscious, complaining of pain in the head; slight intolerance of light; pupils normal; has been shaved. Ice-bag applied.

31st.—3 a.m.: Patient became comatose; died at 4.30 a.m.

Post-mortem, nine hours after Death.—No fluid in pleuræ; about one ounce in pericardium. Heart quite healthy; right cavities full of blood. Posterior part of both lungs congested; otherwise healthy. Liver congested; in other respect healthy. Kidneys congested; otherwise healty. Spleen soft and congested. Uterus: Body congested; ovaries contain several Graafian follicles; no corpus luteum. Brain: Pia mater all over brain injected; a considerable quantity of turbid fluid in arachnoid cavity; under arachnoid, turbid, somewhat buttery fluid at base, especially over cerebellum; fluid in ventricle turbid, not in excess; no laceration of brain; rest normal. There was a fine fissure in the left temporal bone, beginning one inch and a half above and immediately over external auditory meatus, extending down all along roof of meatus across petrous bone, over roof of tympanum, and into internal auditory meatus, where it terminated. On dissecting the ear it was found that the membrana tympani was lacerated; that the tympanum contained partly decolorised clot and turbid fluid; that the malleus was detached from the incus; that the cochlea was filled with clots; that the auditory nerve was discoloured, and that adherent to it was a very small clot. No other fracture found.

[It will be noticed that the fracture was exactly over the course of the auditory nerve as it passes along the auditory meatus; that it extended over the tympanum, and that the tympanic membrane was ruptured. There can be no question, therefore, as to the source of the fluid which escaped from the ear.—Ed.]

BRITISH HOSPITAL FOR DISEASES OF THE SKIN.

FIVE CASES OF LUPUS VULGARIS TREATED BY A MODIFICATION OF THE METHOD OF VOLCKMANN (OF HALLE).

(Under the care of Mr. BALMANNO SQUIRE.)

The cases referred to have recently been under treatment as in-patients of the hospital.

Volckmann's plan consists of scraping away the absolutely rotten and friable portion of diseased skin (nodular lupus deposit) by means of a steel spoon with sharp edges, the patient being under chloroform, and then, when the wound has healed, of setting up traumatic inflammation of the circumjacent skin, affected with molecular lupus infiltration, by numerous punctures inflicted with the point of a somewhat narrow-bladed lancet, repeating the latter operation, under chloroform, at intervals of a fortnight. Mr. Squire employs a much smaller sharp-edged spoon than Volckmann's—namely, one of about one-quarter the size of Volckmann's, and also another spoon of about one-sixteenth the size of Volckmann's—for the purpose of enabling greater precision to be obtained in the draughtsmanship of the operation, and so greater conservation of the skin of the face (the commonest situation of lupus); and yet the small spoons are found by him to be sufficient for dealing in detail even with an extensive area of the disease. Then Mr. Squire, in place of the puncturation of Volckmann—which is rather an uncertain operation as regards uniformity in the effect produced—prefers to scarify the skin with regular linear parallel incisions, spaced uniformly about one-sixteenth of an inch apart. At each successive scarification he veers the direction of the parallel incisions, so that each succeeding set is oblique to the direction of the preceding set. The instrument used by Mr. Squire for this purpose is an ordinary cataract-needle, the head of which is, however, about four times the usual minute size. Then, for insuring uniformity in the draughtsmanship of the incisions, Mr. Squire prefers to effect anæsthesia of the affected skin by freezing it, rather than by the administration of chloroform, since, if frozen,

the skin does not bleed when cut. In this manner the accurate and regular draughtsmanship of the incisions is not defeated by a flow of blood from the very first cut.

Case 1.—A girl, aged twenty two, from Guildford. Duration of disease on admission to hospital, two years and nine months. The disease affects the whole of the lower third of the nose, including the alæ and the under surface of that feature, and extends upwards into the nostrils for a short distance along the lining mucous membrane. The affected surface was covered with a thick greenish scab, which, on detachment, disclosed soft, pale, flabby, uneven granulations, discharging an ichorous pus. In this case, with a view to conservation of tissue, scarification alone has been employed, with, as yet, a most satisfactory result, the tissue having become firm, even, and non-discharging. Although it is still reddened, the sore has quite skinned over with a thin cicatrix, and no additional loss of tissue has eventuated.

Case 2.—A girl, aged seventeen, from Baldock. Duration of disease, since infancy—namely, so far as she knows since the age of two years. It has spread more rapidly during the last three years. Disease affects the left cheek only, the patch of disease measuring two inches and a half vertically, by one inch and a half horizontally. In this case scraping under chloroform was the first operation, followed subsequently by a repetition of scarifications under the ether spray. A fortnight ago all traces of disease (excepting the scar left by it) had disappeared, saving only two minute nodules of lupus. These, under the ether spray, were five days since gouged or cut out by means of the sharp spoon. The spots are now healing.

Case 3.—A girl, aged sixteen, from Brentford. Duration of disease, two years. Area occupied by the disease, the same as in the case first cited—namely, the lower third of the nose,—only that the left ala of the nose is at its outer part partially exempt. The affected surface is covered with a thick greenish scab, which, on detachment, discloses the same condition of skin described in Case 1. This case, with a view to the conservation of substance as the chief object to be aimed at, has been simply treated by repeated scarification under the ether spray, with the result of preserving almost perfectly the natural shape and size of the feature affected, and of attaining a firm, smooth, solid substance, well skinned over, so that the nose looks merely reddened, as if chilled by exposure to a cold wind. The patient is still under treatment. In this case, as in the first, the patient was at separate periods scarified on the affected part of the interior of the nostrils, as well as on the exterior surface, but in every instance quite painlessly. On every occasion the incisions healed perfectly in between three and ten days, and within between two and three weeks left no trace whatever of their having been inflicted.

Case 4.—A woman, aged twenty-eight, from Tunbridge Wells. Duration of disease, six years. Area occupied by it, the lower part of the nose and both cheeks. The nose is affected for its lower two-thirds, the alæ and lower part of the septum having been completely destroyed by the disease, so that the lower third of the nose has irrevocably disappeared. The left cheek is extensively affected by a large continuous patch of the disease. The right cheek is affected to a much less extent by smaller isolated patches. In all of the above-named situations the character of the scab and of the surface covered by it are the same as already described above in the cases of other patients. The patient, after various other plans had been tried at the hospital, without effecting a satisfactory result, was chloroformed, and the friable portions of diseased skin scraped off. The result of this procedure was to effect an apparently complete cure of almost the entire area of the disease, which cicatrised in a satisfactory manner. After a short time it became, however, apparent that at certain spots on the margins of the original patches the disease had not become completely annulled. These places were accordingly scarified under the ether spray, and the patient was kept for some time under observation. Recently, however, some small isolated nodules have become developed at some little distance from—that is to say, quite beyond—the original area of the disease. These, about five days ago, were accordingly scraped out under the ether spray. The places are now healing.

Case 5.—A man, aged thirty-three, from Leeds. Duration of the disease, six years. Area occupied by the disease, the lower two-thirds of the nose, and both cheeks in an equal degree. In this case, however, the greater part of the disease had already succumbed to treatment of a different kind. Only isolated fragments of the original patch remained. This was brought about by a long-continued and vigorous application of lunar caustic (in the stick); an assiduous rubbing of the diseased surface with the solid nitrate of silver. This kind of cauterisation was persevered in for nine months, ending March, 1875. During this period he was thus cauterised altogether about seventy times. He was not perfectly cured when it was discontinued. This plan of treatment the patient describes as unquestionably beneficial, but horribly painful—very much more painful than the endurance of Mr. Squire's operations on him. The treatment by lunar caustic has, however, conferred on the patient an irremediable disfigurement of a different kind. Over the whole of the area so treated—that is to say, over the whole of the greater part of the front of the face—his countenance has acquired a deep slate colour, which gives the patient a somewhat startling appearance. The margins of the alæ of the nose, as well as the edge of the septum, have become destroyed. With the exception of a few small patches of disease on the cheeks—patches that seem to have developed themselves by the extension of minute spots that have escaped treatment by the caustic—the disease is now chiefly confined to the cutaneous margins of the remains of the nostrils and to the mucous membrane lining the nostrils. The portions of diseased surface which the patient presented were treated in the manner already described—first by scraping off, and subsequently by scarification,—the affected mucous membrane of the nostrils being as vigorously treated in this manner as the affected skin. The interior of the nostril and its margin were last scarified on May 22. The patient had before this almost completely recovered. The minute cuts last made are nearly healed.

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Medical Times and Gazette.

SATURDAY, AUGUST 26, 1876.

WARFARE OF SCIENCE WITH RELIGION.—II.

In a former number we spoke of Dr. Dickson White's book on the "Warfare of Science."(a) We followed Dr. White in his allegation that from the earliest dawn of science, to what we are used to think its present noonday lustre, it had met

(a) "The Warfare of Science," by Andrew Dickson White, LL.D., President of Cornell University; with a Prefatory Note by Professor Tyndall. London: Henry S. King and Co. 1876. Pp. 151.

with opposition as if it were hostile to religion. The shape of the earth, the existence of antipodes, the position of the earth, its rotation, its annual revolution, the investigation of nature in the realm of chemistry and physics, the study of anatomy and physiology, the practice of inoculation and vaccination, and the relief of childbirth-pains by anæsthetics, have all been subjects of denunciation by theologians of various grades, as being absurd in themselves and contrary to Revealed Truth. There is one scientific subject which Dr. White might have added to his list—viz., chronology, especially to the time which has passed since the creation of the human race, or since the dawn of civilisation. There is a work on Egypt, said to be written by a Canon of York, and sold by the Religious Tract Society, in which the conclusions of philosophers respecting the date of Egyptian civilisation are alleged to be opposed to Bible chronology. Professor Owen has been lately attacked on the same ground by the Rev. Canon Rawlinson; but Professor Owen is not a man to be easily put down. In a weighty reply to Canon Rawlinson he shows that a long-past civilisation is proved by the elaborate works of the early Egyptian kings, and vindicates the authority of Manetho, the Egyptian historian, as to dates. He complains bitterly of the character of the opposition raised against science. "The obstruction to the acceptance of the inductive evidences on which alone a lasting knowledge of ethnology and of the antiquity of the human race can be had, is the same which opposed the progress of the science of geology and retarded for two centuries or more the demonstration of the causes which in the long course of ages modified the crust of the earth." This obstruction arose from the supposed "incompatibility" of facts with the "chronology of the Bible."(b)

Now, as we before said, it must in fairness be noted that the opposition to science was upheld, not merely by the low and bigoted, but by the foremost and most enlightened men of their time. It was Boniface who condemned the idea of a round earth with antipodes or opposite hemispheres; and Boniface could appeal to Eusebius, Lactantius, and the great St. Augustine. The doctrine that the earth was the centre of the universe was upheld by the "angelic doctor," St. Thomas Aquinas. Copernicus, who taught the revolution of the earth round the sun, was condemned by Martin Luther as an "upstart astrologer" and "a fool who wishes to reverse the whole science of astronomy." Melanethon was as bitter against Copernicus as Bellarmin or Pope Paul V. against Galileo; and Kepler was persecuted by Protestants as well as by Papists.

Now, according to the ideas of an age not long past, the persecution of the holders of erroneous doctrines was considered not only justifiable, but an imperative duty; and it was carried out impartially by whatever party happened to be uppermost —Papist or Huguenot, Churchman or Puritan, Presbyterian or Independent (for down even to the seventeenth century the "liberty" which religious professors claimed was for themselves, and not for their antagonists). It was quite right, therefore, to suppress opinions which were alleged to undermine religion. When we consider what religion had done, we cannot wonder that all means thought legitimate were used to preserve it. To use Dr. White's words, "The work of Christianity has been mighty indeed. It has undermined servitude, mitigated tyranny, given hope to the hopeless, comfort to the afflicted, light to the blind, bread to the starving, joy to the dying; and the work continues. And its work for science has been great."

(b) See Canon Rawlinson on "Egyptian Civilisation," *Leisure Hour*, published by the Religious Tract Society, February, 1876; and Professor Owen's Reply, *ib.*, May, 1876. Also a work said to be by Canon Trevor, of York, on Egyptian Antiquities, in which the chronology of Ussher and others is treated with as much respect as if it were the Bible itself. But the Bible has no chronology; the hiatus before the call of Abraham is unfathomable. The dates interpolated in the margin are destitute of authority. The tone of this book on Egypt is, in this respect, lamentable, and smacks of the darkest ages.

They felt, too, that the very existence of civilised society depends on Christianity, and that amongst the opponents of the latter are to be found the opponents of marriage and of property. Without a doctrine of the Personality of God, the Creator and Ruler, apart from and above matter, there can be no sound morality. Therefore they obeyed a natural instinct of self-preservation when they supported Christianity, but, as Dr. White says, they entertained the unfortunate notion that theology must superintend scientific investigation, and the Bible, "as a historical compendium and scientific treatise, be taken as a standard to determine its results."

So they chose to appeal to the Bible as an authority in chronology, geology, geography, astronomy, and science; and with a miserable bibliolatry put the narrowest and most literal meaning to the Sacred Text, whether it was poetry or prose, parable or narrative, history or prophecy. Then began the Conflict—a series of disasters and scandals from which we are not free yet, as the controversy between Rawlinson and Owen and the Religious Tract Society's publications will testify. In the first place, religion was deprived of those grand views of the universe and of the providence and power of God with which modern science can add fresh lustre to even the poetry of the Psalmist. Secondly, science and religion were made out to be enemies instead of friends, and hosts of the best men alienated from religion; and, thirdly, there follows a series of the most miserable tergiversations. When a new scientific doctrine is first propounded, the pulpit takes alarm. The "drum ecclesiastic" beats to arms. The new doctrine is denounced as contrary to revelation, and its supporters are called "hollow sceptics." This takes with the vulgar, who always are pleased when other people's sins are denounced, especially if relating to things above their comprehension and that do not touch their consciences. Example: The writer of this was on board a P. and O. steamer, where was an American Baptist missionary, who kindly undertook to preach on Sunday. Now, it was perfectly notorious that amongst the auditory were many who worshipped B. and S., morning, noon, and night; people who played cards all day; mothers whose children showed that they were brought up in anything but the way they should go; and so on. But did the preacher attack any of the vices rampant on board? Not a bit of it! But he denounced the atheistical men of science who upheld the doctrine of evolution. There were not three people on board who knew what this meant; but anyhow, the auditory were gratified at hearing scientific men basted for a fault from which they themselves were free.

This illustrates the first stage. Be it geography, or geology, or evolution, it is first denounced as infidel. But as time goes on, science grows and takes root; it is too strong to be put down. Then comes the time for "harmonies"—wretched treatises to show that science is not inconsistent with Scripture, or that the Mosaic account of the Creation may be so interpreted as to agree with science, and the like: all which attempts are apt to end in a compound, as Lord Bacon said, of "fantastical science with heretical religion."

Then, lastly, comes a further stage, in which the conclusions of science, be they what they may, are frankly accepted—as true in themselves, and so not contrary to any other truth—always with this proviso: that Science is true so far as she goes, but that it is only the glimpse, at best, of finite man into the works of an Infinite Creator. We are glad to see that the most influential and orthodox society of the English Church—the Society for Promoting Christian Knowledge—is publishing a series of science manuals, in which no modern scientific conclusion is evaded. In the very able "Manual of Zoology," by Mr. Alfred Newton, the doctrine of evolution and possible origin of man are fairly stated, and left, as they ought to be, to be received or not, according to the weight of evidence on

which they rest, and the state of mental insight of the student.(c)

Lastly, we can affirm, of our own experience, that no one who cultivates that faith which is sealed in the heart, which leads a man to bewail his own imperfections, and seek the remedy which Christianity supplies, need ever be troubled about the so-called opposition of science. No misgivings as to a dead cosmogony will trouble the living spring of water; and the Christian minister who visits and comforts a man in his last moments will say, "Dost thou believe all the articles of the Christian faith?" and not ask whether the voice of Balaam's ass were subjective or objective.

SCIENCE DEGREES IN THE UNIVERSITY OF LONDON: REVISED REGULATIONS.

We would draw the attention of students who may be reading for the degrees of Bachelor or Doctor of Science of the University of London to certain important changes that have just been made in the regulations for them. With respect to the degree of *Bachelor* the regulations have been revised for both the first and the second examinations. In the *First Examination* the programmes in mathematics, experimental physics, and inorganic chemistry have been revised, but no fundamental change has been made in them. In zoology and botany, on the other hand, instead of the superficial acquaintance with both formerly required, there will be a single examination, written and practical, in *general biology*, in which a more thorough knowledge shall be required of the simplest forms and elementary phenomena of animal and vegetable life. It is hoped that by this means the student who may intend to devote himself specially to physical and chemical science will be brought to apprehend the general conceptions common to the two great organic kingdoms, without being required to master the specialities of either; while the student that intends to present himself at the Second B.Sc. Examination in either physiology, zoology, or botany, or all combined, will have laid the best foundation for those special studies in the study of general biology. Honours and an exhibition will be awarded in each of the five subjects at a subsequent examination. These regulations will come into force *at the examination in July*, 1877.

The new regulations for the *Second* B.Sc. *Examination* have been framed with the view of diminishing the number of subjects which each candidate shall be required to bring up. Each candidate shall, accordingly, bring up *any three* of the following *nine* subjects, and he shall be allowed a free option among the nine, so as to combine them in *any* way that may best suit his taste and ulterior objects:—1. Pure Mathematics. 2. Mixed Mathematics. 3. Experimental Physics. 4. Chemistry. 5. Botany, including Vegetable Physiology. 6. Zoology. 7. Animal Physiology. 8. Physical Geography and Geology. 9. Logic and Psychology. Practical examinations will also be held in botany, zoology, physiology, geology, and palæontology. Honours and a scholarship will be awarded in each of the subjects by subsequent examinations. Candidates presenting themselves at the Second B.Sc. Examination in *October*, 1877, will be allowed an option between the old and the revised regulations. The Committee on Examinations, in presenting the report to the Senate recommending these changes in the Second Examination, added that they intended that the examinations in the several subjects should be, as nearly as may be, on the same grade as to the amount of attainment they require. They had learned from the examiners in mathematics that their experience justified them in stating that any candidate who had thoroughly mastered the mathematics of the First B.Sc. Examination, and who had such an aptitude for the study as would lead him to select pure mathematics as one of his subjects at the Second, would find no difficulty in mastering the requirements of its programme by such an amount of study, carried on through an eight months' academical session, as would leave him free to bestow the same amount of time and attention on *two* or even *three other* subjects. The Committee, therefore, wished it to be understood that, in proposing that each candidate should have his choice of *any three* out of the nine subjects just specified, the amount of proficiency expected in each would be that which he might attain by the steady devotion to it of about one-third of the sessional work of a diligent student. With respect to the degree of *Doctor* of Science, a change has been made in favour of candidates who prolong the interval between their first and second examinations for the degree of Bachelor from *one* year to *two or more*; as such will be allowed to come up for the degree of Doctor within a year of their attaining the degree of Bachelor.

(c) The thoughtful reader will gladly peruse "Three Lectures on the Theory of Natural Evolution," by the Rev. J. M. Strachan, M.D., Gold Medalist of the University of Edinburgh, S. P. G. Missionary. Madras. 1871.

REVIEW OF THE PAST SESSION.

The Parliamentary Session recently concluded has not been characterised by any such comprehensive measure of sanitary reform as the Artisans' Dwellings Act of last year. But it must be remembered that no mention of sanitary measures was made in the Queen's Speech at the opening of Parliament; and only one sanitary Bill was promised by the Government during the discussion on the Queen's Speech. That promise was carried out, and that Bill, relating to the Pollution of Rivers, has become law. Some progress has been made in the consolidation of recently enacted measures, which, in consequence of the pressure of other business, had been hurried through debate in a somewhat crude form. Until lately so little was known, even in this most representative of popular assemblies, of the evil effects of overcrowding, insanitary dwellings, and impure water, that any attempt to pass such measures was received with evident disfavour. Now, however, things are changed, and this session has been characterised on more than one occasion by a change of front on the part of Ministers towards the representatives of the medical profession. The lesson so difficult for a commercial community to learn, that it is the interest, and no less the desire, of the medical profession to prevent as well as to cure disease, is now, to some extent, understood and appreciated.

We need not again speak of the excitement roused in the profession by the Cruelty to Animals Bill, as it was drafted when first introduced in the House of Lords; nor need we again describe the alterations made in it,—these we have very lately set forth. It will suffice to say here that the pressure which was brought to bear upon the Government by the representatives of the profession had a very salutary effect. The most objectionable clauses have been greatly modified, and the measure has been made less irksome than when first introduced; but we still look to the Government to carry through their own proposition as to cold-blooded animals, on the faith of which professional opposition was withdrawn.

The only important sanitary measure that occupied the attention of Parliament was the Pollution of Rivers Bill. Considering the time occupied in debate on this measure, the result has proved very unsatisfactory from a sanitary point of view, vested interests having been the basis upon which the Bill was framed and formulated. All factories hereafter to be constructed must not empty either solid or fluid refuse into a running stream; existing factories to have three years' probation, provided that some scheme has been commenced for preventing the escape of refuse into the river. Similarly, owners of mines will not be permitted to foul the streams in their neighbourhood. Sewage will not be allowed to flow into streams used for potable

purposes. But we shall take some other opportunity of noting the provisions of the Bill.

The Cattle Diseases Bill for Ireland is an important measure, because it assimilates the regulations which are to be put in force all over the United Kingdom, and will thus simplify and render much more efficient the existing laws for stamping out epizootic diseases.

A Bill to amend the Medical Act was introduced by Mr. Cowper-Temple, with a view to allow women with only foreign diplomas to practise in England. This very unwise and unjust proposal was, of course, speedily negatived.

Mr. Russell Gurney introduced a somewhat similar measure —viz., a Bill to remove the disabilities to which women are subject who desire to enter the medical profession through existing portals. This Bill has become law, and enacts that "the powers of everybody entitled under the Medical Act to grant qualifications for registration shall extend to the granting of every qualification for registration granted by such body to all persons, without distinction of sex, provided always that nothing herein contained shall render compulsory the exercise of such powers, and that no person who but for this Act would not have been entitled to be registered shall by reason of such registration be entitled to take any part in the government, management, or proceedings of the Universities or Corporations mentioned in the said Medical Act." It is incorporated with the Medical Act as amended by the 22nd of the Queen, c. 21.

The Poor Laws have been amended with a view to assist officers of health in defining the boundaries of their districts.

The report of the Commission on the Epidemic at Eagley has been sent in, and distinct evidence of milk-poisoning has been adduced, rendering it almost imperative that fresh legislation should provide against this evil for the future.

A Royal Commission has been appointed to inquire into the evil effects of noxious gases and fumes from factories and other industries, with special regard to health, and to ascertain in what way these can be abated.

The new Army Medical Warrant has been often and fully discussed in our columns. It seems almost certainly destined to prove a failure.

The Bill for the Preservation of Commons and Open Spaces in populous districts was passed, with a view to secure for the poorer classes in particular opportunities of recreation and pure air within an easy distance of their homes.

From the above short summary of enactments during the past session it will be seen that sanitary science, and measures affecting the profession, have commanded a considerable amount of attention from both Lords and Commons during the past session.

THE WEEK.

TOPICS OF THE DAY.

A DEPUTATION of the Sanitary Authority of the Croydon Union recently had an interview with Mr. Selater-Booth respecting the drainage scheme proposed for a part of the district within the jurisdiction of the Sanitary Authority. Mr. Blake explained that they sought for advice with reference to the carrying out of a drainage scheme for the five parishes within the Croydon Union. There had been two schemes before them—those of Sir Joseph Bazalgette and Mr. Baldwin Latham,—but, owing to the tenant of some 150 acres of ground not having agreed to carry a provisional agreement, and also to recent discussions amongst the members of the Union, the two schemes had been abandoned. Colonel Fox, as the representative of the Local Government Board, had held an inquiry into the whole matter, and what they wanted a decision upon was: whether, in the first place, a drainage system was necessary; and, secondly, advice as to how the matter was to be carried out. Mr. Selater-Booth, in reply, said there seemed to be a difference of opinion amongst the representatives of the parishes as to how the drainage was to be carried out. It was impossible for him to go into the question as between the parishes interested, and he was happy to be relieved of the necessity of going into the rival schemes. They were all desirous of having the district drained. Nobody disputed that drainage was necessary; but different parishes, being differently situated, required the drainage to be conducted in different ways, and upon different scales of expenditure. Colonel Fox was very well acquainted with the Thames valley, and particularly with this district, and he should ask him as to the views of the different parishes. But it was impossible to relieve the Sanitary Authority from their responsibility in the matter; it was for them to refuse or accept such schemes as would be found convenient and satisfactory.

The last meeting, prior to Hospital Saturday, of the Board of Delegates who have charge of the movement, was held last week, by special invitation, at the Workmen's Hall, Stratford. From the institution of this movement we have expressed an adverse opinion to it, and the results of the past years' collections have confirmed our views. It is, to use the mildest term, improvident in those who solicit alms for the hospitals to have a double set of expenses. Those who are anxious to subscribe might readily contribute on the appointed Hospital Sunday, and the expenses of advertising and distributing this fund would be obviated. It is ridiculous to call it a *working*-men's collection, and it is therefore difficult to understand upon what grounds its promoters can justify the keeping aloof from the one recognised anniversary for this purpose. Some idea of the fitness of those appointed to distribute the Saturday Fund may be gathered from that portion of the proceedings in which it is stated that a resolution was moved to exclude University College Hospital from participating in the forthcoming collection, on account of a recent unfortunate inquest, which seemed to throw some blame upon the house-surgeon of that institution.

The authorities of Blackburn have not issued any recent accounts relative to the number of sufferers from small-pox in that town, but it is known that there has been one death. The infected houses in Moor-street and Elizabeth-street are still barricaded. There are six sufferers in one house in Moor-street, and a like number in Elizabeth-street. The patients in the workhouse are convalescent. The Sanitary Inspector, with a large staff of men, is working indefatigably in the distribution of disinfectants.

The machinery and appliances erected at Shooter's-hill by her Majesty's War Department for the softening and purification of water for the use of the invalids and troops at Woolwich has proved an entire success. The water used in the process is pumped up by steam from artesian wells from fissures in the chalk formation, and is believed, from careful experiments made by scientific men, to have fallen on the earth many years ago. Having been filtering through the Kent chalk-beds so long, the water is of unusual purity, but of great hardness. The latter is got rid of by mixing a concentrated solution of slaked lime with the artesian well water in the proportion of nine ounces of soluble lime to forty gallons of water. These two previously clear fluids being mixed together, a muddiness immediately supervenes in the water from the conversion of the partially soluble bicarbonate into the totally insoluble carbonate or chalk. The process also possesses the property of carrying down dissolved organic matter in white flocculi. The mineral and organic impurities being thus converted into precipitates of greater specific gravity than the water, they settle to the bottom in the course of four or five hours, leaving the superfluent water beautifully pure and soft, the same benefit being obtained as would result from

the water being boiled for two hours, the hardness being reduced from 21° to 6°. At the Government Waterworks referred to, it has been demonstrated, without the shadow of a doubt, that the chemical purification and softening of water on a large scale far surpasses in simplicity and thoroughness all systems of filtering, a million—or ten millions—of gallons being as easily and quickly purified and softened as a single gallon. This of course is only a fresh instance of the application of the valuable but too much neglected Clarke's process.

The Brentford magistrates are to be commended for the stringent measures they have taken for putting an end to the adulteration of milk in that district. Last week, two dairymen, named Harris Thompson and Charles Stanley, appeared to answer to adjourned summonses for unlawfully selling milk adulterated with water. Mr. Haynes appeared on behalf of the county inspector and the prosecution, and Mr. Milton defended. In Thompson's case a witness proved purchasing a pint of milk for 2½d. at the shop of the defendant on July 25 last. Subsequently Mr. James Gregg, an inspector under the Act, met him by appointment, and they returned to the shop, where Mr. Gregg divided the milk into three separate quantities, one of which was sealed up and left with the defendant, another was sealed and sent to Dr. Redwood, the county analyst, and the other was sealed and kept by Mr. Gregg. The milk in question, on being analysed by Dr. Redwood, was found to consist of eighty-two parts of milk, and eighteen of water. After further evidence the defendant was fined £7, including costs, the justices intimating that they were determined, if possible, to put a stop to such practices. The case of the other defendant was very similar, and, after hearing the evidence, including that of Dr. Redwood, the justices imposed a fine of £5, including costs, or, in default of distress, one month's hard labour.

The Rugby Board of Health have received a letter from the Local Government Board with reference to the recent cases of death from typhoid fever which have occurred in that locality. The letter states that the Local Government Board observe, in the returns made to the Registrar-General for the quarter ended June 30 last, that four deaths from fever occurred during that period in the town of Rugby, and requests that the medical officer of health be directed to report on the whole subject.

A special meeting of the Warrington Town Council was held on Monday last, to confirm the proceedings of the Sanitary Committee, asking the Court of Chancery for an injunction to restrain the Warrington Spelter Works Company from carrying on their works. The medical officer of health for the borough deposed that from the works offensive effluvia and vapours were emitted, which were injurious to the health of the inhabitants, and also to vegetable life, and that the nuisance arose from the process of recovering metallic zinc from material already used in galvanising wire. It was stated that the trees and the grass in the park were rapidly succumbing to the effects of the vapours. The Council passed the resolution without a dissentient voice.

DIGITALIS COMPARED WITH BILIARY SALTS IN ITS ACTION ON PULSE, LUNGS, AND TEMPERATURE.

This important subject has been investigated recently by MM. Feltz and Ritter, who have presented to the French Academy a memoir stating the results at which they have arrived. From this it appears that the following conclusions may be deduced:—By the biliary salts, and infusion of digitalis administered in non-poisonous doses, the temperature is lowered about a degree—*i.e.*, a degree centigrade—by both substances. The arterial tension descends from two to three centimetres of mercury for the biliary salts, and from six to seven centimetres for the digitalis. The respiration becomes irregular in the two cases, without any great departure from the normal standard. The pulse is lowered by both poisons. The main difference to be noted is the following:—In the case where digitalis has been given, the extreme descent lasts a very short time, and it is followed by an acceleration, which is maintained for at least twenty-four hours. In the cases of the biliary salts the diminution in the number of beats is maintained for a much longer time, but it is not followed by any abnormal elevation. Animals that are put under the influence of biliary salts lose less of their weight than those that are digitalised; in the first the loss does not exceed 300 grammes, while in the second it reaches 800 grammes. In the event of poisoning animals with both biliary salts and digitalis, in cases where the pneumogastric and sympathetic nerves have been divided, the pulse is affected in the first, and not at all in the second, while the temperature and the respiration remain the same. As regards the poisonous doses, the authors state that one can only compare cases of biliary poisoning where death takes place after some hours with those in which digitalis has been administered in very large doses. In animals which die by biliary poisoning, both temperature and pulse fall regularly till death occurs. In dogs digitalised to the extent of four cubic centimetres of infusion to each kilogramme of their weight, the temperature falls progressively and regularly from 7° to 8° C.; the pulsations diminish, after oscillations of a greater or lesser strength, to half their normal standard; the arterial tension falls to three centimetres of mercury. Sometimes sudden death occurs in these cases of digitalisation; one sees no alteration, either chemical or morphological, in the blood. The pulse not diminishing in animals that have been digitalised, after section of the pneumogastric and sympathetic nerves, as it does in animals that have been poisoned by biliary salts; it not presenting any alteration comparable to that which is demonstrable in poisoning by bile; and the action on the muscular tissue—curarised or not—being the same in both cases, we are led to conclude that the effect of digitalis is exerted more on the nervous system than upon the blood or the muscular tissue, as is the case with the biliary salts. The kind of death tends still more to establish this difference, for in all the authors' examinations of animals which have died from digitalis, they have invariably found the heart in a state of relaxation, enclosing almost the same amount of blood in each ventricle. They have never found the heart in that condition of tetanic contraction that is the case in poisoning by biliary matter. Finally, they state that in digitalis poisoning they have constantly found the heart most easily excited to contraction by virtue of the galvanic current. These researches are of interest, because they point out the distinction existing between two poisons heretofore to some extent supposed to be pretty nearly identical in action.

HOW SMALL-POX IS SPREAD.

From across the Irish Channel comes the latest story of neglect of common-sense sanitation and its consequences. For some time back, Dublin—as it was in 1870-71—has been seriously menaced by small-pox through the daily communication with Liverpool and Manchester. All the local authorities in Dublin were forewarned of the danger, and were supposed to be on the alert, when on July 27 a case of small-pox was reported, in the person of a woman who had reached Dublin from Manchester a couple of days previously. She was at once, we believe, removed to a hospital in the neighbourhood, where she was placed in a ward with other patients, no attempt at isolation being made. In an adjoining ward lay a young girl suffering from "cramps in the stomach," who had been admitted on July 25. She was attended, in common with the other patients, by the nurse and ward-maid in charge

of the small-pox case. She could not have been very ill, for she was discharged cured on July 30. On this day she returned to her home, her mother being a laundress living in a crowded street in the heart of the city. More than a week elapsed, when on August 8 the poor girl sickened. She became worse and worse, so that on August 12 her mother put her into a public cab, and carried her to the Meath Hospital, where she was found to be four days ill of severe small-pox. The disease soon showed great malignancy, hæmorrhage set in, and she died on the morning of the eighth day—Wednesday, August 16. On August 15 a young girl residing in the same street as the deceased, whose intimate friend she was, was admitted to Cork-street Hospital with modified small-pox. These facts need no comment from us, beyond an expression of regret that the hospital authorities to whose care the original case was confided did not, through inadvertence, fulfil their duty of taking every means to isolate the first case of small-pox which had occurred in Dublin for many months. They are themselves now fully alive to the imperative necessity of isolating any further cases of small-pox which may present themselves for admission to the hospital; and we may confidently anticipate that no similar casualty will occur in Dublin for a long time to come.

THE WATER-SUPPLY OF THE METROPOLIS DURING JULY.

The report on the state of the water supplied by the Metropolitan Water Companies during the month of July last, shows that in the River Thames, at Hampton, Molesey, and Sunbury (where the intakes of the West Middlesex, Grand Junction, Southwark and Vauxhall, Lambeth, and Chelsea Companies are situated), the water was slightly stained during the whole of the month. The highest flood state of the river was three inches above the (six feet) summer level, and the lowest was two inches below summer level. The highest temperature of the water, taken at Seething Wells, was 73°, and the lowest 66°; the condition of the water in the river was good on twenty-three, and indifferent on eight days. The rainfall for the month was 0.49 inches. The New River Company are still engaged in sinking a well into the chalk formation at Turnford, to obtain at that place a fresh supply of water, by a large boring into the lower green sand. This boring was commenced at the beginning of 1874, and it had reached a depth of 740 feet from the surface in November last. The West Middlesex Company are constructing a new filter-bed at Barnes, of two acres area. This company, having large reservoir capacity for subsidence, avoid taking in water during floods. The construction by the Grand Junction Company of further impounding reservoirs for subsidence at the intake at Hampton (so as to avoid the flood waters), is in contemplation, as this Company will require such reservoirs before they can deliver effectually filtered water during the period when floods prevail.

FRESH WATER AT SEA.

Under the title of "The Aqua Vitæ," Captain Edmunds has patented, and last week exhibited at Messrs. Sedgwick's foundry, Millwall, a most useful little machine, which will probably do much to alleviate the sufferings of those who are committed to the sea in open boats, should they be lucky enough to have the apparatus with them. It is remarkably compact, and fits into such a small compass that the bows of any ship's boat are sufficient to contain it; and it produces good and drinkable water from the sea at the rate of a pint and a half per hour. The system of working it is as follows: an oil lamp securely suspended keeps a small boiler filled with sea-water continually boiling, the steam from which passes into a condensing chamber, and thence in the form of fresh water to a tank, whence it is drawn off by a tap as required. To assist the condensing process, a continual stream of cold sea water is admitted by a head-pipe through the stem of the boat, and, passing round the condensing chambers, is got rid of again through waste pipes at either side. On the occasion of the trial the lack of a sufficient stream of cold water round the condensing-pipe rendered the process of production slower than it otherwise would have been. The water used for condensing was a very strong solution of sea-salt, and the water produced by the machine, if not quite equal to spring water, was, at any rate, sufficiently good to satisfy all the needs of a shipwrecked boat's crew.

DOES VACCINATION INTERFERE WITH LIBERTY?

The Keighley Guardians are doubtless enjoying their martyrdom, sweetened with the popularity or notoriety that does them honour in the Keighley tap-room. Sympathisers sing their praises for their heroic defence of the laws of God and the liberty of the subject, and for that it is a sin to insert a beastly disease like vaccinia into the pure blood of a new-born babe. On this matter we take leave to observe that the preservation of ourselves and others from a loathsome disease cannot be against the law of God; and that in all countries private liberty must give way to public safety. Suppose one of the Keighley Guardians were to arrive by steamer at Brest, St. Nazaire, Lisbon, Marseilles, Suez, or any foreign port he pleases to name, and there had been a case of small-pox, of yellow fever, or of cholera on board. Our friend might be as well as possible, fresh as a new-born baby, with no vestige of disease about him,—but the health authorities of the port would shut him up in quarantine, and would shoot him like a dog if he were to go beyond bounds at the lazaretto. They would deliberately shut him up till there was no reasonable chance that he could be a carrier of disease. It is the same with babies here. On their entrance into this world, we take care that they shall not be possible vehicles of one of the foulest and most destructive of diseases; and we feel that we have a right to do so. We only wish that there were analogous methods of security against some others of the zymotic class of maladies.

HOSPITAL SATURDAY FUND.

Hospital committees and those of kindred medical institutions who desire to participate in this year's Hospital Saturday Distribution, but who have omitted to furnish to the Council of the Hospital Saturday Fund the information on which the Council will make their awards, are reminded that the time for supplying their required information has been extended to Hospital Saturday, September 2. Medical institutions, the committees of which neglect to send in returns by September 2, will necessarily be excluded from this year's distribution, the plan of which has already been prepared. As in the two previous years, the distribution will be made equitably to each institution, according to the amount of relief given, economy practised, and efficiency attained.

THE "THUNDERER" DISASTER.

We learn that a boy, aged fourteen, belonging to the contractor, died on Thursday last at Haslar Hospital. This makes twenty-six out of the fifty-nine originally received; and we may add that no more deaths are anticipated. This poor boy was extensively and deeply scalded over face, upper extremities, and body, and made a wonderful struggle for life. Aphtha in the mouth and irritability of stomach preceded dissolution for some days, showing too plainly the cause of death. A few of those remaining will be invalided, the shock to the system rendering them unfit for further service.

ANNUAL MEETING OF GERMAN "NATURFORCHER UND AERZTE."

The annual meeting of this Association will be held in Hamburg, commencing September 17. The Association differs somewhat from our own British Medical Association, in that it includes all scientific subjects, as well as medicine; it

resembles it in that its work is divided into sections, each one of which is presided over by some one specially learned in it. A programme has been issued, and by it we learn that the scientific work does not by any means form the only attraction, as each evening is set apart for social meetings, which we doubt not will be very enjoyable. A general invitation is issued to all members of our profession, and a hearty welcome may be anticipated by any foreigners who may choose to be present.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

ON TWO CASES OF HEMIPLEGIA.

Analogies and Dissimilarities of Two Cases of Hemiplegia—Detailed Study of one of these Cases—Period of Apoplexy and General Symptoms—Various Steps of the Diagnosis—Characteristics of the Hemiplegia—Disorders of Motion, of Sensation—Sensitive Impressions and Perceptions—Abolition of Muscular Sense—Anæsthesia of Fifth Pair—Examination of the Heart and the Temperature—Importance of these Data—Diagnosis of the Seat of Lesion—Method to be followed—Discussion on Cerebral Embolism and Cerebral Hæmorrhage—Secondary Degenerations.

GENTLEMEN,—I propose to set apart this lecture and the following to the consideration of two hemiplegic patients who are in our women's ward at the present time. I have a double motive for so doing. These two clinical cases are in themselves of intense interest: they exhibit certain symptomatic peculiarities which are rarely submitted to our observation, and, notwithstanding their apparent complexity, the seat of lesion can be accurately defined; they are not less instructive if you consider the pathogenic and etiological conditions of the disease; in short, although we may have only to deal in reality with a very ordinary case—hemiplegia following an attack of apoplexy—you may frequent the wards of a hospital for a very long time, carefully watching the patients suffering from hemiplegia, before you will meet with two analogous cases. On the other hand, the examination of our patients will make you acquainted with the method and the landmarks of observation in all hemiplegic cases; and this acquirement, though of a general bearing, will certainly not be the least valuable result of this inquiry.

At the first glance, the situation of our two patients seems to be the same: both were seized a few weeks ago with a severe attack of apoplexy; this attack has left in both of them hemiplegia of the limbs and face. But here the resemblance ceases; the characters of the paralysis, the seat and nature of the lesion which has caused it are wholly unlike, and the prospects of these two women on leaving the hospital offer a no less marked contrast: the one is on the eve of a complete recovery, which will leave her without a vestige of her complaint; the other is condemned to languish in a condition of irremediable infirmity. This simple sketch is sufficient to show you that, given a patient affected with unilateral paralysis of the limbs, you must never stop short when you have ascertained that there is hemiplegia; this is but a symptom, and the recognition of this symptom cannot of itself furnish a diagnosis of the disease, still less can it justify you in formulating its prognosis.

The woman, of forty-four years, who is lying in St. Claire ward, was seized with apoplexy on November 11, 1871, and when she came to us five days after she was in a comatose condition, which did not permit of a rigorous and systematic analysis; she still presented the general symptoms produced by the attack itself. You know that the primary effects of apoplectic lesions of the brain are not limited by their topographical extent. At the moment when apoplexy takes place, the lesion, directly suppressing the activity of one half of the encephalon, acts by a reflex action upon the other half united to the first by strong commissures, and deadens its excitability; the limited symptoms which result from the lesion itself are then lost sight of in the midst of the bilateral phenomena due to the general inertia (*névrolysie*) of the brain, which declares itself by the complete prostration of the intellectual and animal faculties, and total paralysis of the muscular system. These are the phenomena which, under the name of general symptoms (*symptômes diffus*), I distinguish from the symptoms referable to the focus of the disease (*symptômes de foyer*), which tell of the persistent influence of the lesion. The length of time during which the general symptoms last—that is to say, the interval which elapses between the apoplectic seizure and the development of the symptoms referable to the seat of disease—is the best criterion as to the severity of the attack; from a few hours, or, in slight apoplexies, even less, this interval occupies, in cases of medium intensity, one or two days, and in severe apoplexies it may last a week. The duration bears no relation to the nature of the lesion, but it is in direct relation with its extent, and above all with its seat: the extent being the same, changes in the pons and the uniting apparatus produce attacks of greater severity, and consequently a longer duration of general symptoms, than purely hemispherical lesion.

Our patient, then, who, on the morning of the sixth day, had general paralysis with almost complete loss of consciousness, had been seized with apoplexy of the severest form; but within twenty-four hours from the time of her entering the hospital, a marked amendment took place: she took notice of me and things about her—that is to say, there was a return of consciousness, and with it of speech, which up to this time was confused, incoherent, and monosyllabic; at the same time, the muscular relaxation of the limbs on the right side had disappeared, and power of voluntary movement was restored to them. In a word, the general symptoms had passed away, and the other symptoms made their appearance with such distinctness as to lead at once to this conclusion: the patient having emerged from the apoplectic condition, retained a left hemiplegia of the limbs and face. The left half of the face, elongated and expressionless, was the first thing to attract notice; the movement of winking formed the solitary exception to the immobility of the features, and the deviation of the opposite corner of the mouth, which was strongly drawn towards the right side, completed this characteristic deformity.

So far no difficulty; but in reality this conclusion formed but the first step in the diagnosis, and in order to carry it further it was necessary first of all to determine the special characters of the motor paralysis, and then to inquire into alterations of sensation and the other concomitant symptoms.

Power of voluntary movement was entirely abolished in the paralysed parts; the limbs of the left side, when raised from the bed, fell heavily back again like an inert mass, and the left half of the face only participated in the movements of the features so far as the persistence of the spontaneous or induced act of winking was concerned. *Involuntary movements*, jerking, starting, sudden contraction, were absent in the paralysed limbs; those *associated movements* which occur so frequently in old hemiplegias, and which consist in the involuntary raising of the affected limbs when those on the healthy side are moved, were no longer observed. *Reflex movement* could not be excited by purely tactile impressions; it manifested itself in response to impressions of pain, and particularly—which is an unusual anomaly—to impressions of change of temperature. The application of a cold substance to the paralysed leg or arm instantly called forth violent jerks of a reflex character, which, at first unilateral, afterwards extended to the opposite side, in accordance with one of Pflüger's laws—the law of transverse radiation.

Tactile sensibility was entirely abolished in the affected limbs, and remains so to this day; you may vary the test as you please, so long as you confine yourself to the sphere of sensibility to contact, you produce no impression, and, therefore, no perception. *Sensibility to pain* was, and still is, diminished, as is clearly proved by comparison with the limbs on the right side; nevertheless it is not abolished, and it presents a phenomenon to which I have already many times called attention. The impression caused by pricking or pinching the skin gives rise to the proper sensation, in the sense that the patient, without any appreciable hesitation, announces its presence, but it is not differentiated. The woman cannot indicate the nature of the impression; even if she is put on the track by certain questions, she cannot say whether it is an impression of touch, or of pain, or of burning. Moreover, she is incapable of localising it even approximately;

she is most frequently mistaken to the extent of an entire segment of the limb. You have here, gentlemen, a typical example of want of association in the function of sensibility; it is a ready-made analysis instituted by the disease for your benefit, and you must be careful not to overlook its teaching, notwithstanding that these distinctions were burdened with useless subtleties by the older physicians. To sum up, the patient feels an impression of pain, but it is not elaborated and transformed into an individual and conscious phenomenon; the simple or crude sensation is there, but not the perception.

Sensibility to change of temperature is altered to exactly the same extent. Finally, *muscular sensibility* is lost to an extent that you rarely meet with; the patient has no knowledge as to the whereabouts of her limbs; when her eyes are kept closed and she is asked the precise position of the paralysed arm or leg, she searches for them with her right hand before answering, and the hesitation and uncertainty with which she prosecutes that search show, without the possibility of a mistake, that the topographical perceptions are in complete abeyance. If this phenomenon were only manifested when the limbs lay extended on the surface of the bed, it might be attributed simply to tactile anæsthesia, which, you will remember, is complete; in this latter condition the cutaneous impressions resulting from contact with the plane surface of a solid body are abolished, and the disorder is sufficient to account for the absence of the notion of position. Nevertheless this is not the state of affairs in the case before us. Take hold of one of the patient's fingers, and raise the upper extremity of the left side until it is vertical; then ask the woman, as was done a little while ago, where her arm is; she seeks it imperturbably upon the surface of the bed, and for the nonce is surprised and distressed at not finding it. Now, in the realisation of this particular dilemma, sensibility to contact is no factor, for it is not brought into play; the information is entirely derived from the muscular sensibility. Moreover, the loss of notion as to position is complete; you not only find it under the two foregoing conditions; vary as much as you please the situation of the paralysed limb, never will the patient manifest the least consciousness of it; the limbs are as though they no longer belonged to her.

Experiments as to the sensibility of the face give results no less interesting, and we here again meet with one of those unusual peculiarities to which I alluded in commencing this study. On the side on which movement is paralysed, cutaneous sensibility is lost in its three modes of manifestation over the whole extent of the cheek, the tempero-frontal region, and the region of the masseter; over the left eyelids, sensibility is dulled, but not extinguished; as is also the case with the surface of the conjunctiva and cornea. With reference to this last, however, sensibility is impaired to a slighter degree. This difference, gentlemen, should not surprise us. The conjunctiva only receives direct ciliary filaments from the nasal nerve; the cornea receives, in addition to these direct filaments, indirect ciliary nerves, through the medium of the ophthalmic ganglion. It is quite evident, therefore, why alterations of sensibility are not always equal in the two membranes. It is important to notice that at the points where anæsthesia is incomplete it presents precisely the same characters as in the limbs; the impression, the crude sensation alone exists, there is no perception of the impression. Over the mucous membrane of the mouth, gums, and tongue, tactile sensibility is unimpaired, and the same holds good of the Schneiderian membrane, which has retained, however, its special olfactory sensibility. Consequently the paralysis of the left trigeminal nerve, which certainly exists, is partial in extent, and incomplete in degree.

This detailed analysis, which is absolutely necessary in all analogous cases, is still not all that is required. When you have exhausted the encephalic functions, you ought at once, before setting yourself to determine either the lesion or the disease, you ought, I say, to enter into three further questions: the condition of the vessels, and of the heart, and the height of the temperature.

Our patient has a very clear systolic murmur of medium intensity at the apex of the heart, which is slightly enlarged; a slighter murmur may be heard at the base of the organ, and you find some pericardial friction-sounds along the left border of the sternum. Mitral insufficiency, a roughened condition of the aortic orifice, and old pericardial exudations, are what these auscultatory phenomena signify.

This woman's arteries are evidently atheromatous, as may be ascertained either from the unusual resistance of the radials, or the markedly tortuous course of the temporals. Now, as the patient is but forty-four years old, the atheroma cannot be attributed to senile degeneration; it constitutes unmistakably a pathological condition.

With regard to the temperature, it was normal when she was admitted; it has continued so since. This observation has been made with the more care, on account of our having noticed for three days a phenomenon which is generally associated, in analogous cases, with a slight elevation of temperature. The day following the admission of this patient, when consciousness and speech were beginning to reappear, the paralysed limbs were seized with a rigidity, involving, as usual, the group of flexor muscles in the upper extremity, and the extensor muscles in the lower. This rigidity was more pronounced in the arm than in the leg; it could be overcome without any great effort by direct extension; but as soon as the traction was discontinued, the parts resumed the position enforced by the muscular spasm. This symptom lasted up to the ninth day, after which it ceased; the limbs became completely flaccid, and the disease reassumed its characteristic torpor, momentarily interrupted by this phenomenon of irritation.

The examination being now complete, we were able to elaborate and define more accurately our previous conclusion. We had before us a paralysis of motion and sensation in the limbs and face on the left side, supervening upon a severe attack of apoplexy, in a woman of forty-four affected with mitral insufficiency and arterial atheroma, the paralysis presenting, moreover, these characters—that it was accompanied with temporary rigidity without any accession of fever, and that in all the points where the sensibility was not wholly abolished, impressionability alone remained, while perceptibility was wanting.

In possession of these data, the direct results of our examination of the patient, we could form an estimate of the facts; we have the material necessary for solving the twofold problem which presents itself in the diagnosis of all diseases within the encephalon—the *question of seat* and the *question of nature*.

In order to reply to the first, as to the *topographical diagnosis*, I have adopted a method to which I have already directed attention several times, and which I once more strongly recommend to you because it really facilitates the solution of this ever difficult problem. I am in the habit of dividing it into two questions, which logically separate into two parts the course to be pursued. Can a single lesion account for the whole series of phenomena presented by the patient? That is the first point. If the answer is in the affirmative, where must this single lesion be seated in order to give rise to the various symptoms observed? This is the second and last stage. I urge you, gentlemen, never to depart from this analytical method; it is at the first blush less rapid and brilliant than synthesis, but, believe me, it is infinitely more sure, and upon ground so full of pitfalls (*accidenté*) you cannot be too cautious.

In the case that engages our attention to-day, the first question admits of an affirmative answer; there is no occasion to hesitate about it. We know, indeed, that the right half of the encephalon contains all the conducting elements of motor impulses to the left extremities and left half of the face, that it also includes the conductors of sensorial or centripetal impressions passing upwards from these parts to the right hemisphere; it is therefore certain that a single lesion of the right encephalon can abolish movement and sensation in the whole of the left side of the body.

Where must this single lesion be seated in order that it shall have been able to produce these complex results *at the same moment*? The reply is in this instance less difficult than in many others, and it is precisely on that account that this clinical case, being really a type of the class, has seemed to me to be a favourable opportunity to teach you my method, and to convince you of its superiority. As all the symptoms are on the left, as there is no impairment of the right side either in reference to motion or sensation, the lesion of the right encephalon necessarily occurs above the decussation in the pyramids—that is to say, beyond the medulla; and, moreover, it is above and beyond the point of decussation of the nerves from the seventh pair and from the fifth pair, and this for two reasons—first, because the functions of these nerves are entirely intact on the right half of the face; secondly, because the paralysis which affects these on the left has all the characters of so-called central paralysis; in the parts supplied by the facial, the deep branches are not affected, the reflex movement of winking persists; as regards the trigeminal

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the paralysis is still less complete, still more partial. The paralysing influence has certainly not, therefore, affected the nerve-trunks themselves; it can only affect the elements which indirectly connect the centres of origin with the opposite hemisphere—that is to say, the central fasciculi of the nerves. For these reasons, deduced from the characters presented by the facial paralysis, the lesion, I repeat, is not only beyond the medulla, it is beyond the point of decussation of the left facial and left trigeminal; it is, therefore, beyond the anterior border of the right half of the pons.

Starting from this point, various regions are presented to us; and first of all the cerebral peduncle must arrest our attention for a moment. It is quite certain that a lesion of this peduncle may give rise to all the disorders of motion and sensation found in this woman, because this organ represents, in a condensed fasciculus, the whole of the elements which connect the right hemisphere with the nerves of the left side. But in order that a lesion of the peduncle may be able to produce such effects, it must be a deep lesion, and must at any rate involve the lower and middle layers of the peduncle. Now, in this instance I do not see how the nerve of the third pair could escape alteration; and because, in our patient, no sign exists of paralysis of the common motor nerve of the eye, I am obliged to reject that locality. May the lesion be situated in the right hemisphere itself? I am no better able to admit this than the former. The hemispheres constitute a region pre-eminently tolerant; for a purely hemispherical change to give rise to all the phenomena that we have before us, it must be very extensive—a condition incompatible with the rapid and complete restoration of this patient's intellectual faculties.

This point reached, the uncertainty of the problem ceases. The lesion must be on the right side, beyond the pons, while it cannot be in the cerebral peduncle or in the hemisphere; it is therefore in the apparatus to which I have given the name of the uniting apparatus, and it chiefly occupies the corpus striatum, which is in special relation with the conducting fasciculi of the motor impulses. But, in my opinion, the alteration must extend beyond the limits of the corpus striatum, involving in equal degree the optic thalamus. Why? I will tell you. I have already remarked, on several occasions, that, at those points where sensation is not wholly lost, whether in the limbs or face, impressions are simply felt, not discerned, not perceived. Now, while the centre of simple sensation (the "crude sensation" of Henle) appears to lie in the medulla, the quadrigeminal tubercles, and the pons, the organ, or, at any rate, one of the organs, of perception is the optic thalamus. Considering that our patient presents a truly exceptional and clear contrast between loss of perception and retention of sensation, I have no doubt as to the lesion having affected the two ganglia of the uniting apparatus, and I finally localise it in the corpus striatum and optic thalamus.

The question of seat thus decided, let us look into the *pathogenic diagnosis*. The materials for our guidance are utterly different from those which assisted us in the topographical diagnosis. The special characters of the paralyses, their extent, their situation, give no information; in short, it is not to the nervous symptoms in themselves that you must look for the basis of your conclusions, but it is to their mode of appearance, and development, to the other pathological phenomena, to the condition of the patient at the time of the attack, that you must turn for the materials from which to form a judgment.

In our patient the apoplexy was altogether sudden, there were no prodromata; notwithstanding, therefore, the atheromatous condition of the vessels, the notion of *softening from thrombosis* cannot be entertained. The verdict is not less peremptory with reference to *acute encephalitis*, a disease which is often apoplectiform, but which, when it is so, is always accompanied with a more or less intense febrile condition, and almost always with muscular rigidity at the time of attack. Having eliminated these, there remain to us two possible causes of infinitely greater frequency—namely, *softening from embolism* and *hæmorrhage*. Whenever you discover a valvular lesion of the heart in a patient whose attack of hemiplegia took place without prodromata, embolism is the first thing that occurs to you, for you have all the necessary conditions for its production fulfilled. Such is indeed the conclusion to which I myself came in the first instance; but two phenomena supervened, the one at an early, the other at a later stage, to shake and afterwards to modify my diagnosis. I pray you, follow me attentively.

I have told you that five days after the attack the paralysed limbs were seized with a rigidity which lasted for four days. Now, that is a symptom foreign to the ordinary course of an embolic softening, which only presents, if I may so express myself, phenomena of passivity. This rigidity, however, as it here presented itself, was not of paramount significance; it was not accompanied either with cephalalgia or fever, and consequently it lacked the leading characters which distinguish inflammation following cerebral hæmorrhage; it only simulated it in the period of its development, being within the precise limits of secondary encephalitis, which generally makes its appearance from the fifth to the seventh day. Had the rigidity been attended with fever, it would have sufficed to banish positively the idea of embolism, and to establish the existence of hæmorrhage; being, however, apyretic, it could not of itself enable us to form an opinion, because it was somewhat abnormal in both respects. If you wished to refer this symptom to hæmorrhage, you must have admitted the possibility of a secondary encephalitis, without its usual accompaniments, revealing itself only by functional irritation (rigidity), without nutritive irritation (fever); and if, in spite of the rigidity, you persisted in your diagnosis of embolism, you would have to put deliberately on one side the unusual character of the process, and to attribute the functional excitement to the exaggerated intensity of the compensatory circulation, destined to repair the effects of the arterial obstruction. The thing was possible; and this interpretation, which I expounded to the students at the hospital, was in itself satisfactory; but it failed in the particular case in a very important point: in cerebral embolism the complementary circulation is at its maximum of activity in the forty-eight hours following the accident, so that if at the end of four or five days it has not fully restored the nutrition of the embolic area, that fortunate result can no longer be hoped for. Consequently, in our patient, the rigidity, interpreted as the exceptional effect of an embolism, was too long delayed, and that alone justified the greatest hesitation; but, besides, if this spasm was the result of an exaggerated flush of blood, it ought, according to all analogy, to have been followed by a considerable amelioration in the symptoms, for this flow, exceeding the necessities of the case, ought, at any rate, to have done away with the ischæmia due to the embolism. Now, nothing of the kind has happened, and when once the accidents of the apoplectic seizure had entirely disappeared, it was impossible to trace the smallest improvement in the paralysed limbs. Placed in this dilemma, and notwithstanding that there was something unusual in the rigidity under both suppositions, it appeared to me more logical to recognise in it the remains of an abortive secondary encephalitis, and, correcting my first diagnosis, I conclude that hæmorrhage has taken place at the spots already pointed out to you.

Later on, another phenomenon appeared to corroborate this inference. After remaining perfectly stationary for four weeks, some movements reappeared in the lower extremity, and to-day the patient can not only perform at will the movements of adduction and abduction, but she can raise the limb completely from the surface of the bed, and can keep it so raised and directly extended for some seconds. An amelioration so long delayed is in contrast with the ordinary progress of embolic necrobiosis, while it is altogether in harmony with that of cerebral hæmorrhage. I repeat to you, gentlemen, that, considering the condition of this patient's heart, and considering the suddenness of the attack and the absence of prodromata, the diagnosis at the outset must needs have been cerebral embolism, and, to be still more precise, embolism of the right middle meningeal artery. Any other conclusion at that stage would have been a mistake; then, as often happens in similar cases, the progress of events gave rise to new material for forming a judgment, and, for the reasons I have stated to you, I supposed there to be a cerebral hæmorrhage, the apparent occasion of which we discover in the atheromatous state of the arteries.

The premature development of this general atheromatous condition seems to me attributable to the avocation of the patient, who for ten years has been daily using white lead in the manufacture of tooth powder. This employment, which more than any other involves exposure to the absorption of the lead dust, has certainly not given rise in this woman to any of the usual symptoms of lead-poisoning; but this immunity cannot lead us to forget the connexion which observers have shown to exist between the absorption of lead into the system and chronic endocarditis and arteritis. The full diagnosis, then, must be formulated thus: atheromatous

degeneration of the arteries, due to absorption of lead, occasioning extensive hæmorrhage into the corpus striatum and optic thalamus on the right side.

The prognosis is a grave one from all points of view, and here we encounter some interesting peculiarities. Seeing that the change predisposing to hæmorrhage is co-extensive with the arterial system, it is certain that sooner or later another hæmorrhage will occur, and the violence of the present attack leaves but little room for supposing the patient capable of resisting the next. On the other hand, recovery from the present hemiplegia cannot be complete, and, however far off the new hæmorrhage may be, this woman is from this moment reduced to a condition of infirmity. You shall have my reasons. I have pointed out to you the occurrence of an amelioration in the functions of the lower extremity; now, we have nothing like it in the upper; motion and sensation are as completely abolished to-day as at first. This phenomenon would not be sufficient of itself to justify my prognosis, seeing that in cases of complete recovery the functional restoration is always slower in the arm than in the leg; but instead of restricting your observation to the functions of motion and sensation, compare the state of the two paralysed limbs as regards nutrition, and you will observe such a difference as can leave no doubt as to the permanency of the infirmity of the arm.

In the lower extremity the skin is intact. The muscles, more flaccid than their fellows on the opposite side, are evidently of the same size; subjected to the influence of electricity they contract with a force proportionate to their volume. The subcutaneous tissues are not infiltrated. Lastly, a comparative examination of the paralysed and the healthy leg with the thermometer only reveals a difference of a few tenths of a degree in favour of the sound side. Two thermometers of similar make were placed simultaneously in the two popliteal spaces, and maintained in position by assistants, who forcibly flexed the legs; at the expiration of a quarter of an hour the register was 34·5° for the paralysed limb, and 35·2° for the other.

In the upper extremity everything is reversed. The wrinkled skin is covered over with epidermic scales; the muscles, diminished in size, respond feebly to the electric current, and I should hesitate to call by the name of contractions the oscillations of the fibrillæ that it provokes; the forearm and hand are œdematous; and the nutritive interchange is reduced to such a point that the thermometer, which stands at 35·6° in the bend of the elbow on the sound side, does not reach higher than 32·6° in the affected limb. This tremendous difference is out of proportion with that presented by the two inferior extremities; and it acquires a still more positive significance if you place it side by side with the results of a thermometrical observation made in the same way upon another hemiplegic woman whose paralysis bears the same date within four or five days. Here the temperature at the bend of the elbow on the sound side is 33·6°, in the paralysed limb 33°. To recapitulate, while the lower limb shows no sign of atrophy, the upper one presents us with disorders of innutrition to the fullest extent, and that, you will note, six weeks after the attack. This precocity prevents us from attributing these alterations to the sole fact of the immobility; according to this hypothesis, moreover, the lower limbs should also be involved to some extent. Matters standing thus, I am constrained to refer these phenomena to the morbid process known by the name of secondary degeneration. You are aware, gentlemen, that when a serious and permanent lesion occupies the substance of the hemisphere, or the corpus striatum, or the optic thalamus, the nerve-elements in functional relation with those which have undergone alteration are affected by a secondary atrophy, which consists essentially in the segmentation and fatty granular transformation of the nerve-tubes, and in the development of connective tissue. The seat of these degenerations is determined by the locality of the primary lesion. In the case supposed, the secondary atrophy attacks first the cerebral peduncle and the anterior pyramid of the same side; it then passes on to the opposite side of the medulla, where it follows the posterior half of the lateral column. In certain cases of lesion of the corpora striata there is a second atrophic tract which intersects the pyramids, and which occupies, in the side of the medulla corresponding to the lesion in the parts above, the internal portion of the anterior column. When these secondary alterations begin to be developed, reaction to electricity becomes weakened and annihilated in the paralysed parts; the muscles, the nerves, even the bones of the limb atrophy; and from that moment the disorders are incurable, not from the fact of the primary lesion, but from the fact of the spinal degenerations and the peripheral atrophy. The upper extremity of our patient presents so clear and complete an assemblage of these atrophic phenomena, that I cannot retain any doubt as to their determining cause, and this it is which dictates and confirms my prognosis. I am well aware that Türck, who, from 1851, has directed attention to these secondary lesions of the nerve-centres, has assigned their appearance to a more remote period. According to him, they do not appear much before three months and a half or four months after the hemiplegia; but the symptoms are so well defined and so complete in our patient, that this difference as to time cannot lead me really to hesitate. Moreover, a fact which I have not hitherto mentioned to you, lest I should complicate this exposition, comes to justify my assertion, and to weaken the objection that might be raised from the precocity of the secondary phenomena. Prior to the disease, whose history I have set forth to you, this woman's brain was not intact; she had previously suffered from two attacks of apoplexy. One, very slight, in 1869, gave rise to a right hemiplegia, lasting for a few days; the lesion then had its seat on the left side, and so has no interest for us. But in 1870 there was a more severe attack, with left hemiplegia of several weeks' duration; in this instance the lesion was on the right—on the same side as to-day, perhaps in the same locality,—and although repaired, the injury then inflicted on the nerve-tissue is sufficient to explain the exceptionally rapid development of the secondary degeneration.

Such is the clinical case, gentlemen, which I had on my mind to bring before you. From the symptoms, from the various questions raised by the topographical and pathogenic diagnosis, from the special circumstances which influence the prognosis, it deserves all your attention, and I hope you will not regret the few moments we have set apart for this study.

FROM ABROAD.

The Pathology and Treatment of Burns.

Dr. Bedford Brown (*Philadelphia Med. Times*, July 22) observes that although much has been written upon the subject of burns, their medical history remains unsatisfactory. They have probably been too much regarded as merely local in their character, than as having most intimate and important relations with the general system. Besides the first general impression made upon the system in the shape of nervous shock, there are certain coincidental morbid phenomena which are of great importance and little understood. In cases of excessive nervous shock caused by extensive burns, thrombosis of the heart and large veins entering the right side of that organ not infrequently occurs; and this phenomenon is met with especially in this kind of injury, not only because of the excessive nervous depression that is produced, but also from blood which has been disorganised by the local action of heat being carried from the burned tissues to the centre of circulation, and readily forming nuclei for the formation of thromboses. Hence the necessity of accurately distinguishing between these and simple nervous shock with respect to treatment. In simple shock, the pulse, though exceedingly feeble, is not usually much accelerated, while it is generally regular in rhythm. The cardiac sounds are very feeble, but distinct. The temperature is greatly reduced, and the complexion is pallid, while the respiration is little increased in frequency, and there is an absence of præcordial distress, though nausea may be present. But in shock accompanied by thrombosis, the breathing is painfully laboured and frequent; the action of the heart is tumultuous, irregular, feeble, and very frequent; the complexion is livid, while the skin is cold and bathed in perspiration; præcordial distress is painful, and the cardiac sounds are almost obliterated. There cannot be a rational doubt that death following extensive burns directly is often the immediate result of cardiac thrombosis.

Capillary embolism may also constitute one of the chief causes of death in the secondary stages of burns during the reaction which ensues, portions of the disorganised blood becoming lodged in the pulmonic or portal circulation, producing blood-stains, hyperæmia, inflammation, and suppuration. Thus we may have, as the result of capillary embolism in the pulmonic system, pleuritis, pneumonia, or abscess, with

inflammatory fever; and in the portal system, peritonitis, ulceration of the intestines, with diarrhœa or dysentery, and abscess of the liver. In many cases all the characters of true pyæmia are developed. The microscopic emboli obtaining lodgment in the duodenum, excite ulceration, which is probably an effort at elimination. Mere extent of burn, Dr. Brown observes, is not always the cause of death, for numerous cases of extensive burns that have come under his notice were healing favourably until symptoms of capillary embolism suddenly set in, with congestion, inflammation, and ulceration.

The protracted and unceasing pain from burns, so much greater than that from other injuries, is in itself probably a serious obstacle to recovery; for painful wounds heal less readily than those that are painless. This peculiarity in burns arises from the exposure and injury of myriads of terminal branches of sensitive nerves supplied to the skin; while in the burned tissues there is a constant tendency to contract, producing increased pressure around these inflamed nervous terminations. This induces incessant pain, until finally, by this compressing process, their organisation is destroyed, as is indicated by the great want of sensibility in the cicatrix.

In the treatment of simple primary shock, while all concede the necessity for anodynes, the free use of diffusible stimuli and quinine are of great importance. The quinine, by an action analogous to that which it exerts in fevers, not only aids in restoring reaction, but also moderates this, and prevents a high degree of febrile excitement. In shock with cardiac thrombosis opiates are dangerous, and quinine in large doses is too depressing, but in small ones is useful. Liquor ammoniæ, with iodide of potassium and alcoholic stimulants, constitute the most important remedies. The following is a valuable combination:—℞. Liq. ammon. fort. ʒij., potass. iod. ʒjss., glycerin. ʒj., elixir calisayæ ʒv.—m.; a tablespoonful to be given diluted every hour. The ammonia might also be used hypodermically with advantage. Cases of hectic fever arising during the progress of very extensive burns with copious suppuration are best treated with a combination of tincture of chloride of iron, chlorate of potass, and quinine. In cases of internal inflammation, suppuration, or ulceration from capillary embolism, either with or without symptoms of pyæmia, these remedies are equally valuable, but they should be associated with antiseptics of a decided character —carbolic acid in the form of sulpho-carbolate of sodium probably being one of the best adapted of all this class for internal use. Dr. Brown believes strongly in the efficacy of both external and internal antiseptics, the large mass of disorganised tissue furnishing such ample source for the development of septic material, which, when absorbed into the general system, is the true cause of many of the local and general morbid phenomena usually attributed to mere sympathetic influences. In many of the cases of sudden fatal termination from comparatively slight burns, septicæmia is the real cause of death. "Typhoidism in the type of febrile reaction in burns, as in wounds, always indicates septicæmia." Of all local treatment he prefers iodoform, in the following formula: —℞. Iodof. ʒij., ung. cetacei ʒj., ext. conii ʒjss., acid. carbolici gt. x. This, spread on fine linen, is applied twice daily to the inflamed surface, and then enveloped in oiled silk, no other dressing being required. In cases where there is great dryness of surface from destruction of vitality and want of exhalation, the wound, before applying the ointment, should be coated with the common linimentum calcis, which affords a soft and moist dressing, and in nowise interferes with the action of the iodoform. The iodoform acts as a certain and most effective sedative on the painful and exposed surface, and at the same time as an antiseptic. It reduces inflammation and suppuration, when in excess, in a remarkable manner, promptly converting a most painful and irritable wound into one that is comparatively painless. It is also an excellent promoter of healthy action and the healing process, and has besides the great advantage of rendering the use of anodynes unnecessary.

The French Army Medical Service.

The French Parliament has adjourned for a long recess, after having done far less in legislating even than our own. Even the Budget has only been partially voted; but among the portions of it carried are those relating to educational purposes, for which several million francs have been readily voted, a good portion of which are to be devoted to the improvement of the appliances of medical education. Among the subjects which have not come forward for discussion is that of reform in the Army Medical Service, which has so long called for adjustment, and which seems ripe for settlement. An important report on the subject, by M. De Freycinet, has been presented to the Chambers, and its discussion is expected to occur in November. In this he refers to the complaints that have been for so long a period interchanged between the Medical Department and the Intendance or commissariat of the French Army—complaints, indeed, that have in every war been reiterated by the highest authorities on military medicine. The present regulations give to the Medical Department the technical control of the hospitals and ambulances, but place their administrative direction under the Intendance. The Medical Department declares that under this arrangement the Intendance, on the pretext of police and discipline, interferes with the hygiene of the hospitals, and modifies orders given, under the pretext of administration. The *personnel* of the hospitals do not obey the doctors, who are, in fact, so to say, not masters in their own house; and, in fact, under this dual system, disputes and differences are of constant occurrence. At the present time a medical officer cannot order the windows of a ward to be closed or opened according to hygienic requirements; and the prescriptions and regimen which he considers necessary for his patients are liable to modifications at the hands of the intendant. Any infractions of the tariff which the medical officer may incur he is responsible for, so that he may have to pay out of his own pocket for quinine ordered during an epidemic. He cannot insure the obedience of the attendants or soldiers, who, dependent on the intendant, believe it their interest to disavow the authority of the doctor, and even to circumvent his most legitimate intentions. The new Bill, founded on M. de Freycinet's report, puts an end to this discreditable state of things, and places the doctor at the head of the Medical Service, conferring upon him the right and duty to see that nothing is wanting for the due working of the hospitals and ambulances. He will communicate his observations directly to the commanding officer, and will order all matters relating to the food and requirements of his patients independently of any control on the part of the intendant. Another point on which the Bill contains provisions highly favourable to the Medical Department is its relationship to the army pharmaciens. In 1873 an animated debate took place on this subject at the Academy of Medicine, in consequence of the Minister of War having asked the opinion of the Academy as to what these relations should be; but the decision was not quite so marked as it might have been, owing to the determined opposition of the pharmaciens of the Academy to the claim of the Army Medical Department that the pharmaciens should be strictly subordinated to it, instead of continuing a semi-independent body, often acting in concert with the Intendance. The present Bill insists upon such subordination being carried out.

Animal (Heifer) Vaccination.—According to the Report of the Milan Committee for Animal Vaccination, there have been vaccinated under their auspices during the period 1869-75, 69,740 individuals, 11,608 of these being primary vaccinations, and 58,832 revaccinations. Of the 11,608 vaccinations, 8912 exhibited genuine results, and 115 spurious results; in 288 no effect was produced, and in 2293 the results were not verified. Of the 58,132 revaccinations, 18,169 furnished genuine results, 3847 spurious results, and 22,960 no results at all—the remaining 13,156 not having been verified. After trial of all the various means for the preservation of the lymph, most decided preference is given to glycerine.—*Annali Universali*, May.

Board Schools as Centres of Infection.—At the meeting of the Liverpool School Board, on Monday, a memorial from all the leading medical men in that town was read, in which they directed the attention of the Board to the fact that small-pox is now epidemic in Liverpool, and is spreading. They also assert that schools act as the chief centres of infection in this and similar diseases: and they suggest that Board schools should be subject to periodical medical inspection, in order to reduce the risk of disease spreading in this manner to a minimum. The memorial was referred to a committee for consideration; but one of the members of the Board hinted that the anxiety exhibited by the memorialists sprang from a desire to see a new series of well-paid appointments instituted.

REVIEWS.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M.D., F.R.C.P., Professor of Obstetric Medicine, King's College, Examiner in Midwifery to the University of London, etc. London: Smith, Elder, and Co. 1876. Two vols., pp. 397 and 385.

A comprehensive and systematic work on the Science and Practice of Midwifery, by a metropolitan teacher of eminence in that subject, and examiner in it at the most respected of our diploma-conferring bodies, is one which by the profession will be naturally expected to reach a high level of performance as well as of promise. In Dr. Playfair's work they will not be disappointed. It is complete: it embraces every subject comprised under the title of midwifery, and on debateable points the views of all, or almost all, who have earned a right to be heard are mentioned and done justice to. The author, it is hardly needful to say, has had very large experience, and has read widely. The work of others he has compared with his own close and extensive observation, and thus weighs in the balance of a cultured and informed judgment the statements which he finds promulgated as truth.

The work is divided into five parts—1. Anatomy and Physiology; 2. Pregnancy; 3. Labour (under which head is included an account of everything which may interfere with delivery, and the means of overcoming each obstacle, save and except by operation); 4. Obstetric Operations; 5. The Puerperal State.

Although this division is no doubt a scientifically accurate one, yet it involves some repetition, and separates some things which those who turn to it in practice would like to find together. The section on the anatomy and physiology of the pelvis, and the organs it contains, gives a succinct account of those facts and theories which are of importance to the obstetrician, the text being wisely not encumbered with minutiæ of purely anatomical interest. The process of menstruation is fully and carefully described. The long-continued experience of the Jews is, we believe for the first time, called attention to, in opposition to the theory which supposes that conception is more likely to take place immediately after the menstrual period. The theory of Pouchet, to support which evidence has been recently adduced by Dr. Tyler Smith and Dr. John Williams—viz., that the entire mucous membrane of the body of the uterus is shed during menstruation—Dr. Playfair thinks does not hold good under ordinary circumstances, although he does not doubt the occurrence of this process as a morbid phenomenon.

The part relating to pregnancy includes the development of the ovum, the anatomy and physiology of the fœtus, and the physiology, signs, and diseases of the pregnant state. The intermittent contractions of the pregnant uterus described by Dr. Braxton Hicks, the author has never failed to detect, and he allots them a high place among the corroborative signs of pregnancy. The violet colour of the vagina pointed out by Jacquemier and Gluge he thinks valueless, on the ground that it is constantly seen where similar pressure is effected by large fibroid tumours of the uterus. Now, many obstetricians of repute attach great weight to this sign, and it certainly is not produced by all fibroid tumours of the uterus large enough to simulate the gravid uterus. We do not wish to question Dr. Playfair's very emphatic statement, but it is a very important one, and we think that a full account of the circumstances under which this violet colour of the vagina is met with associated with uterine fibroids, or any other condition, would be of service; although, of course, it is not called for in a work like the present. Possibly in such cases other signs and symptoms might be so marked as to prevent any mistake of the kind arising. The theory of Dr. Graily Hewitt, maintaining that the vomiting of pregnancy depends upon flexion of the uterus, the author, we think rightly, rejects.

The very important and interesting subject of extra-uterine gestation is practically discussed; and the conclusion Dr. Playfair comes to as to the best and safest course for the treatment of these cases, in the present state of our knowledge, we think most prudent obstetricians will agree with. He points out that the real objection to the bold course of extirpating at once the nearly certain cause of future dangerous hæmorrhage is the difficulty of the diagnosis. Could we be sure that a tubal gestation existed, which would almost inevitably be the source of sudden and uncontrollable internal bleeding, we should give the patient the best chance by opening the abdomen and taking out the fountain of clearly foreseen and deadly evil. As it is, diagnosis being very fallible, the safe course is, if we have a tumour with signs and symptoms which render it probable or possible that it contain a developing ovum, to put an aspirator-needle into it. If it be fœtal its growth will be stopped; if not, no great harm has been done. In cases of abdominal gestation, he agrees with Mr. Hutchinson and Dr. Barnes as to the safety of leaving the case till nature seems to favour removal, but thinks that where there is urgent distress primary gastrotomy may, at the patient's request, be undertaken. The arguments in favour of either course are, in the author's opinion, so nearly balanced that the patient's wishes may fairly influence the practitioner's course of action. In the very rare condition known as missed labour, the author advocates dilatation of the cervix and removal of the uterine contents, rather than delay.

Professor Playfair's account of the mechanism of natural labour presents some modifications of the accustomed description. The reason of the flexion of the head given by Solayres, and adopted by others, fails, in the author's opinion, to explain its occurrence before the waters have broken. Solayres said that the force being nearer the occiput than the sinciput, and the resistance being equal, the former is pushed down. Dr. Playfair puts it that, the head being equally pressed on from below, the forehead is pushed up—a very subtle and ingenious distinction, but with very little difference. He agrees with the German obstetricians in thinking that the resistance of the soft structures in the posterior part and floor of the pelvis has a larger share in producing rotation of the head than the projection of the ischial spines; but he does not altogether deny the influence of the latter. The lateral obliquity of the fœtal head described by Naegelé, and after him by others, Dr. Playfair does not admit; but he does not enter into the arguments for or against.

The old-fashioned practice of supporting the perineum he rejects, but only to substitute a new way of doing it, which he calls "relaxation." It consists in pushing the perineum forward, so as to widen the anal orifice, and so relax the perineum. The objections which hold good against other modes of supporting the perineum seem to us to apply to this also.

Dr. Playfair holds that the proper management of the third stage of labour is of cardinal importance, and that this is one of the things in which English practice most needs improvement. The ordinary mode of assisting the expulsion of the placenta, by gentle traction on the cord, he condemns altogether, in favour of the method of expelling the placenta by abdominal pressure taught by Crede and others. To improper management of this stage Dr. Playfair ascribes the frequency of post-partum hæmorrhage, of hour-glass contraction of the uterus, and of many so-called "adherent" placentæ. *Vis a tergo*, not *vis a fronte*, should be the rule of practice.

The author speaks very decidedly on the great value of chloral in the first stage of labour. He says that it is specially the anæsthetic of the first stage; that it has no relaxing effect on uterine contraction, while "it produces a drowsy state in which the pain is not felt nearly so acutely as before." In cases of rigid, undilatable cervix he knows of nothing that answers so well; two or three twenty-grain doses, at intervals of twenty minutes, will often relax the parts enough to allow the passage of the head, without interfering with the strength of the pains, but, on the contrary, making them steady and regular. So valuable he finds it, that he recommends that it be carried as a matter of routine in the obstetric bag.

The dangerous and difficult complication of placenta prævia receives very thorough and careful treatment in this work. The views of Simpson, Barnes, Matthews Duncan, and others, are stated and criticised. The author finds that no one rule of practice can be laid down for all cases of placenta prævia. He sums up the result of his experience and the published experience of others in six rules, which may be abbreviated as follows:—Before the child is viable, temporise; afterwards, consider that the sooner labour is over the better. The first thing then to do is, if possible, to rupture the membranes. If hæmorrhage continue, plug, dilate, and turn. Before turning, the placenta may be separated around the margin of the os.

The time-honoured mark of diagnosis between accidental and unavoidable hæmorrhage—viz., the escape of blood, in the one between, in the other during, the pains—Dr. Playfair rightly rejects as fallacious. In accidental hæmorrhage his

treatment is based on the broad generalisation that in all forms of puerperal hæmorrhage the great hæmostatic is uterine contraction. Therefore he ruptures the membranes, gives ergot, and, if this be not enough, goes on to empty the uterus. Post-partum hæmorrhage he looks upon as to a great extent a preventable accident, arising from mismanagement of the third stage of labour. In the treatment of these trying cases he puts the injection of perchloride of iron in the place which we think it fairly claims. He thinks its introduction into practice one of the greatest improvements in modern midwifery, and goes so far as to say that no one has yet brought forward any cases in which its evil effects have been conclusively proved; and that no practitioner should attend a case of midwifery without having the necessary styptic with him. He thinks it needful to mention plugging of the vagina in cases of post-partum hæmorrhage, to insist on its absolute inapplicability; but nevertheless we notice that in abortion he advises this proceeding. It is easier and more convenient, and perhaps not, as in the first-mentioned condition, positively harmful; but can there be a doubt that, as Dr. Barnes has pointed out, the safe and scientific course is to go to the source of the hæmorrhage at once, and plug the cervical canal, not the vaginal?

The part of the author's practice in which he most distinctly departs from the rules of the great accoucheurs of the past, and which we conclude is in his thoughts when in his preface he anticipates that some part of his practice may be "considered heterodox, and may even not meet with general approval" (a forecast in which we hope and believe he will be mistaken), is that relating to the use of instrumental aid in labour that is simply tedious. In his opinion forceps might be applied much oftener than they are, with the result of an enormous saving of infant life and maternal suffering. Adherence to a definite rule, that progress must be arrested for a certain time before interference is justified, he looks upon as incompatible with a practice based, as sound practice should be, on the merits of each case. He lays it down—and we are glad to see that he puts it so clearly—that the mere prolongation of labour is in itself a serious thing, and that formidable symptoms from this cause should never occur in the practice of the skilled obstetrician; and that when we are once convinced that the natural efforts are unlikely to effect delivery, except at the cost of long delay, it is far better to interfere soon than late. As to the operation itself, we may simply remark that Professor Playfair uses the same instrument (the long double-curved forceps of Sir James Simpson) in all cases; and that in all cases he passes the blades along the sides of the pelvis, without reference to the position of the child's head. He points out that the usual description of them, as a lever of the first class, is inaccurate; that they can only act in this way if so loosely applied that one blade can work independently of the other. He omits to say, probably as too obvious to need mention, that, if regarded as an agent to compress the child's head, the instrument is undoubtedly a double lever of the first kind. Regarded as a tractor, Dr. Playfair correctly says the two blades form one instrument, and only act as a lever in the side-to-side movement which is customary in extraction, and that then the leverage is of the second kind, "the fulcrum being the portion of the head on which the extremities of the blades rest, the power being at the handles, and the weight between the two."

Ergot, the author insists, should only be given with strict limitations, and after careful consideration. With this surely all must agree; for, whatever be our own opinion as to how often one ought to interfere with labour, there can be no doubt that it is better to work with an instrument obedient to our own will, than to call in a blind force like the prolonged uterine contraction produced by ergot, which we cannot check or influence; and that for the practitioner who has acquired competent skill in the use of forceps, the cases requiring ergot must be few and far between. The administration of a dose of ergot after delivery, however, the author recommends as thoroughly good practice. He calls attention to the great value of abdominal pressure in aiding delivery; he has even, in the absence of pains (other conditions, of course, being in every way favourable), effected delivery by this means alone. For effecting delivery of the after-coming head in pelvic presentations it is the most powerful means at our disposal. He expresses his surprise that this effectual mode of action has been overlooked by former writers on the subject.

When there is obstruction to delivery so great as to involve the sacrifice of the fœtus, Professor Playfair expresses a very decided opinion as to the best instrument for extraction. The crotchet he condemns as obsolete. The craniotomy forceps in their modern form—the best being the "craniocłast" of Sir James Simpson—he finds effective and useful; but the cephalotribe is the best, quickest, and easiest. The form of instrument he prefers is that to which Dr. Hicks's name is attached. Cephalotripsy, in Dr. Playfair's opinion, deserves to be, and will be, the ordinary operation in this class of cases.

We cannot say that, in the part of the work relating to puerperal eclampsia, Dr. Playfair has thrown much light on this obscure subject. He tersely recapitulates the principal theories which have been advanced; but as he himself says, its precise pathology cannot be regarded as by any means satisfactorily settled. Although admitting that cases with albuminuria pass through pregnancy and labour without harm, yet he thinks the risk is so great as to justify the introduction of premature labour. The criteria which he mentions as foreboding danger are headache, giddiness, and loss of sight, with progressively increasing albuminuria. Now, of course, an exhaustive discussion on this subject, which really belongs to the general physician, would be out of place in a work such as the present; but we should have thought something more definite and detailed could have been given to guide the practitioner on so important a point.

Puerperal fever (so-called), or puerperal septicæmia, as Dr. Playfair prefers to name it, is discussed, or rather our knowledge of it is epitomised, in one of the ablest chapters of the book. The author first lays before his readers a condensed but impartial summary of the various theories which have been held concerning this sequence of parturition, and then describes it from what he believes to be the right point of view. In the compass of thirty pages it is, of course, not possible to adduce proof and illustration of each statement, therefore this chapter is a summary rather than a treatise.

The author recognises in it the disease familiar to surgeons as pyæmia or septicæmia, and can see no evidence of a special virus, or any peculiar and unique morbid phenomena. He believes it originates in absorption of some septic poison from some part of the generative tract. He coincides with Heiberg, who classifies the cases into four groups, epitomised as follows:—1. Intense cases without marked post-mortem signs; 2. Cases characterised by inflammation of serous membranes; 3. Cases characterised by changes in mucous membranes; 4. Cases characterised by the impaction of infective emboli, and secondary inflammation and abscess. The whole chapter is one of the best accounts of this difficult subject with which we are acquainted. In treatment, Dr. Playfair lays stress on the importance and value of washing out the uterus with antiseptic fluids. In the early stage of the disease he thinks the action of aconite, in depressing the cardiac action, is beneficial. The other points of his treatment are in accordance with the general principles universally acknowledged.

The subject of puerperal thrombosis and embolism is one to which, as obstetricians are well aware, the author has paid great attention, and to our knowledge of which he has added much. We need not therefore take up space by quoting from these chapters, as they contain matter which Dr. Playfair has already brought before the profession in another shape.

To conclude, we think that Dr. Playfair has given us a most valuable, interesting, and trustworthy work. He tells us in his preface that it has been his object "to place in the hands of his readers an epitome of the science and practice of midwifery which embodies all recent advances"; and in this he has fully succeeded. If we cannot find anything of great and startling novelty, there is abundance of that kind of originality which consists in viewing everything from an independent standpoint. The work is in two convenient volumes, in type clear and large enough to be read with comfort, and reference is made easy by marginal indications of the contents of each paragraph. The illustrations are numerous and well chosen, but their quality varies much. Some are original, but many are copied, and the borrowed ones are not, as a rule, acknowledged. The reason for this Dr. Playfair explains in a quotation from Tyler Smith, to the effect that all obstetric authors have so freely borrowed from one another that to trace many illustrations to their authors is difficult or impossible. We are sorry that Dr. Playfair has helped, by his example, to keep up this practice. We can only regard Dr. Tyler Smith's doing so as an excuse, not as a justification; and we hope that in future editions the author will give honour where honour is due—if he cannot to all, at least where he can.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

Philadelphia, July 10.

Meeting of the American Medical Association: The Address of the President, Dr. Marion Sims—The International Medical Congress: Expected Medical Visitors from Europe and Canada—The Medical Department of the Centennial Exposition—The National Medical Library—Sanitary Condition of Philadelphia.

The medical profession of this city and of the country at large seems to be looking forward with much interest to the approaching International Medical Congress, to meet here in September. By that time it is hoped the Centennial Exposition will not be so much of a novelty as to interfere with the attendance of delegates at the sessions of the Congress, as it has done with all other conventions that have assembled in this city in 1876. The American Medical Association was particularly unfortunate in this respect; for it was barely possible to bring together half of the registered delegates at any one morning session, and the sections—some of them full of practical instruction and interest—were sometimes graced by the presence of a mere handful. The members naturally thought that they could attend a section meeting any year, but they were afraid that circumstances might prevent them from being present at another Centennial Exhibition. The Association, in spite of these great drawbacks, accomplished about the usual amount of work. Its President (Dr. J. Marion Sims), after a natural and not inappropriate outburst of Centennial enthusiasm, alluded to the various matters of contention that had been removed from the arena of the Association; all points in dispute were kept out of the general meetings by reference to the Judicial Council; the colleges—important and insignificant, and of all shades and degrees of educational proficiency—could not bring their quarrels into the main body as of old, for they were no longer represented in the Association. It is an evidence of the wonderful progress of the times to find the President of this great national council a gentleman whose sympathies, as a native of South Carolina, were at one time sincerely Southern, advancing the proposition—in which, if the occasion had arisen, the Association would doubtless have sustained him—that if any society therein represented should send a coloured man as a delegate, the Association would be obliged to receive him. So, too, with the woman-doctor; and this view was maintained by the admission, for the first time in its history, of a delegate of that sex from the Illinois State Medical Society. The bitter quarrel of a few years since on this very point is still fresh in the memories of everyone. Dr. Sims also took strong ground in favour of a modification of the code of ethics, to allow physicians to derive some pecuniary advantage from their inventions, inasmuch as the surgical instrument maker is now the only person thus benefited by the genius of the surgeon. I find that the agitation on this subject is already giving abundant material, in the columns of our medical journals, for discussion and reflection. The President then added a forcible statement of his views on the necessity for legislation in regard to the spread of syphilis to those so ably advanced by Professor Gross and others at previous meetings. He declared that this evil must never be fought by the European plan of licensing prostitution, but by preventing the importation of syphilis from abroad, and of checking its spread among us in every way possible.

Many of the States are still without a State Board of Health, on whom would rest the responsibility of regulating the sanitary affairs of the people within their borders. It is so difficult to divest any question of this kind of a political complexion, and so much jealousy exists on the part of legislators towards the medical profession, that after a fruitless annual effort to legitimise such a Board, the condition of things remains unaltered, in hopeful anticipation of success another year. Pennsylvania is very laggard in this respect; Massachusetts far, far in advance. The American Medical Association wisely determined that it was hopeless to expect the United States Congress at Washington to create any National Health Council for the whole country until the States themselves had taken a more earnest and advanced ground.

The preliminary programme of the International Medical Congress, issued a couple of months since, was necessarily more national in character at that time than it will be when completed by the addition upon it of foreign representatives. The gentlemen who had been selected from abroad to deliver general addresses found it impossible to be present; and even Lebert, who had accepted a place upon the programme, has since signified his inability to attend. The number of those who are coming is, however, an indication of the interest taken in the Congress by our medical brethren of Europe especially, and the various volunteer papers from the same sources will materially strengthen it in its international features. Stromeyer was to have been here, but the great surgeon has passed away, and the gratification of seeing him is denied us. Among those whose names I have heard mentioned as likely to be present, I recall at this moment those of Warlomont, of Brussels; Estlander, of Helsingfors; William Adams, of London; Joliffe Tufnell and Dr. William Stokes, of Dublin; Engelsted, of Copenhagen; Dr. Hausen (President of the Copenhagen Medical Society) and Professor Carl Lange, of the University of that city; Professor A. R. Simpson and Dr. Finlay, of Edinburgh; Drs. J. Langdon Down and Richard Davy, of London; Professor Hueter, of Greifswald; Mr. Alfred Haviland, of Northampton; Dr. Brown-Séquard; Dr. Robert Barnes, of London; Mr. Henry Wilson, of Dublin; Drs. Morell Mackenzie, Lauder Brunton, C. B. Radcliffe, and Mr. Henry Power, of London. It will be readily seen, from such an array of names, that the discussions may be exceedingly interesting, and that many volunteer papers will probably be offered, which will contribute still further to the thoroughly international character of the Congress. Those who visit Philadelphia at that time will witness an assemblage of the very cream of the medical profession of the United States, for the American portion of the Congress is made up of delegates from all the national and State medical societies of the country, and each society has exerted itself to select such of its members as are prominent by their ability, culture, and professional integrity. Such a medical convocation as this has never yet met in this country. Our Canadian brethren, we have understood, have had a lively competition in some of their societies for the choice of delegates.

So far as medicine is represented at the Centennial Exposition, much may be written. The Government has, in its own building and annexes, given the public an insight into the progress made in its medical departments. There is a building which is a model of an army hospital for twenty-four beds, built of the exact dimensions, and furnished with the same equipments as all other buildings of the same kind now constructed by the Medical Department. In this building models are exhibited of hospitals, hospital cars and vessels, as used in the late war, and the various contrivances which experience and ingenuity have suggested for the transportation of medical supplies, the sick and wounded, etc. One of the most interesting features here presented is the display o microphotographs, contained in portfolios, and placed in every window. Dr. Woodward, of the army, to whom the credit of such a display belongs, took an active part in the debate before a section of the American Medical Association at its recent meeting, maintaining the close identity of the blood corpuscles of man and some other animals when magnified, as some of these specimens, were 4350 diameters.

The library of the Surgeon-General's Office, or, as it has been recently re-christened, the National Medical Library, is represented here by a collection of albums of photographs, of uniform size, of title or specimen pages of more than a hundred curious books contained in it. One of these is a photograph of a page of a very old manuscript, Bernard de Gordon's "Lilium Medicum," bearing the date of 1349; another a photograph of the first printed monograph on diseases of children, by Paul Bagellardus, 1472; while the fifteenth and sixteenth centuries are largely represented in the list. Indeed, it seems like instituting a comparison at once between ancient and modern eras to find the bookmakers' productions of those distant days linked with the newer arts of the photographer, and thus vividly introduced to the thoughtful attention of others than mere bookworms or literary *virtuosi*. The library is rich in literary treasures—rare books, rare editions, and quaint and antique volumes. The Surgeon-General has recently issued a specimen of a catalogue of the whole library, the entire catalogue being now nearly ready for the press. The sample submitted is a combined catalogue of subjects and authors arranged in dictionary order under a single alphabet,

instead of having two separate works, one containing the authors, the other the subjects. The classification is mainly from the anatomical standpoint, with numerous cross-references, the references being always from the general to the more special heads, as "Aneurism" under "Abdomen, Tumours of," etc. The catalogue will be of great bibliographical value, and will possess to the profession the inestimable advantage of supplying an index to all accessible medical periodicals on every topic which has been discussed by a multitude of writers, and which may again furnish texts for contributors to periodical literature in countless ages to come. The librarian of Congress, in view of the establishment of this great national medical library, at present aggregating 40,000 volumes, all collected within a few years past, no longer purchases medical works, leaving that department of literature to be gathered by the Surgeon-General. The complete catalogue on the plan proposed would make five volumes of a thousand pages each. The Navy Department has no such opportunities for display at the Exposition as are offered that of the Army, and its very creditable exhibit in the Government building is confined to an indication of the nature of the medical supplies, to the arrangement of hospital facilities on shipboard, and to various contrivances for the removal and treatment of the wounded and sick. I am reminded that in speaking of the Army Department I made but little, if any, allusion to the United States Army Medical Museum at Washington, which is divided into six sections; the Surgical Section containing 6539 specimens, the Anatomical Section 1254, the Miscellaneous Section 240, the Medical Section 1299, the Microscopical Section 7275, and the Comparative Anatomy Section 1522 specimens. The Surgeon-General is desirous that this Museum, created originally for the preservation of specimens illustrative of the wounds and diseases producing death and disability during war, shall be extended in its objects to include all forms of injuries and disease, and thus become a general pathological museum, accessible for study to all medical men who may be prosecuting original inquiries.

The Centennial Exposition has wonderfully developed the taste for Centennial authorship. It is said that an immense amount of bibliographical research is being prosecuted through the facilities offered by the National Medical Library, to give completeness to the addresses to be presented before the International Medical Congress. Several medical journals have been interested in this line of subjects, and some of them have occupied their columns with more than a mere outline sketch of Centennial progress and the literary medical history of a hundred years. The medical men and surgeons of the War of Independence are now being exhumed, so far as their share in making the history of those times is concerned, and buried annals searched by more than one patient and industrious hand for matters of professional interest.

The volume of *Transactions* to be published by the International Congress after its meeting in September will be a very large and comprehensive work, containing all the addresses to which I have already alluded, and full reports of the general meetings and the discussions in the sections. Doubtless arrangements will be made so that the profession at large will be able to obtain it, and the volume will thus be not only a memento to those who will have been present at the meetings, but probably the most valuable and interesting memorial work issued during the Centennial year. To those of your absentees who may have no other opportunities of studying the proceedings of the Congress it will possess much interest.

Dr. William Pepper, Medical Director of the Exposition, recently issued a circular for the information of visitors to this city, as to its sanitary condition. He gives the following statistics from the most authentic sources accessible, indicating the mortality in some of the chief cities of the world during the past four or five years:—

	No. of Years.	Average Population.	Average Total Mortality.	Average Death-rate per 1000.
Vienna . .	5	648,560	20,424	31·42
New York .	5	994,458	29,601	29·93
Berlin . .	4	950,000	28,420	29·91
London . .	5	3,284,488	76,741	23·33
Paris . .	4	1,851,792	42,724	23·06
Philadelphia .	5	744,831	16,573	22·27

It is also stated that while these figures show an average rate of mortality more favourable than that found in any other city containing over 500,000 inhabitants, Philadelphia has recently (1874) attained a degree of healthfulness almost unparalleled—viz., with a population at that time of 775,000, the number of deaths was but 14,966, giving a death-rate of only 19·3 per 1000. These very favourable results are largely due to the abundant and cheap water-supply, and to the opportunities given, even to the poorest citizens, for the enjoyment of pure country air in the great Fairmount-park, which contains 2991 acres. During the year 1875 the park was visited by over 11,000,000 persons. The most powerful influence of all, however, is the absence of overcrowding of the population—the most fruitful source of sickness and death in nearly all other large cities. The 817,488 inhabitants of Philadelphia are spread over an area of 129⅛ square miles, which are traversed by more than 1000 miles of streets and roads; and the city contains, in addition to other kinds of buildings, 143,000 dwelling-houses occupied by families—a number exceeding by over 40,000 that of any other city in America. The mean annual temperature of the last ten years is 53·73° Fahr.; the average annual rainfall is about forty-five inches.

The mean temperature (Fahr.) of each month during the past ten years is as follows:—January, 32·72°; February, 33·12°; March, 39·16°; April, 53·36°; May, 63·24°; June, 73·54°; July, 78·74°; August, 75·92°; September, 67·72°; October, 56·03°; November, 43·34°; December, 33·92°. It is thus seen that only during the months of June, July, and August does the mean temperature rise to a high point. During this period there are very rarely any prevailing epidemic diseases; and the chief mortality occurs among children, especially among the poorer classes.

Within the Exhibition grounds a rigid sanitary inspection is maintained under the control of the Bureau of Medical Service, and thus a guarantee is afforded that no cause of infection or disease will be allowed to occur through neglect of this important duty.

Corporal Punishments in Schools.—An Islington lad having been chastised by his schoolmaster in the regulation manner—that is to say, by giving him a few stripes over his posterior parts with a cane—his parents called in a surgeon residing at Holloway to prevent any permanent damage resulting. The surgeon brought all his skill to bear upon the case, visiting his patient twice a day, and so on, ultimately effecting a cure, for which he sent in a bill for £5. The parents brought an action against the schoolmaster about ten days ago to recover the amount of the doctor's bill and other expenses incurred during the anxious illness of the young hopeful. The surgeon was present, and stated to the judge that £5 was a fair and reasonable charge; his rule was to charge according to circumstances, and as he was given to understand that the schoolmaster would pay his account, he charged £2 more than he should have expected the parents to pay. The judge nonsuited the plaintiff, who will now have to make the best terms he can with the doctor.

Smoking Belladonna in Asthma.—Dr. Reeves states that smoke derived from the leaves of belladonna possesses much more power in cutting short an attack of asthma than that from stramonium. A long pipe is the best means of smoking them, the patient being instructed to draw the smoke deep into the chest. If, when the attack is at its height, he has not the power of doing this, the leaves may be placed in a saucer containing lighted charcoal or wood-ashes, which should be placed on a chair in front of the patient—this chair, as well as his own, being covered with a large sheet, so as to confine the fumes before the leaves are put on the hot charcoal. From two and a half to five grains of the leaves are sufficient when smoked, and from five to twenty grains when burned. If the smoke is drawn deeply into the chest, the relief is immediate, expectoration of phlegm taking place. It is in the spasmodic form of asthma, where there is little or no expectoration, that the greatest relief is obtained, for when the tubes are loaded with mucus the smoke cannot get access to their muscular tissue. The relief is most marked when the remedy is used soon after the paroxysm has commenced, before the spasm prevents access of air to the smaller tubes and air-cells. Tobacco-smokers do not receive the same amount of relief as others. Temporary headache of a throbbing character may be produced if the leaves are used too freely.—*Melbourne Med. Record*, May 24.

GENERAL CORRESPONDENCE.

THE BRAVO CASE.

We have received the following from Messrs. Kimber and Co., the solicitors for Dr. Gully. We at once and most readily publish it, hoping it will do Dr. Gully as much good as he deserves:—

[To the Editor of the Medical Times and Gazette.]

The enclosed with the compliments of

HENRY KIMBER AND COMPANY.

79, Lombard-street, E.C., London, August 23, 1876.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your very able article in last week's paper justifies us in thinking you will not object to inserting a few words from us upon one point in which you have borne rather hardly on Dr. Gully, viz., as to his prescriptions in 1874 for Mrs. Bravo. We enclose you copy of these two prescriptions, which perhaps you had not seen, and the barest inspection of which will show that the stronger of the two prescriptions only contained two-thirds of a drop of the oil of savin in each pill. We think you will agree that this, and the fact that these prescriptions were written in the light of day, and sent openly to a most respectable chemist to be made up, should have negatived any idea of improper intention actuating Dr. Gully, and that they should have protected any medical man from the foul insinuation involved in Mr. Lewis's questions respecting them.

The insinuation conveyed by a question of a juryman as to whether the patient might not have been intended to take the whole amount prescribed (sixty pills in one dose), shows the animus by which the jury were actuated.

Your obedient servants,

THE SOLICITORS FOR DR. GULLY.

London, August 23, 1876.

[*Copy.*]

May 25th 1874

diluted into 510 drops

- Oil of Savin 30 drops
- Bromide of Potassium 1 dram 60
- Tincture of Chloride of Iron 7 drams 420
- The drops to be taken as directed

June 19 1874

6 drops = 1 dram

drops	
40	Sulphate of Iron 2 scruples
60	Gum Tragacinth 1 dram
40	Oil Savin 30 drops
	Make into 60 pills
140	One at bed time every night

[The above is a literal reproduction of the prescriptions as forwarded to us.—ED. *Med. Times and Gaz.*]

THE scheme to unite Kingston and Surbiton into one drainage district has fallen to the ground through a disagreement as to the composition of the governing board.

PRELIMINARY measures have been taken with a view to establish in New Zealand a General Medical Association, having for its object the advancement of medical science, and the promotion of the common interests of the medical profession. Its promoter says:—"The advantages that would accrue to the public and to the profession if the latter possessed one representative and united organisation, whereby its voice on questions of medical politics might be heard, are obvious; and it appears to me that there is every probability, amid the many constitutional changes through which the colony is now passing, and the consequent adjustment of details which will inevitably follow such changes, that there will be many matters of medical interest cropping up upon which it would be preferable that the voice of the profession as a whole should be known." We wish the association every success, and recommend to their early notice the subject of medical ethics: it will give them employment.

REPORTS OF SOCIETIES.

ASSOCIATION OF SURGEONS PRACTISING DENTISTRY.

WEDNESDAY, MAY 24, 1876.

S. CARTWRIGHT, F.R.C.S., in the Chair.

THE CHAIRMAN: I much regret to say that Mr. Salter, who was to re-open the discussion to-night, is unfortunately unwell, and is not allowed to come out, but he has sent a letter, which the Secretary will read.

Mr. HAMILTON CARTWRIGHT read a letter from Mr. Salter, regretting his inability to be present, and said: Having recently had a conversation with Mr. Salter with regard to his views on syphilitic-mercurial and stomatitic teeth, I may perhaps be permitted to give a very brief *résumé* of his opinions. I believe that he quite coincides with Mr. Jonathan Hutchinson as to the existence of a peculiar type of tooth which is characteristic and diagnostic of hereditary syphilis, but he thinks that much evidence is wanting, even in those cases brought forward by that distinguished observer, to support the theory that mercury has any special action *per se* upon the teeth generally, or upon the six-year-old molars in particular. Mr. Salter also maintains that the cases are rare in which it produces stomatitis in children, and also draws attention to the fact—which my own experience most strongly corroborates—that the malformed teeth described as mercurial appear in people of all nations, whether that medicine be exhibited or not; whilst it cannot be denied that several years ago it had a far more extended use than now, and yet it is found that "rocky" teeth are no less frequent. In fine, his opinion is, I take it, that the (so termed) mercurial teeth do not necessarily indicate any other condition than that of depressed and arrested nutrition during the development, as proved by the layer of half-calcified dentine which underlies the craggy enamel. I believe that Mr. Hutchinson thinks that the first molars are particularly affected by mercury, but it must not be forgotten that these teeth are very prone to decay, indeed, their liability to do so is in the ratio of from 60 to 65 per cent. in the earlier years of life.

The CHAIRMAN: You had a very interesting discussion upon this question on the last occasion, but there was not time to finish, and it was adjourned until this evening. There are several gentlemen present, capable, I am sure, if willing, to enter into the discussion of a most interesting subject—interesting to us all not only as surgeons, but as practising dental surgery also. There is a certain amount of diversity of opinion on every question, and that diversity makes these discussions the more interesting. Some gentlemen imagine that the peculiarities connected with the teeth which are strictly syphilitic are not always so patent as is represented or thought to be the case. Then, again, as to the mercurial teeth, no doubt you find teeth very much analogous in character that you cannot trace to any influence of mercury, arising, no doubt, from various constitutional disturbances in infancy. I have myself seen teeth, very much of the character represented by Mr. Hutchinson, that, so far as one can trace, were not at all the result of syphilitic disease in the infant. That is the question before us, and we shall be glad to hear remarks on this subject. Perhaps Mr. Hutchinson would be kind enough to state the peculiar character of the teeth that he thinks are due to mercurial influence.

Mr. JONATHAN HUTCHINSON: I am extremely sorry both for the cause and the fact of Mr. Salter's absence this evening, for I believe he would have been able to state some important facts with reference to this question. In answer to the questions you have put, I should like to be permitted to repeat what I have stated strongly in print already, that I do not believe the teeth which I ventured to call "mercurial" are always mercurial; and that I quite agree with the opinion you express, that these malformations are due to a variety of causes occurring in infancy, which result in some congestion of the alveolar process and capsule of the tooth. Any condition of ill-health which leads to inflammation of the gums and congestion of the alveolar processes and dental capsules, may lead to these effects in the malformation of the enamel of the teeth. Amongst the influences which most frequently do it, I believe mercury stands, by very far, pre-eminent, and that it causes the great majority of cases of malformation. It is only in

that sense that I think the term "mercurial teeth" can be at all justified, as a term simply of convenience. I have said, in what I have written on the subject, that the term "stomatitis teeth" would be more strictly applicable; but I use the term "mercurial" for the sake of convenience, because I believe that mercury stands at the head of all other causes of dental malformation. I would suggest that the reason why the first permanent molar is, as dentists well know, the tooth to decay earliest is to be found in the fact that it is the first to calcify. It is the earliest in its development, therefore it is the tooth which is most likely to suffer if through any cause the child's health be deranged in infancy, and stomatitis result. If the child gets stomatitis from anything, there is its first permanent molar ready before the others, and in a state likely to receive damage, and hence the fact that it is observed to be in later life the most prone to caries. If I were to state what I think are the characters which are most reliable in practice, in order to the recognition of those who have taken mercury, or have suffered from some analogous form of stomatitis, I would mention first the absence of enamel on the surface of these four first molars. Some of the drawings I showed at the last meeting illustrated this very well. In some cases most of the other teeth were tolerably good; in almost all of them the two pre-molars, both in the upper and lower jaw, quite good, because they are teeth late in the process of calcification and development. The first permanent molar is the one which never escapes, if the others suffer. Next to the first molars generally go the incisors and canines, the central incisors suffering most severely, and next the lateral incisors, and lastly the canines. In cases in which the incisors almost or wholly escape, the most noticeable conditions are simply an absence of enamel on the surface of these four first molars, allowing of the projection of masses of dentine. These are more or less discoloured, dark, and dirty-looking, and also somewhat spirous, having grown irregularly. This absence of enamel on the surface of the first molar I place first; and next to that, in all mouths in which the influence of stomatitis has been felt at all severely, will come the deficiency of enamel on the central incisors, lateral incisors, and canines. With these teeth I think it usually ends. I have in very few cases indeed found any material amount of defect in the formation of enamel on the other teeth. In contrasting mercurial teeth with syphilitic teeth I would say this broadly: that the syphilitic teeth are defective in general development, in size, shape, and every way, and show evidence of general atrophy and also of special atrophy of certain portions; but that the mercurial teeth show no general atrophy at all, and comparatively little of malformation, an interference with the development of the enamel being the chief feature. An absence of enamel, a rugged and dirty condition left by the denudation of the dentine beneath, and a rugged condition of the surface, are the chief features, and are far more likely to attract the attention of a casual observer than the less conspicuous, but far more important, syphilitic malformation. Hence it happens that the results of mercury are very frequently mistaken for syphilitic malformations. As regards the evidence upon which I rely that those are really due to the exhibition of mercury, I have very carefully questioned the parents of children in a great many cases, and the general result has been that we have been able to get in most cases a good deal of evidence as to the exhibition of mercury, and the amount of evidence has been generally in ratio with the severity of the defect of the development. Thus, wherever we have found very bad teeth indeed, we have almost always found the evidence very clear. Very often there has been a history of convulsions which had been treated by a large quantity of mercury. I mentioned at the last meeting that my attention had been mainly drawn to the matter in the investigation of a very peculiar form of cataract, known as "lamellar cataract," in which certain layers of the lens become opaque. By the observation of several different ophthalmic surgeons it has come to be pretty well established that wherever a child has lamellar cataract you will be sure to get the history of convulsions. A child is never born with lamellar cataract; "*congenital* cataract" is a different thing. Lamellar cataract occurs in early childhood, but is never congenital; and wherever you see a child with lamellar cataract you may guess back that there has been illness in infancy. I never saw a patient with lamellar cataract with really good permanent teeth; they all show these peculiar teeth which I have been describing. Now, I have been engaged some years in trying to find out what is the nature of the association which undoubtedly exists between lamellar cataract and pitted teeth. At one time I anticipated there was really some law of correlation of development between the lens and the teeth, and that the same influence which interfered with the nutrition of the lens of the eye interfered also with the development of the enamel of the teeth; but I got some marked facts showing that such was not probably the case. The following I may quote as a specimen:—A surgeon from Aberdeen sent me up the cast of the mouth of a patient whom he had known from infancy. This young man is now twenty-one, and has perfect teeth in every respect, and yet lamellar cataract. This gentleman sent me the cast after my paper at the Pathological Society. He said he could state from his positive knowledge that this child had suffered from fits in childhood, but had never taken any mercury for them, so that the fits had produced lamellar cataract; but as there was no exhibition of mercury for their cure, the teeth had wholly escaped. We here have a fact very exceptional to what we observe in practice at Moorfields, where we almost invariably find the teeth defective when this lamellar cataract is present, and we get almost always some statement such as this in answer to our inquiries as to fits in infancy. "The doctor said nothing but calomel would stop the fits." In very many cases the mothers have given the statement that Stedman's soothing powders had been largely used on account of fits; or in other cases in which we have met with these teeth without the lamellar cataract, the teething powders have been given for some other cause. Of course I have met with exceptions. Being at the table of a medical friend in a country town, I could not help observing that his eldest girl had these "mercurial teeth" very badly indeed, and I was so much interested in it that I asked him if he would allow me to inquire into her history. Her teeth were very badly deficient in enamel, yet I was assured that, so far as he knew, the child had never taken any mercury whatever, nor was he aware that the child had ever suffered from any special form of stomatitis. This is the most definitely exceptional case I have met with, but I have met with a good many in which we could not say that we had conclusive proof that any large quantity of mercury had been given in infancy. Still, I repeat, the general result of my inquiries on the point has been to favour the belief that there is a connexion between the use of mercury in infancy and this defective development of the enamel of the teeth,—admitting most fully that any other cause which shall produce stomatitis in infancy, at the same age, will produce precisely the same result. There is nothing by which you can tell the dental results of mercurial stomatitis from any other form of stomatitis.

Mr. Coleman would ask Mr. Hutchinson whether he had noticed a tendency in honeycomb teeth to become hereditary; he had observed many instances where such was the case.

Mr. Hamilton Cartwright: I should also much like to ask Mr. Jonathan Hutchinson, if he will forgive me for troubling him once more, whether he thinks that there should be actual ulceration of the mucous membrane to produce the so-termed stomatitic and mercurial teeth: and whether he does not think that in the one case it may be owing to mere congestion or inflammation, or, in the other, to the action of a special virus, leading to an arrest in nutrition, and a consequent imperfect deposition of osseous material; or does he think that actual stomatitis must be present?

Mr. Hutchinson: I believe these are what dentists term "craggy" teeth?

Mr. Coleman: We call them "honeycombed."

Mr. Hutchinson: I should rather have claimed the term "honeycombed" for the "mercurial tooth," since it is pitted irregularly; but when a tooth is very hard and everywhere covered with enamel, as these are, I should dispute its appropriateness. You see those in the diagram are white, quite to their free edge, evidently having their enamel on them, whilst they have transverse lines which cross the enamel. My observation respecting such as these has been exactly the same as yours—that such teeth are often a family peculiarity. Two or three of the most marked cases I have seen have had just the history you have given, that it was a peculiarity which had been observed in several generations. I quite admit that some of these might have raised a suspicion of mercurial influence, but there is not a tooth figured there which I should have taken as at all characteristic of mercury, since they are all white, and none have really lost their enamel. They are the teeth which are described in my book as "craggy teeth," but not as mercurial. You must, however, if there is any doubt, look to the first molars and see how they are, for they are always

altered in mercurial sets, and, I think, do not usually suffer in those which are a matter of family peculiarity.

Mr. McHardy: There is a case I have recently seen that I should like to mention; it is one Mr. Nettleship has seen with me, and by his permission I mention it. The patient presents certainly what I believe Mr. Hutchinson would confess is one typical upper central incisor—typical of inherited syphilis. It is that of a boy, fourteen years old, who suffered from well-marked interstitial keratitis on the same side as the syphilitic tooth. The corresponding tooth on the opposite side is in no way suspicious of inherited syphilis; it is a well-developed, sound tooth in all respects, and the case appears to me so unusual—I have never met with one before—that I think the Society would perhaps kindly pardon me for mentioning it. I much regret not being able to bring a cast.

Mr. Napier: Is there any history?

Mr. McHardy: The history is distinct. He is the eldest of three living children. Both his eyes were affected by some spreading disease, probably interstitial keratitis—that is about five years ago,—and he could hardly see. His mother has had seven pregnancies, and he was the result of the first impregnation, and was perfectly healthy as far as they believed. Only two children have lived since he was born.

Mr. Warrington Haward: A short time ago I had the opportunity of examining the teeth of a large number of children in the factory districts of Lancashire. Amongst these I saw no single case of notched upper permanent incisor teeth. In estimating the relative frequency with which these notched teeth, which Mr. Hutchinson has described as syphilitic, occur in children affected with inherited syphilis, one or two points should be remembered. I see among syphilitic children but very few cases of notched teeth, yet very many cases of syphilitic children die before the period at which these teeth are developed. Then, again, the children who are affected with inherited syphilis, and are brought under the notice of the general surgeon, mostly come to him for something else, and not for their teeth; and it is quite possible in many instances that the condition of the teeth has not been investigated. Again, the surgeon practising dentistry sees patients brought to him because of their teeth, so that he might observe cases of notched teeth and fail to obtain the evidence of syphilis; whereas we general surgeons may be more prone to overlook the teeth, and yet to observe the syphilis. But from a careful observation of a great many cases of inherited syphilis, I can say that I have seen many, of the age at which the permanent incisors are present, in whom there were no notched teeth. That, I suppose, Mr. Hutchinson would say is the case. But I have never seen a case of well-marked notched permanent incisors in a patient who was not evidently syphilitic. With regard to the mercurial teeth, I am glad to hear Mr. Hutchinson repeat that this condition, which he attributes to the exhibition of mercury, may be produced also by other causes (not mercurial) which lead to stomatitis, for amongst the factory children I observed a great number of instances of the pitted teeth which Mr. Hutchinson describes, especially the pitted molar teeth, but had no reason to think that they were due to the exhibition of mercury.

Mr. Hutchinson: I will briefly answer Mr. Cartwright's question as to the stomatitis. I did not use it in the limited sense, or intending to imply only those forms attended by ulceration, but rather any disease involving a congestion of the gums and mouth generally. And I should quite agree with him and with Mr. Salter, that in the majority of cases there is no ulceration of the mucous membrane; it is generally inflammation of the alveolus. As regards effects occurring early in the first set, there of course we must examine as to the health of the mother. The state of the milk teeth will probably depend upon what the mother took when she was pregnant. It would be very interesting indeed, and I think very possibly we may get cases showing what the result of the salivation of a pregnant woman in a late period of her pregnancy is on the first teeth. It is very likely we might get some light on the malformation of the first set from observations in this direction. I have been very much interested in the observations just made by Mr. Haward. I am afraid, however, that I can scarcely accept the theory of the sweetmeats, because I think the influence must be brought to bear upon the children too early in life—usually, that is, within the first year.

The Chairman: I remember one case at the Children's Hospital which made an impression on my mind. There were two children, one brought up by the mother, and the other brought up by the artificial use of the bottle, with a teat in which sugar was put, because the child would not take to it without. The teeth were particularly good in both children, very much beyond the average; and the children were very healthy. The child brought up naturally had her teeth perfect; but in the case of the child fed by the bottle the incisors were very peculiarly worn. They were not decayed, but were wasted. From that I thought that the action of the sugar must have been felt upon these teeth, because otherwise the two children were so analogous in condition. It struck me very much that there was some action through the mode of feeding that acted upon the teeth, that had not acted upon the other. You certainly do find the children of the poor with teeth very much decayed. I always questioned the parent as to the amount of sweetstuff they took, and they repeatedly made use of the expression, they gave them that to keep them quiet when they were out. But although I do not doubt that sugar affects the teeth materially, I think that there is some difference between the teeth so affected and those the result of stomatitis.

Mr. Henry Lee stated that in other diseases, such as fever, we do not know those diseases by any one symptom. It is not the skin, it is not the pulse, it is not the secretion, it is not the tongue; it is no one symptom that would enable us to say, "*that* is scarlet fever," "*that* is typhoid," "*that* is typhus." It is the combination of symptoms by which we are guided in all these cases. We cannot select any one symptom by itself in any one disease that is diagnostic *per se*. With regard to the pathology of syphilis generally, I may say that in its primary, secondary, or tertiary forms there is no one symptom that can ever be said conclusively to be diagnostic of the disease. In the primary symptoms the induration certainly is not. Something resembling it may be produced by a great variety of causes. The enlargement of the inguinal glands may also be produced by a great variety of causes, and cannot *per se* be considered as diagnostic. In the secondary forms the eruptions upon the skin may be simulated by a great variety of other affections. And so with regard to the tertiary forms of the disease: they may all, if you take them one by one, be produced by other causes. Therefore I should think it a very wonderful thing if so-called syphilitic and mercurial teeth should, when taken alone, be considered diagnostic of syphilis. My own impression is that anything that impairs nutrition at a particular age—whether mercury, syphilis, or scrofula—will produce an analogous condition of the teeth. Great injury might, I believe, be done to the feelings of parents and families if we took it for granted that because you have certain conditions of teeth, therefore that patient's parents must have been syphilitic; and I think this Society especially ought to be very careful before it adopts the conclusion that by any one symptom in the tooth, whether want of enamel, or notch, any case can be said to be syphilitic. I know very well indeed that inherited syphilis may impair the nutrition of teeth, and I am quite sure that some of the effects of syphilis may go through a second generation, and I would instance particularly affections of the mucous membrane of the nose. But I would, in the interests of society, and having regard for the feelings of parents, beg this Association to pause before it really puts its stamp upon the idea that any malformation of the teeth by itself, independent of its history, is diagnostic of either syphilis or mercury.

Mr. Napier: Mr. Chairman, I feel that I have rather a difficult duty to perform in replying to all the observations which have fallen from the different gentlemen who have taken part in the discussion upon "the condition of teeth commonly known as syphilitic," which I had the honour of introducing at our last meeting; but as the evening is already far advanced, and Mr. Coleman has also a paper to read, I shall be forgiven for condensing as much as possible the remarks that I have to make. Dr. Drysdale expressed his astonishment that one so conversant with teeth as myself should have failed to notice the difference between the teeth mentioned by Mr. Hutchinson. He stated also that his own faith in the theory propounded by that gentleman was so confirmed, and the cases which had come under his notice so satisfactory, that he had given up inquiring into their history, as his custom had been previously, believing it to be unnecessary when certain marks were present. In reply to his criticism I will only say that it is solely in consequence of the experience which twenty-three years' familiarity with various conditions of the teeth and mouth has given me that I feel myself forced to reject the theory which he supports; and I

cannot but think that in giving up the investigation of the history of cases he shows a tendency to accept too readily a conclusion of the truth of which many besides myself are sceptical. Mr. Francis Mason's opinion I was pleased to find in perfect unison with my own; his testimony being especially valuable, owing to his large hospital experience and the character that he bears as a careful and accurate observer. Mr. Coleman, who, upon the whole, agrees with Mr. Hutchinson, said that his experience had certainly been that the form of teeth alluded to had almost invariably been associated with patients who had inherited syphilis from one or other parent—almost invariably, for there had been one or two exceptions. Now, as the first question I propounded was, "Can inherited syphilis be diagnosed with absolute certainty from any peculiar condition of the teeth?" I think you will agree with me, that the evidence afforded by Mr. Coleman, including as it does his acknowledgment of the existence of various exceptions to the rule he inclines to lay down as absolute, goes far to justify my scepticism as to the correctness of his conclusions. Mr. Hamilton Cartwright gave it as his opinion that I was mistaken in laying stress upon the fact that the teeth of the first dentition are seldom, if ever, affected; his own study of the subject leading him to consider that this is just what we ought to expect, seeing that calcification commences in utero—a period when specific inflammation does not occur. If congenital syphilitic evidences were unknown, I should readily allow the force of this argument; but as we all admit that infants are born with various imperfections attributable to syphilitic taint, I repeat that I attach great significance to the rarity of this peculiar mark upon the teeth of first dentition, connected indissolubly as it is in the minds of some with hereditary syphilis when it presents itself in the second: and I would again venture to suggest that this phase of the subject is one that demands elucidation. Mr. Risdon, whose remarks showed that he had carefully investigated the subject, holds, I was glad to find, views similar to my own. We now come, sir, to Mr. Jonathan Hutchinson's able exposition of his views, and I am sure that I express the feeling of all the members present when I say that we feel ourselves to be under a deep debt of obligation to him for his kindness in coming to the meeting of our Society, and in giving us the benefit of his experience. Mr. Hutchinson expressed some surprise that I did not produce a number of casts or series of cases illustrating my reasons for disbelieving in syphilitic teeth. He has, I fear, somewhat misunderstood my argument. I did not say that syphilis does not ever affect the teeth, bringing about a condition that may entitle them to the designation of syphilitic, but what I do hesitate to accept is the assertion that a certain peculiar semilunar notch in the two upper central incisors is an infallible proof of inherited syphilis. Cases are worthless unless their history is complete, and my belief still is that its attainment in public or private practice is almost impossible. Casts are valueless for the same reason, and therefore I did not produce any at the last meeting. I have very carefully considered all that Mr. Hutchinson has said upon the subject, and am forced to confess that I am more than ever opposed to the adoption of his theory. Where a semilunar notch exists, a very indefinite history of syphilis in the case of one parent seems to be held to be sufficient proof of the origin of the disfiguration, and to render superfluous any inquiry into the condition of the other, who may be highly strumous, rickety, or (if the mother) incapable of giving proper nourishment to the child affected. But so rare is the occurrence of this blemish in proportion to the frequency of syphilitic indications that I am myself rather inclined to seek its origin in other causes, in combination with, or even apart from, the one to which it is, as I think, without sufficient consideration by many attributed. Amongst the sequelæ of diseases—of scarlet fever, for example—may be classed, I myself believe, many disfigurations of the teeth; in exemplification of which I have here a small model, taken since we last met, from the mouth of a young lady whose teeth show a strong tendency to develope the peculiar semilunar notch, the enamel having it well defined, though the dentine is only slightly affected, and this blemish, I have good reason to believe, is attributable entirely to a severe attack of scarlet fever in early life. Dr. Southey, who was to have been here this evening, has sent me a letter, in which, after expressing great regret at his inability to be present, he gives me permission to bring forward this case for him. He says, "I am acquainted with a large family of sons and daughters, all by the same father, but by a first and second marriage. Out of ten children born to the first wife, and six born to the second, none were known to have had any eruption or snuffles in early infancy. The first teeth of all the children were good and sound. One of the children by the first wife (the eighth born) had second teeth which might be described as answering completely to Mr. Hutchinson's description of syphilitic teeth. Of the six children by the second wife, five grew up, and two of them have second teeth which might be called syphilitic. But here comes the important feature. The children who had wet-nurses, or who were nursed by their mother, have well-formed second teeth; those who were brought up by the bottle or hand, nearly if not altogether from the first, are those that have the syphilitic-looking teeth. The children who were subjected to ill-feeding suffered from indigestion, and were treated to frequent doses of calomel, as I happen to know for certain. Malnutrition, therefore, I conclude, at the time when the second teeth are being born and bred, is the cause of the so-called syphilitic aspect of them. That syphilis is often the cause of malnutrition at the same period of life, makes it the not infrequent cause of the selfsame bad second teeth; but it is neither the sole cause nor the explaining cause, in my opinion." We are indebted to Mr. Warrington Haward for some very interesting remarks upon certain conditions to be found amongst factory children who have come under his immediate observation, and they for the most part tend (if I understand him rightly) to magnify rather than diminish the difficulties of diagnosing syphilitic teeth. Mr. Henry Lee, whose opinion, like that of Mr. Hutchinson, is of exceptional value, regards the subject, I am gratified to find from the same point of view as myself. And I must, for my own part, confess that I am still unconvinced by any argument that has yet been adduced in favour of the recognition of a set of rules by which the origin of certain appearances of the teeth may be rigidly determined, my own experience leading me to incline to attribute rather to a complication of several causes effects that are at present believed by many to owe their existence to one only. It is much that we may look forward to a fuller and more searching investigation of the subject; and from what I know of Mr. Hutchinson, I may answer for his readiness to fulfil his promise of affording us all the assistance in his power. Fully satisfied though he may himself be of the correctness of the opinions he at present holds, he will think no less of us for withholding our acquiescence until the theory is proved to our entire satisfaction. Time will only allow me to thank you, in conclusion, for the kind attention with which you have listened to my remarks, and briefly to express my sense of the obligation that we have been laid under by the readiness with which our distinguished visitors have come forward to help us in an interesting and important debate.

The Chairman: I am sure we must thank Mr. Napier for the paper that he has read to us; and we must also thank Mr. Hutchinson for coming here to give us the benefit of his valuable opinion. When a gentleman has taken so much pains as Mr. Hutchinson, and has seen so many cases, and has looked into the question so deeply, his opinion, of course, is of very great value; but still it may be possible that as the subject is further looked into we may have more light thrown upon some of the phenomena which have not been accounted for quite satisfactorily. I am sure it will be for us to accord our best thanks to the author of, and the speakers upon, this most interesting paper.

Mr. Alfred Coleman read a paper on that form of dentigerous cyst dependent upon a misplaced tooth. He accounted for the eruption of the teeth by the growth of the maxillæ from their nutrient centres to their circumference at which absorption of bone took place. The old theory that the eruption of the teeth was due to the growth of their fangs, he agreed, in common with Dr. Baumé (over whose researches he did not claim priority), was quite incorrect. Applying this theory to dentigerous cysts, it seemed clear that when a tooth became impacted between the roots of its fellows it would, after a time, when the process of bone-formation became less vigorous, become quite detached by the advance of the surrounding bone to the surface, a space being thus left, into which serous fluid, under atmospheric pressure, would be effused.

Mr. Hamilton Cartwright: Mr. Coleman's paper is of very great interest, inasmuch as there have been so many theories as to the pathology of dentigerous cysts. I have brought with me two or three interesting specimens, which I think will

assist to aid our views with regard to the method of their formation. Mr. Coleman speaks of the walls of the cyst as being composed of the walls of the enamel organ, but I think that the latest theories on dental development invalidate such a conclusion, whilst it does not seem more probable that the fluid is effused between the enamel organ and the cuticula dentis. My own impression is that the parietes of such cysts are formed by the remains of the capsule within which the tooth was developed; and the accompanying unique and remarkable specimen seems to support this view. You will see that it represents a right superior maxillary bone in which the antrum is exposed, that cavity being filled with an osseous cyst perfectly developed, in the interior of which is a supernumerary tooth, with all its tissues, including the enamel, absolutely perfect. The wall of this cyst is probably the remains of the primitive dental capsule, converted into bone by a process somewhat similar to that by which the tissues of the developing tooth become calcified, whilst in the present case effusion took place from the interior of the sac, separating it from the tooth within, the capsule itself becoming ultimately calcified. These other specimens seem to point to a like conclusion, which seems to be much more simple than the generally accepted theories as to the enveloping membrane around teeth included in such cysts; and in cases like that exhibited, the sac from which the cementum is probably formed—a tissue very analogous to bone—would be far more likely to be converted into bone, as in this specimen, than the remains of the enamel organ.

Mr. Napier: I should like to ask Mr. Coleman what was the condition of the tooth when removed in the case that he alludes to—that is to say, the development of the tooth: was it a dead tooth without vitality, and if so may we not consider that cysts of this kind are possibly produced solely and entirely as the result of the tooth having been so retarded in its development as to become a foreign body, creating so much irritation and inflammation as to form around it a cyst in which it is afterwards found enveloped?

Mr. Coleman: I am sorry I have so little to reply to. In the first place, I do not think we can lay great stress upon one particular interesting specimen that Mr. Hamilton Cartwright has shown—namely, that of a tooth apparently developed in the antrum in the centre of a cyst projecting in that cavity which has become calcified. It is a very abnormal position for a tooth to be found in, and, more than that, it is the only instance on record of a cyst being found to have undergone calcification. With regard to the other views, I certainly should myself incline to think that a cyst is formed from that which has been the remains of the enamel organ. We are well aware of the theory that the tooth appears to be perfectly distinct, and even separated to a slight extent, from the enamel itself, and that it is into this cavity the serous fluid is diffused, and that the serous fluid is at a certain period carried away from the surface of the enamel, leaving a space in which naturally the easiest material would find access, namely, the serum from the blood would be diffused. In reply to Mr. Napier, my belief would be, in those cases in which surgeons cut into a cyst of this kind, and find a tooth, the cone of which simply projects into the tooth, there would be every reason to believe, though I have never been able to verify the fact, that that tooth would be a living tooth—that is to say, it would have both nervous and vascular connexion with the other parts; but in a case in which the cyst is cut into, and the tooth is found lying at the bottom of the cyst, we should naturally suppose that it is not in the same condition, that there is no vascular connexion kept up with it, and the tooth is to all intents and purposes dead; but I would not say that when the cyst forms the tooth still retains its vitality. It may be owing to the death of the tooth that some morbid action is set up, by which the cyst is formed; but in thinking over this most probable cause, to my mind, of the eruption of the teeth, it seems at the same time to offer an explanation of this form of dentigerous cysts.

Mr. Napier having shown and explained his new instrument for producing local anæsthesia, the Society was then adjourned until November next.

A site for the intended mortuary for the parish of Clerkenwell having been obtained, the parochial authorities are casting about for the money. The sum required is £2300, which it is hoped will be advanced as a loan by the Metropolitan Board of Works at £3 18s. 6d. per cent. interest.

OBITUARY.

CHRISTIAN GOTTFRIED EHRENBERG.

One of the most celebrated Prussian *savants* died on June 27, in the eighty-first year of his age. We avail ourselves of an obituary notice published by Dr. von Hoffmann, in the *Berlin. Klin. Wochenschrift* of July 10, for furnishing our readers with some particulars of his scientific career. How active that must have been may be seen from the fact that, besides his great substantive works on the Infusoria and Micro-Geology, which have achieved so worldwide a reputation, there are no less than 264 articles of his indexed in the Royal Society's "Catalogue of Scientific Papers," to which several more will have to be added in the continuation of that publication shortly to appear.

Christian Gottfried Ehrenberg was born at Delitzsch, in Prussian Saxony, April, 1795, in which town his father held a judicial office. From an early period he exhibited a strong inclination for natural science, and it was only after a struggle that he complied with his father's wishes by entering the theological class at Leipsic in 1815. This study, however, at the end of the year he abandoned for that of medicine. By 1818 he had passed the necessary examinations, and had begun to practise, having his mind, however, occupied with other matters. Microscopic studies, which were at that time becoming more fruitful in consequence of the improvement of the instruments, soon engaged his exclusive attention, and impressed a determinate stamp upon his scientific development. About this time his first "epoch-making" publication appeared under the title "De Mycetogenesi," in which he so successfully combated the doctrine of spontaneous generation in the lower forms of vegetable life. Seized with a strong desire for foreign travel, he was enabled in 1820, by the aid of the Berlin Academy of Sciences, to accompany, together with his friend Hemprich, an expedition into Egypt, whence he traversed various portions of Africa. Hemprich died in Abyssinia, and Ehrenberg returned to Berlin in 1826. Next year he was elected Professor in the Medical Faculty and a Fellow of the Academy of Sciences, of which body he was secretary from 1842 to 1867. The great importance of the results of these Egyptian travels was shown by the works which were published under the titles of "Symbolæ Physicæ," "Die Korallen des rothen Meeres," etc. In 1829 he accompanied Humboldt and Gustav Rose in their travels to the Ural and Altai, a journey that was too brief to be attended by such important discoveries as the former, but which was very important to Ehrenberg as confirming him in the influential friendship of Humboldt.

He now became again almost exclusively engaged in microscopical investigations, and in 1838 his most considerable work ("Die Infusionsthierchen als vollendte Organismen") was published—a work that must be regarded as one of the most important that has appeared on natural science during this century, and one that has secured to him an undying renown. Without space for dwelling on particulars, it may be stated that his various discoveries in botany, zoology, and comparative anatomy imparted a powerful stimulus or effected a transformation in all the departments of natural science. To the embryologist the whole infusorial world was rendered accessible; and the proof that living germs peopled the air, the water, and the soil, gave new and unexpected explanations of the doctrine of infection. The investigations with regard to the nature of putrefaction, the bacteria theory, etc., were all renewed, and in many respects newly originated, by Ehrenberg; and geology received through him new and important developments. The exact microscopical investigations of certain of the strata, which he undertook, were followed by discovery upon discovery, which in their completed state were exhibited in his work on "Microgeologie," published in 1854. In that he demonstrates that the microscopic skeletons and shells of the lower animals (*Polythalamia* and *Polycystina*) constitute entire strata of the earth's surface. He also employed himself in the examination of specimens raised from the depths of the ocean. It would occupy too much space to advert to his other numerous scientific labours; but probably enough has been said to show the extent of his services, which have indeed been universally acknowledged by the scientific world. In 1837 he was elected a Foreign Member of the Royal Society, and in 1842 he was chosen on the death of Humboldt as one of the eight Foreign Associates of the French Académie des Sciences. In 1842, when the "Order

pour le Mérite" in Science and Art was established, he was made one of the members. In 1870 he received the Cuvier Prize of the Paris Academy; and in 1875, the first medal instituted in memory of Leeuwenhoek, the discoverer of the infusoria, was awarded to him. In 1864 he became the subject of cataract, but after an operation by Von Graefe he partially recovered the sight in one eye, so that the aged *savant* was once more able to resume his researches. This, however, was only with great labour; and, after the celebration of his doctor's jubilee in 1868, he was obliged to gradually abandon all attempt at work. He only became seriously ill at the commencement of this year, and on June 27 quietly breathed his last.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At special examination meetings of the College, held on Tuesday, Wednesday, and Thursday, August 8, 9, and 10, the following candidates were successful for the licence to practise Medicine:—

Houghton, John Francis. | O'Rorke, Charles Thomas John.

The licence to practise Midwifery:—

Houghton, John Francis. | Sherrard, Cæsar Dudley.
O'Rorke, Charles Thomas John.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 17:—

Peake, Joseph, Coventry.
Bott, Henry Septimus, Bury, Lancashire.
Jolly, Robert William, Shooter's-hill, Kent.
James, Thomas, Aberdare.
Alford, Charles Edward, Upper Helmsley, Yorkshire.

The following gentlemen also on the same day passed their primary professional examination:—

Langdon, John Winkley, St. Bartholomew's Hospital.
Fagg, Thomas William, St. Bartholomew's Hospital.
Hammond, Alexander Billing, Guy's Hospital.

At the recent competitive examination for the Prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were—

1. Castle, Hutton, of St. Thomas's Hospital.
2. Graham, Albert William, of St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CRICHTON, GEORGE, M.B., L.R.C.S. Edin.—House-Surgeon to the Lancaster Infirmary and Dispensary, *vice* J. M. Scott, L.R.C.P. Edin., resigned.

GAY, JOHN, F.R.C.S.—Honorary Consulting Surgeon to the Soldiers' Daughters' Home, Hampstead, *vice* Campbell De Morgan, F.R.C.S., deceased.

BIRTHS.

ALLEN.—On July 24, at Sehore, Central India, the wife of Surgeon-Major W. E. Allen, F.R.C.S., Bhopal Battalion and Political Agency, of a daughter.

BUTTON.—On May 31, at Clyde, Otago, New Zealand, the wife of Horace G. Button, M.R.C.S. Eng., of a son.

COTTON.—On August 17, at 214, Seven Sistera-road, the wife of Thomas Cotton, M.D., of a daughter.

MCENERY.—On August 19, at The Lodge, Cerne Abbas, Dorset, the wife of W. McEnery, M.D., of a son.

MCEWAN.—On August 15, at Southsea, the wife of D. McEwan, M.D., R.N., of a son.

STEWART-FALLS.—On August 17, at Marden Ash, Bournemouth, the wife of W. Stewart-Falls, M.D., of a daughter.

TOWNE.—On August 18, at 364, The Crescent, Kingsland, the wife of Alexander Towne, jun., M.R.C.S., L.S.A., of a son.

THOMPSON.—On August 21, at 9, Cranley-place, South Kensington, the wife of Reginald E. Thompson, M.D., of a son.

WALKER.—On August 21, at 26, Ladbroke-grove-road, the wife of A. Dunbar Walker, M.D., of a son.

MARRIAGES.

BRIMS—KAY.—On August 3, at St. Michael's Church, Aberystwith, James Brims, M.D., of Burnley, to Elizabeth Kay, of Mount Villa, Burnley, Lancashire.

DOWNIE—HALL.—On August 17, at the parish church, Alton, Alexander Francis Mackenzie, only son of the late Sir Alexander Mackenzie Downie, Kt., M.D., to Henrietta, second daughter of Henry Hall, Esq., of the Manor House, Alton.

HALL—KENDELL.—On August 16, at Kirkthorpe, near Wakefield, Yorkshire, the Rev. Samuel Howard Hall, M.A., Assistant-Curate, of Whitby, to Helen Hamilton, youngest daughter of D. B. Kendell, M.D., and J.P. of West Riding, of Meath House, near Wakefield.

OWEN—BARWER.—On August 15, at St. Mary's, Eastbourne, William Owen, M.R.C.S. Eng., of Carnarvon, to Laura Cecilia, eldest daughter of Alexander Brewer, M.R.C.S., late of Ebbw Vale Ironworks, Monmouthshire.

SMITH—PATEMAN.—On August 2, at Kegworth, George William Smith, M.R.C.S., second son of John Smith, M.R.C.S., Castle Donington, Leicestershire, to Elizabeth Ann Pateman, only daughter of John T. Pateman, solicitor, of Uppingham.

SWIFT—FORDHAM.—On August 19, at St. Mary's, Leyton, Essex, Thomas Charles Swift, eldest son of Thomas M. Swift, late of Woodford, to Isabel, only child of the late Robert John Fordham, M.R.C.S., of Leyton.

TRITTON—ELDER.—On August 10, at Grub-hill Church, R. Lindsay Tritton, Esq., of Riverside, Amelia county, Virginia, U.S., eldest son of Rev. R. Biscoe Tritton, Vicar of Otford, Sevenoaks, Kent, to Helen Temple, daughter of Dr. Elder, of Hoboken, New York.

TYERMAN — PODMORE. — On August 15, at All Saints, Stoke Ferry, Whittington, Norfolk, Daniel Edward, eldest son of the late Daniel Fletcher Tyerman, M.R.C.S., of Marton, New Zealand, to Mary Elizabeth, second daughter of William Podmore, of Whittington, Norfolk.

DEATHS.

ARNOTT, MARIANNE, widow of Neil Arnott, M.D., LL.D., F.R.S., at 2, Cumberland-terrace, Regent's-park, on August 19, aged 76.

EDWARDS, ANDREW FRANCIS, M.D., etc., at Bourne House, Wiveliscombe, Somerset, the result of a carriage accident, on August 18, aged 69.

GOODMAN, MINNIE GOAHAM, only child of Godfrey Goodman, Staff-Surgeon, R.N., at Alverstoke, Gosport, on August 18, aged 2 years and 4 months.

HAINWORTH, CAROLINE MARIA, wife of John Hainworth, F.R.C.S., at Welwyn, Herts, on August 17, aged 64.

MACFARLANE, KATHERINE HARLEY HAY, eldest and last surviving daughter of the late James Macfarlane, M.D., of Perth, N.B., at 11, Southwick-place, Hyde-park, W., on August 17.

MONTGOMERY, ROBERT, second son of the late James Montgomery, M.D., of Braidlee, Ayrshire, and Peozance, Cornwall, at Meerut, Upper India, on June 18.

SCARLETT, LOUISA, daughter of the late Robert Scarlett, M.D., of Duckett's Spring, Jamaica, at Brighton, on August 13, aged 76.

WILLANS, JANE FLORINE, wife of Blundell Willans, M.D., of Great Hadham, and only child of George Sheward, of Leinster-square, London, suddenly, at Great Hadham, Hertfordshire, on August 16.

WILLIAMS, BERTRAM COOPER, son of Dr. Harvey Williams, late of Rhyl, on August 17, aged 25.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIGHTON AND HOVE DISPENSARY.—Resident Medical Officer and Dispenser. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London or Licentiates of the Apothecaries' Company of London, and duly registered under the Medical Act, 21 and 22 Vict., c. 90. Diplomas and other testimonials to the Chairman, on or before September 4.

GENERAL INFIRMARY AT LEEDS.—House-Surgeon. Candidates must be Members or Licentiates of a British College of Surgeons. Copies of testimonials to Dr. Heaton, The Infirmary, Leeds, on or before September 6.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — House-Physician. Candidates must have a recognised medical or surgical qualification. Applications, with testimonials, to David Cannon, Secretary, on or before August 31.

NORTHAMPTON GENERAL INFIRMARY.—Surgeon. Candidates must be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin. Testimonials and diplomas to S. P. Bennett, Secretary, on or before August 28.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-UPON-TRENT.—Two Resident Medical Officers, viz., House-Surgeon and House-Physician. Candidates must be duly registered and possess a diploma or degree in Surgery from the College of Surgeons in London, Edinburgh, or Dublin, or from one of the Universities, and a diploma, degree, or licence in Medicine from a University or duly recognised licensing body of Great Britain or Ireland. Applications and testimonials to the Secretary, on or before August 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Huddersfield Union.—Mr. George Osborne has resigned the Woodhouse District; salary £12 per annum.

Lanchester Union.—Mr. I. G. Hunter has resigned the Tanfield District; area 10,297; population 12,706; salary £30 per annum.

Melton Mowbray Union.—Mr. H. Douglas has resigned the Wymondham District; area 15,673; population 2511; salary £32 per annum.

Southmolton Union.—Mr. H. Adey has resigned the Eighth District; area 10,638; population 1496; salary £20 per annum.

APPOINTMENTS.

Mitford and Launditch Union.—James Vincent, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Workhouse.

Wharfedale Union.—John W. Pinder, M.R.C.S. Eng., L.S.A., L.R.C.P. Edin., to the Second District.

Worksop Union.—Charles Gowan, M.D. and M.C. Edin., L.R.C.S. and L.M. Edin., to the Anston District.

Prosecution of Illegal Practitioners in France.—The recent interpretation of the law secured by the exertions of the legal advisers of the French Medical Association—viz., that as many penalties may be recovered as there have been infractions of the law within the twelvemonth—is bearing good fruits. The various branches of the Association are advised to institute no prosecutions except in cases where there have been several infractions. Quite recently an illegal practitioner was condemned to the fine of three francs, which is the legal penalty, and seems derisory enough; but it was found possible to prove against him 328 contraventions of the law—*i.e.*, 984 francs,—to which had to be added the costs, making altogether a total of about 1200 francs, or nearly £50, a sum that even a successful charlatan cannot afford to despise.—*Union Méd.*, August 19.

Blistering in Pleurisy.—Dr. J. Besnier has recently concluded the publication, in the *Journal de Thérapeutique*, of a series of articles on "Blistering in Pleurisy," which he had previously read as a paper at the Société Médicale d'Emulation. In these he expresses his surprise that while so much discussion has lately taken place at Paris on the operation of paracentesis thoracis, so little has been said about preventing its necessity. This may arise from the operation being principally performed at hospitals, where the patients are not seen until late in the disease; and it has met with little favour in private practice in Paris. For his own part, Dr. Besnier believes that it may almost always be avoided by the employment of blisters, but only on condition of these being applied early, on the first or second day, which may be done safely and advantageously, whatever amount of acuteness of the disease and its accompanying fever be present. If we wait until this subsides, the opportunity is lost, and the means is then of doubtful efficacy.

East London Medical Defence Association.—On the 18th inst. the Committee and officers of the East London Branch of the Medical Defence Association were entertained at dinner at the "Ship" Hotel, Greenwich, by Mr. J. E. Adams, Assistant-Surgeon to the London Hospital, and one of the Vice-Presidents of the Branch. Covers were laid for twenty-five guests, and among the company present were Dr. A. E. Sansom, Assistant-Physician to the London Hospital; Mr. H. Nelson Hardy and Mr. George Brown (Vice-Presidents of the Branch), Dr. R. H. S. Carpenter (Hon. Secretary), Mr. F. G. Aubin (Vice-Chairman of the Committee), Drs. Wiles, Stirling, Chaple, and G. Danford Thomas, Mr. Gordon Brown, etc. After dinner several toasts were drunk, among them being "Our host, Mr. James E. Adams"; "Success to the East London Branch of the Medical Defence Association," replied to by Dr. Danford Thomas; "Success to the Medical Defence Association," replied to by Mr. George Brown; "Health to the Chairman, Vice-Chairman, Treasurer, and Law Officers of the Branch," replied to by Mr. F. G. Aubin. A very pleasant evening was spent, and the company broke up in time to catch the last train to town.

Hydrate of Chloral in Puerperal Convulsions.—Dr. Chouppe, having had the opportunity of observing carefully a considerable number of cases of puerperal convulsions, has come to the conclusion that, of all the means we possess, the hydrate is the most reliable for treating this disease. In twelve cases in which it was alone employed the termination was successful, although in some of these the state of things seemed desperate when it was commenced. He thinks, indeed, that it should be resorted to even before the disease becomes confirmed, whenever the woman, exhibiting albuminuria and œdema, complains of headache, singing in the ears, hallucinations of vision, restlessness, cramps or vague pains in the limbs, etc. When there is trismus present it should be given in enemata, which have also the great advantage of being able to be given during the paroxysm. The doses will vary according to the tolerance of the patients and the severity of the paroxysms, but it is necessary to commence with a pretty strong one (especially if the paroxysms are violent and close upon each other), in order to make a powerful and quick impression. After a calm has been obtained, and if the attacks do not recur, some smaller doses may be given during the next twenty-four hours or so; but if the attacks recur, large doses must again be resorted to until the paroxysms have completely ceased. In an enema we may always begin with thirty grains, repeating this at the end of ten minutes; and by the mouth at least forty-five grains should be given at once, fifteen grains being repeated every quarter of an hour. In a violent attack the dose required will vary from 120 to 180 grains; and it may even be requisite to resort to hypodermic or intravenous injection. In all cases it is of importance to get at least sixty grains rapidly taken, and to prolong the use of the chloral for a tolerably long time after the cessation of the convulsions.—*Gazette Méd.*, August 5.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Edward Haughton.—Had our correspondent read our remarks aright, he would have seen that we did not in the slightest degree refer to Dr. Gully's professional antecedents, but to his personal character. As to the former we had not either then or now anything to do or say. But for the rest, for our own part we are not in the slightest degree surprised that none of Dr. Gully's friends have come forward on his behalf—indeed, we should have been surprised had any such done so in this case.

T. Keith B.—The Army Medical Museum at Washington was formerly Ford's Theatre. The museum contains a series of mounted preparations of great professional interest, remarkable chiefly for its profuse exhibition of the effects of shot and shell, and other implements of war, on the human frame. The materials for this museum were chiefly collected during the American Civil War. In addition to the purely medical collection, this museum contains a well-arranged collection of skulls of the various aboriginal American tribes, with a few Mexican and Peruvian

R. Dunn T.—The new buildings of the Glasgow University were opened in November, 1870. The proceedings were conducted within the Hunterian Museum. The Duke of Montrose, Chancellor of the University, presided. From subscriptions and from Government £254,000 had been obtained, and £117,000 had been received for the ground upon which the old college stood. Everything in connexion with the new building was paid.

Physiologist.—The Physiological Laboratory at Leipzig owes its pre-eminence to the energy of Professor Carl Ludwig, and to the liberality of the Government of Saxony. It is the most complete establishment of the kind in Europe. *All* expenses, even to the frogs used for experiments, are borne by the Saxon Government, so that the institution is absolutely free of charge to the student. Any student is welcomed to the laboratory (provided there is room for him), whether German, English, French, or Russian, who is desirous and capable of original investigation

Beverages.—It was not till about the end of the seventeenth century that any chemical investigation of mineral water was undertaken. Boyle, in 1663, seems to have been the first who employed tests to detect the substances contained in mineral waters.

H. Thompson, M.D., Sheffield.—The remains of John Hunter now repose in Westminster Abbey, where you will find a handsome slab covering them, with the following inscription:—"Beneath are deposited the remains of John Hunter, born at Long Calderwood, Lanarkshire, N.B., on February 13, 1728, died in London on October 16, 1793. His remains were removed from the church of St. Martin's-in-the-Fields to this Abbey on October 28, 1859. The Royal College of Surgeons of England have placed this tablet over the grave of Hunter to record their admiration of his genius as a gifted interpreter of the Divine power and wisdom at work in the laws of organic life, and their grateful veneration for his services to mankind as a Founder of Scientific Surgery. 'O Lord, how manifold are Thy works, in wisdom hast Thou made them all.'" Hunter expired suddenly in St. George's Hospital. Sir James Paget will deliver the biennial oration next February.

A Tutor, Holloway.—The next preliminary examination for the diplomas of Fellow and Member of the College of Surgeons will take place early in the ensuing month, instead of at Christmas as heretofore.

A Caution to Both Sides.

About four months ago the houses of a number of medical men in the East-end of London were visited by a man of respectable appearance during the temporary absence of the principal. In each instance he pretended that he wanted the doctor to call on a patient in the neighbourhood, but, in order that there might be no mistake as to the address, etc., he would write a note to be delivered to the doctor on his return. In some instances he was shown into a room, and left for a few moments whilst he wrote the note, and it was afterwards found that he had improved the occasion by appropriating any portable article of value within his reach. From Dr. Carpenter, of Commercial-road, he stole a case of surgical instruments and a book; and from Dr. Riley, of Victoria-park-road, a case of pills and a bi-aural stethoscope. He managed to escape detection for a time, but ultimately he was caught robbing a dentist in another part of London. He was summarily convicted on this charge, and before his liberation from prison he was identified by some of the persons who admitted him to the houses of the doctors he had robbed in the East-end. He was tried at the Middlesex Sessions on Tuesday week, and sentenced to eighteen months' imprisonment with hard labour—being six months for each of the three cases in which his identity as the thief was clearly established.

Indecent Quack Literature.

A few days since, a man who was distributing indecent handbills in High-street, Islington, relating to the practice of a quack doctor, was taken into custody. On being charged with the offence at the Clerkenwell Police-court, the magistrate inflicted a fine of 40s., or a month's hard labour. We should be glad to see the police bestow a little more attention to this evil, and it would be even more satisfactory were it possible to reach the parties who send out the poor wretches to distribute indecent quack literature.

Martyrs, not Heroes.

"The seven Keighley Guardians," says a contemporary, "now immured in Clifford's Tower, at York, whence they address the electors of Leeds, signing themselves 'Yours in bondage,' have certainly made martyrs of themselves, but not heroes. There are several celebrated 'sevens' mentioned in history—for instance, the 'seven wise men of Greece' and the 'seven against Thebes,' but the 'septem contra Jenner' will enjoy but a brief notoriety, and will only be remembered—if remembered at all—as 'seven' very wrong-headed men who persisted in kicking against the pricks to their own detriment. The Keighley Guardians seem to have got themselves elected with the express object of impeding the operation of this Act—the Vaccination Act,—and herein consists the most reprehensible part of their action. In their private capacity the Keighley Guardians may hold what views they like on vaccination, but no right-minded person can sympathise with them in their 'trespasses and contempts.'" It may be added that it is a pity that these wise men could not have been at once made legally incapable of being guardians and of voting at any election of guardians, instead of being made popular "martyrs" by imprisonment.

COMMUNICATIONS have been received from—

Mr. Charles Slagg, Madeley, Salop; Dr. Edward Haughton, Upper Norwood; Dr. C. Bell Taylor, Nottingham; Dr. C. H. Leonard, Providence, Rhode Island, U.S.A.; Mr. W. Hay, Hull; The Honorary Secretary of the Quekett Microscopical Society; Mr. George Barraclough, New Wandsworth; Dr. Daultt, Christchurch; The Secretary of the Hospital Saturday Fund, London; Dr. Anderson Imlay, Bristol; H. Kimber and Co., London; Mr. Henry Morris, London; Mr. Thomas C. Fox, London; Mr. C. J. Cullingworth, Manchester; Mr. J. Chatto, London; Dr. Heimann, London; Mr. T. M. Stone, London; Dr. Francis Ogston, Aberdeen; Dr. J. M. Eldoaough, Scatliff, Brighton; Mr. Balmanno Squire, Folkestone.

BOOKS AND PAMPHLETS RECEIVED—

Herbert Fry, The Royal Guide to the London Charities for 1876-77—William B. Carpenter, C.B., M.D., LL.D., etc., Principles of Mental Physiology—John Liddle, Report on the Sanitary Condition of the Whitechapel District for the Quarter ending July 1, 1876—Thirtieth Report of the Commissioners in Lunacy to the Lord Chancellor—Surgeon-Major J. E. Tuson, M.D., F.R.C.S., Observations on the Efficacy of Burning Sulphur Fires in Epidemics of Cholera—J. H. Pooley, M.D., Gastrotomy and Gastrostomy—William Goodell, A.M., M.D., A Sketch of the Life and Writings of Louyse Bourgeois.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Chicago Medical Journal and Examiner, August—Nature—Southport Daily News—New York Medical Journal, August—Student's Journal—Archives of Clinical Surgery—Philadelphia Medical Times—American Supplement to the Obstetrical Journal of Great Britain, July—Nordiskt Medicinskt Arkiv—Ohio Medical and Surgical Journal, August—Archives of Dermatology.

APPOINTMENTS FOR THE WEEK.

August 26. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

28. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

29. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

30. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

31. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

September 1. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 19, 1876.

BIRTHS.

Births of Boys, 1145; Girls, 1140; Total, 2285.
Average of 10 corresponding years 1866-75, 2139·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	752	757	1509
Average of the ten years 1866-75	788·6	721·5	1510·1
Average corrected to increased population ...	...	...	1616
Deaths of people aged 80 and upwards ...	...	...	54

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	8	1	4	2	3	...	28
North... ...	751729	...	4	10	...	9	1	2	3	53
Central ...	334369	...	2	2	1	5	...	1	...	21
East	639111	...	7	6	...	3	1	...	1	58
South	967692	5	11	23	1	5	1	7	2	72
Total	3254260	5	25	46	3	26	5	13	6	232

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·767 in.
Mean temperature	72·0°
Highest point of thermometer	93·8°
Lowest point of thermometer	57·2°
Mean dew-point temperature	59·7°
General direction of wind	E.
Whole amount of rain in the week...	0·25 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 19, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Aug. 19.	Deaths Registered during the week ending Aug. 19.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2285	1509	93·8	57·2	72·0	22·22	0·25	0·63
Brighton	100632	42·7	57	52	84·5	59·5	68·6	20·34	0·00	0·00
Portsmouth ...	124867	27·8	86	75	85·0	61·0	66·7	19·28	0·39	0·99
Norwich	83430	11·2	60	48	87·0	58·0	69·3	20·73	0·00	0·00
Plymouth	72230	51·8	38	25	78·5	58·5	66·3	19·06	0·39	0·99
Bristol	199539	44·8	130	74	97·0	53·4	70·5	21·39	3·81	9·88
Wolverhampton ...	72549	21·4	54	37	91·7	55·1	68·0	20·00	0·44	1·12
Birmingham ...	371839	41·3	272	229	92·0	54·4	68·6	20·34	0·27	0·69
Leicester	113581	35·5	64	100	95·5	55·8	70·9	21·81	0·69	1·75
Nottingham ...	93627	46·9	72	50	93·6	54·9	70·1	21·17	0·04	0·10
Liverpool	521544	100·1	421	273	84·6	58·0	65·5	18·61	0·52	1·32
Manchester ...	357917	83·4	285	223	87·0	60·0	69·4	20·78	0·19	0·48
Salford	138125	26·8	143	85	90·3	53·3	67·3	19·61	0·30	0·76
Oldham	88609	19·0	57	50	...	...	...	...	...	...
Bradford	173723	24·1	127	79	83·6	55·2	66·2	19·00	0·00	0·00
Leeds	291580	13·5	227	187	89·0	51·0	68·6	20·34	0·00	0·00
Sheffield	274914	14·0	235	174	90·5	54·0	68·7	20·39	0·00	0·00
Hull	136933	37·7	106	78	83·0	52·0	63·6	17·56	0·00	0·00
Sunderland ...	108343	32·8	95	57	83·0	51·0	64·8	18·23	0·00	0·00
Newcastle-on-Tyne	133929	26·1	95	60	...	...	...	...	0·00	0·00
Edinburgh	215146	51·3	101	59	...	...	...	...	...	...
Glasgow	545144	90·4	378	229	80·6	54·0	65·3	18·50	0·00	0·00
Dublin	314666	31·3	144	100	80·9	47·5	64·7	18·17	0·77	1·96
Total of 23 Towns in United Kingdm	8028595	37·7	5532	3844	97·0	47·5	67·8	19·89	0·38	0·97

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·77 in. The highest was 29·87 in. at the beginning of the week, and the lowest 29·62 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture IX.

DEATH BY DROWNING.

In the various forms of injury which have been passed under review, as coming under the medico-legal designation of *wounds*, we have seen the prominent place which *syncope* occupied in these as a cause of death—whether from pure loss of blood, the amount of shock at the outset, or the consequent exhaustion. In the classes of cases which we have now to consider, the leading form in which death occurs is that of *apnœa* or *asphyxia*—a mode of death common, with very few exceptions, to all the instances of *drowning*, *hanging*, *strangulation*, *suffocation*, and *smothering* (the subjects in question), though each of these presents *certain peculiarities* which serve to discriminate and distinguish them. This being the case, it may be proper, before proceeding to discuss *these five forms of death separately*, to point out the characteristics of—

Asphyxia generally, as almost equally applicable to each. *Three stages*, then, may be observed in the phenomena of asphyxia. *The first* is characterised by the intensity of the sensation which prompts to the acts of inspiration, and the consequently violent and laborious, though ineffectual, attempts to appease that sensation by the action of all the muscles of inspiration, and in some instances by other actions voluntary and instinctive, but still under the guidance of sensibility. *The next stage* "is distinguished by insensibility, rapidly increasing, and attended with irregular spasms or convulsions; and *the last* by cessation of all effort, and of all outward signs of life, while the heart's action and circulation are known still to go on for a short time."

As a general rule, it may be assumed that "*the first two* of these stages are usually over within *three minutes*, seldom extending to *five;* and the circulation through the heart has very generally ceased within less than *ten minutes* from the commencement of the obstruction."—(Alison, "Cyclopædia of Anatomy," vol. i. page 259.)

In those cases of hanging and strangulation in which the trachea is completely compressed from the outset, the insensibility is almost instantaneous. In drowning—and, perhaps, in most cases of smothering and suffocation—the first two stages may last for from *about two minutes* on an average, but not longer, unless where the air is only partially excluded from the lungs. Contrary to what has been asserted, *habit* has little or no influence on the extent of *time* to which this privation of air may be borne. There is as little reason to believe that life has been restored in any case of asphyxia after from five to ten minutes' arrest of the respiration—*the very latest period* which can be assigned to the continuance of the heart's action after the *entire cessation* of the functions of the lungs.

When discussing the different forms or modes of death (Lecture IV., No. 1340, page 245), I had occasion to lay down the post-mortem appearances which serve to characterise asphyxia *generally:* these being, I need only here remind you, the accumulation of the blood in the veins, and its comparative scantiness in the arteries; congestion in the lungs, right heart, liver, spleen, brain, and kidneys; at times also venous plethora in the intestinal canal, and in portions of the common integuments. In these cases, on viewing the dead body, (*a*) the face, except at, or shortly after death, is observed to be rosy, reddish, or somewhat livid; (*b*) *the eyes*, though oftenest natural, may be prominent, clear, and fixed; (*c*) the features usually calm, though occasionally expressive of suffering; (*d*) *the cadaveric lividity* of the dependent parts of the body *mostly* of a pronounced sort; (*e*) the cadaveric rigidity well marked and persistent; (*f*) the cerebral sinuses full, and the interior of the brain dotted with bloody points, and accumulation of serum is at times encountered in the cerebral ventricles; the root of the tongue is swollen and red; the trachea and larger bronchi are reddened, and frothy fluid, sometimes reddish, is met with in their interior; the lungs are expanded and congested; the right cavities of the heart, and the pulmonary artery and venæ cavæ, and their principal branches, are distended with dark fluid blood, as are to a greater or less extent the liver, spleen, and kidneys. Little blood is encountered in the left cavities of the heart, or in the aorta and pulmonary veins.—(Devergie, vol. ii. page 301.) Congestion to any marked extent of the scalp and face, and of the mucous lining of the alimentary tube, is rarely encountered in cases of rapid asphyxia.

This summary of the appearances in the body after death by asphyxia generally does not, however, include all the peculiarities which may be encountered in some of the special forms of apnœa, or exclude other peculiarities in certain of these, nor are all the appearances we have enumerated constantly to be met in every individual instance of fatal asphyxia, however well marked otherwise. This will come out under the different forms of this mode of death. These I commence with *death by drowning*. This form of asphyxia opens up a study of high importance to the medical jurist, and one which will consequently demand a proportionate degree of attention from us. There are circumstances connected with the subject of death by drowning which distinguish it to some extent from other forms of sudden death. There is not, for instance, the same amount of unanimity amongst authors as to the precise mode of the fatal event as might have been expected in such an uncomplicated case as is here presented to us, the leading phenomena of which are to such an extent well understood and so uncomplicated in their character. Again, authors have differed as to *the appearances* to be encountered *in the dead body* in the case of the drowned, and assigned a different amount of value and importance to *the absence* of certain of these, and *the presence* of others. Hence, once more, the extreme opinions which we encounter in our earlier medico-legal writings, especially as to the facility of determining, from the examination of the body, as to the cause of death on the one hand, and as to its utter impossibility on the other. Much, however, of this discrepancy comes to disappear on a little consideration given, in the first place, to the circumstances attendant on the last act of life; and, secondly, to the proper appreciation of the influences affecting the body at the period at which it may be presented for examination, whether from the time which has previously elapsed since the death of the party, or from the character of the medium or media in which the body has lain since death. All this will come out most clearly as we proceed.

Without further preface, then, I go on to remark that *the finding of a dead body in water under suspicious circumstances* may give rise to the following medico-legal inquiries:—First, *Whether the person had died by drowning?* and secondly, if so, *Whether the submersion had been the consequence of accident, of suicide, or of homicide?* And, first, as to the question *whether death arose from drowning*, much unnecessary difficulty has been thrown in the way of a satisfactory reply to this inquiry by writers on the subject of death by drowning mixing up *the cause of death in drowning* with *the cause of death in persons found dead in water*. A little consideration of this *obvious distinction* will simplify very much *the unnecessary complication* of a point in itself not unattended with some inherent difficulties.

The body of a person, then, who has fallen into water and there perished, may, on inspection, present (1) the appearances characteristic of death by *syncope*, or "neuro-paralysis" as it has been termed; (2) those of death by *coma;* (3) those of *asphyxia;* and (4) those of *coma and asphyxia conjoined:*—

1. It has been assumed, rather than proved, that *fatal syncope* may be brought on by the state of terror into which the individual has been thrown prior to his accidental or violent fall into the water; or, what is more likely, by his coming against some obstacle, either above or below the water, during his fall, with sufficient force to induce concussion of the brain to an extent which, of itself, would destroy life. Now, it would be more philosophical to say that such a person had perished, though in the water, *not by drowning*, but by *syncope*—restricting the former term, as we obviously ought, to the primary arrest of the respiration by the exclusion of the atmospheric air from the lungs. In a case of this sort the syncope, if complete, could not be recovered from, so as to permit the phenomena of *asphyxia* to be set up, and the appearances in the body would be those of death by *syncope*, to which cause the death, though it took place in the water, should be undoubtedly ascribed in every such instance. I am, however, inclined to go somewhat farther than this, and to state that *nothing short*

of complete syncope, such as would be *at once fatal in or out of the water*, would, in such a case, hinder the *phenomena of asphyxia from taking place to some obvious extent* in a submerged body. I ground this opinion on the following occurrence:—

In November, 1854, the body of a very stout man was found at the foot of the quay-wall near the mouth of our harbour (Aberdeen). He was lying on some loose dry blocks of stones, which were covered with water at high tide. Besides minor injuries the inspection showed a comminuted fracture at the base of the skull, and the sternum fractured and depressed near its middle. The nature and extent of these injuries—which were explained by his having, while in drink, fallen over the quay-wall with some added momentum—of themselves would have implied that a concussion sufficient to induce syncope had been sustained by him in his fall, had not the want of effused blood in the vicinity of the fractures indicated this; and yet in this instance the signs of death by asphyxia were sufficiently developed to authorise us to report that his death had been by *submersion*.

I have since met with a similar case, in which a person, by throwing himself with a considerable momentum—obtained by running some distance—over the parapet of a bridge into the Aberdeenshire Canal, and striking against the retaining wall of the water underneath, had sustained serious injury of the head before his submersion.

In this opinion I am glad to find that I am joined by both Drs. Taylor and Caspar, the latter authority especially speaking very decidedly on the point—("For. Med.," vol. ii. page 230),—in opposition to the views of several foreign medical jurists.

2. It has been suggested by some authors that the congested state of the cerebral vessels so frequently encountered in the bodies of the drowned proves that the parties had perished from *coma* rather than from asphyxia. That a person struggling against an assailant trying to force him into the water may thus bring on a state of apoplexy, or that a person falling into an apoplectic state may accidentally drop into water in his immediate vicinity, are not unlikely occurrences. But in such cases, unless the death was immediate—which is scarcely consistent with known facts,—they would, notwithstanding, if left there, perish from *asphyxia*, not from coma. It will not be pretended that a mere state of oppression of the brain will hinder a person thrown into water from making attempts to save himself, such attempts being less the result of consciousness—of which at such a moment the party is deprived—than of mere instinct, acting blindly but powerfully, like other reflex actions, whenever existence is at stake, in every living creature. I speak from experience when I say that a person in a state of brutal intoxication will struggle powerfully in the water; at least, the morbid appearances which indicate a prolonged struggle will be in these discovered in the body after death. But the following case seems to me to settle the point in dispute:—

A shipmaster, who had suffered from repeated apoplectiform attacks, was seized with a fresh attack while standing on the edge of a lighter or decked boat, and falling down insensible, rolled into the water. Some hours elapsed before his body was recovered. On examining the body afterwards it exhibited all the indications of death from asphyxia unusually well marked, in addition to the extreme cerebral congestion which was to have been expected.

3. It is not difficult to account for the mixed indications of death by coma and asphyxia occasionally encountered in the bodies of persons who have perished in the water. Such a case as the one I have just referred to would be of this nature. I also met with like mixed instances on examining the body of a man who, while in the delirium of fever, threw himself into the water and was drowned, and that of a furious maniac who committed suicide in the same way.

But even independently of all this, the duration of the struggle for life, and the previous state of the brain, the vigour of the organs of circulation, and their relative fulness, will all influence the amount of the cerebral congestion discoverable after death from this cause; while we should have every reason to believe that the occurrence of this congestion had taken place *posterior, not prior*, to the final interruption of the respiratory functions,—not to insist on the fact that (in every case) death by coma resolves itself virtually into death by asphyxia.

In this way, then, we get rid of *three* out of *the four* ways in which death by submersion has been accounted for. Without denying that a person found in water may have died in any of the three ways specified, all we argue for is that he has died *not from drowning strictly so-called;* and that the occurrences enumerated—such as apoplexy, concussion, and ordinary syncope—are merely to be regarded as so many modifying circumstances, known, in certain cases, to attend the act of drowning.—(Taylor's "Medical Jurisprudence," vol. i. page 104.)

(To be continued.)

CLINICAL LECTURE
ON TUBERCULAR LEPROSY.

DELIVERED AT UNIVERSITY COLLEGE HOSPTAL.

By TILBURY FOX, M.D., F.R.C.P.,
Physician to the Department for Diseases of the Skin.

GENTLEMEN,—We have a most typical case in the hospital at the present time, of a disease rarely seen in this country. Many of you may perchance have to deal with its management, if not in this country, at least abroad, in the future, and it is important, therefore, that you should know all about it. I do not intend to give you an elaborate description, but a useful practical sketch of its clinical features.

The notes of the case, which have been most capitally taken by Mr. Swift, are as follows:—

The patient was a clerk in Barbadoes for two years and a half—that is, up to the time he came to England. Since he has been here he has done nothing; he is single, has lived well, been well fed and clothed, and has drank nothing stronger than tea and coffee. He comes from Bridge Town, Barbadoes, and had lived there all his life. He lived in a suburb which was dry, and considered to be a very healthy part. The boy is of a fair complexion and cheerful disposition, and had slept well till last year. The patient says he has always been strong, though thin, and has never had any illness before this.

Family History.—There were sixteen children in family, one of whom died young; all the rest are healthy, with the exception of a younger brother, who has a skin affection something like this patient's. Patient knows of no other of his relatives having any skin complaint.

Present Illness.—The disease commenced seven years ago, when he was twelve years old. The boy did not leave his work till one month before he came to England. The patient says he first noticed a round brown spot, about the size of a shilling, on the front of the left thigh, just above the knee, with red edges, but with no scales on it; it did not become an ulcer, but it increased in size, and whilst doing so, other brown spots appeared on the left side of the body, on the trunk and the arm. These spots were at first only on the left side; later on the right half of the body was affected, and the brown spots began to coalesce together. About two years ago his face began to get brown; it used to flush a great deal and feel irritable. About this time he felt tingling sensations in his fingers and toes and legs, and he noticed his knees became numb; this was some little time after it appeared; the ends of his fingers became slightly numb, so that he could not pick up things well. His face now began to get rough, with lumps about it, and the brown spots about the leg got tubercular, and also about shoulder. There are no tubercles in his hair.

Treatment.—He was treated by one doctor in Bridge Town. He gave him some drops of iodine to take in sea-water three times a day. This was only a short time before he left. It did him no good. His mother also treated him with ointments; and he took sarsaparilla to no purpose. Since he has been in town he has been treated by a doctor, who gave him iodine, tonics, lotions (one being lime-water), and ointments; but he got no better. The doctor said it was scrofula. He has also taken Clarke's blood mixture.

Present State.—The face of the patient is covered with tubercles, on some of which are scales, making it rough. The nose and lips are also covered with tubercles; likewise the ears, which stand out from the head. There is no marked distinction between the mucous membrane of the lips and skin of face, the disease spreading from one to the other, so that the face is very much deformed, and being of a dirty sallow-like colour, gives him the leonine, satyr-like expression; and instead of looking nineteen he looks forty. The skin feels thickened, knotty, and uneven, and rough from the scales on the tubercles. There are no eyebrows, whiskers, or moustache. The mucous membrane is also the seat of these tubercles, and they can be seen on roof of mouth, back of pharynx, and on

the tongue. On stripping the patient, a deep brown staining, in blotches about the size of an eighth of an inch in diameter, covers the back, chest, and abdomen. Some of these brown spots on the chest are the seat of the tubercular change. On the neck there are very few of these brown spots. On the left shoulder there are a few tubercles; and also on the outer side of the arm the brown staining is diffused, not in blotches. On the outer side of the elbow is another patch of these tubercles, on which are some white, shining scales. The ulnar nerve can be felt by the side of the ulnar, enlarged and cordy. On the forearm are some more of the brown blotches with scattered tubercles. On the back of forearm, near radial border, is a large, dirty-brown scab an inch long, the remains of an ulcer which arose from patient picking the scab off one of the tubercles. The back of the hand is covered with tubercles. The muscles of the forearm are wasted, and so are those of the hand. His hand is very soft, and the joints of the fingers are very loose, so that the fingers can be bent about in a peculiar way. The second and third phalanges are drawn back by the extensors overpowering the flexors when he holds his hand out straight. He has great difficulty in picking up money, from the ends of his fingers being numb; he does it with his nails. There is complete anæsthesia on the inner border of the little finger, and on the outer side till you come to the web of the finger, where he feels slightly; there is also anæsthesia on inner side of ring finger, but not complete. There is more anæsthesia along the course of the ulnar nerve than along that of the radial. Right arm: On this elbow is another large patch of tubercles, with white scales; and on back of forearm there are many scattered tubercles, getting more numerous as you get to the wrist and back of the hand, where there is a large crop. There are very few tubercles on front of forearm. This is also the case in left arm. The blotches on his back do not seem to be getting tubercular. He has some scattered tubercles on each buttock. His groins are free from tubercles and blotches, but are stained yellow. On the upper part of his thighs there are a few tubercles, but there are several patches of glazed skin, looking like cicatrices, and a few pits, where patient says he has scratched the heads off the tubercles. At the lower part of each thigh, and around the knee, are a large quantity of these tubercles, and complete anæsthesia. Below left patella is a scab like that on left forearm. Both legs are covered with tubercles, which are in greater quantity on outer side. These tubercles are larger, redder, and have less scales on them than those about body, and there is marked anæsthesia all down legs from knee to ankle. The skin of feet is whitish and soft, and the toes are drawn back by the extensors. There is very little power of movement in them, and almost complete anæsthesia on dorsum of foot. If pricked he feels a weight. His voice alters in winter, and becomes hoarse and thick. The patient says his face is brown in summer and tubercular in winter, in which particular he is worse than he was when in Barbadoes. Bowels constipated. Liver not enlarged.

November 27.—Patient complains of constipation and very little appetite; otherwise he is in his usual health.

28th.—Patient had his bowels opened yesterday. Has still very little appetite. Is pretty cheerful. Gets up every day. Goes out when fine.

December 2.—Complains of pain in left knee; has had it there before in wet seasons; it is of a throbbing character. Has slight cough. Bowels still confined.

After this he was attacked with what appeared to be at first sight acute rheumatism, with swelling of the joints; marked pyrexia, with exacerbations at night. This continued some time, and coincidently with this attack the tubercles became redder, softer, and smaller by degrees, until they disappeared in great measure; and after several weeks the boy was left weak and prostrated, but with a great amelioration in the condition of the skin; the febrile attack seeming to have been more like pyæmia than rheumatism. I shall have to comment directly on this particularly.

Now, if you have followed my reading of these notes, you will not have failed to observe, as regards the skin, three series of phenomena: first, certain *discolorations;* secondly, certain *tubercular formations*, or infiltrations; and thirdly, the development of *anæsthesia*. And let me say that these are the points to which your attention should be directed in tubercular leprosy—discoloration, formation of tubercles, and development of anæsthesia.

I will deal with these several items separately. First of all let me say a few words as to premonition, cause, and age at which it developes. Before any symptoms referable to either of the conditions above referred to develope, leprous patients become in some degree cachectic, or at least debilitated. They are weaker than they were; or they become morose, or suffer from malaise of varying degree, with rheumatic pains; or they have been pulled down by fever or ague. As regards the cause, leprosy is in the great majority of cases hereditary; and if it be true that a brother of this patient is similarly affected, and inasmuch as our patient does not appear to have resided in districts where leprosy is endemic, it is not unlikely that it may be an hereditary matter with him. The cause *de novo* is involved in obscurity at present. Whether it be due to the action upon the system of some poison of a malarial kind, or the use of putrid fish, or of a diet deficient in certain principles, or to other causes, are questions under dispute.

Now for a notice of our three points above referred to. *First, as regards discoloration.* The first thing this patient observed was a brown spot about the thigh; a certain amount of erythema accompanied its development, for the brown spot had red edges. This is the usual way in which tubercular leprosy developes. This discoloration is of a reddish-yellow hue, and is due to the presence of pigmentary deposits. At present large tracts of the body are discoloured, as you will see, but the individual patches are somewhat smaller than usual. The spots attacked one side only (the left) for some time, and this points to the neurotic character of the disease; at least, to the fact that disease of nerves determines the seat of the discolorations. Now, I wish you not to mistake this reddish-yellow or dark coppery blotchiness for syphilitic discoloration, as is often the case. Be always suspicious of coppery discoloratiens when they occur in persons who have resided in India or other places where leprosy is common, and remember this: that syphilitic staining never exists as the sole evidence of syphilis, nor is it so extensive as in leprosy. In syphilis, if there be coppery staining, it has been preceded by distinct eruption, and there exist coincidently with this eruption other evidences of syphilis. A quasi-coppery staining, especially when extensive, without other evidence of syphilis, to me is not existent as syphilitic, and yet I have known men treated month after month, and even invalided home, for syphilis under these circumstances. You will not fail to notice that the face is bronzed equally with the body, and when the face is attacked it is first of all more hyperæmic than usual, and in consequence the tint of the discoloration is much darker and duller. If you remember, this lad's face flushed much at the early stage of the disease, and began to be attacked in the second year of progress. This is the rule.

Secondly, as regards the formation of tubercles. These spring up in the already discoloured parts. They consist of granulation tissue exactly resembling, in regard to minute character, that of syphilis. Their size varies, as you will notice, in our patient from that of a pea to a nut, and they are soft, smooth, shining, dusky-red in colour at first, and getting gradually brownish-yellow or bronzed. They are most plentiful and marked in seats where the cellular tissue is lax —consequently about the face: the nose, the lips, the eyes, the mouth, and the ear. The face of our patient shows well-developed tubercular formations all over it, and is now very characteristic. See how it ages the boy: he looks forty, and is only nineteen. His eyebrows are thickened, stand out from his indurated forehead, and overhang the eye excessively, giving the boy a lion-like appearance. The mouth, lips, nose, and eyelids are all enlarged and thickened, and the whole surface feels hard, knotty, and uneven; in fact, the neoplasm is not so much in some places developed as tubercles, but generally infiltrated amongst the textures. Then look at the boy's ears; they are three times their natural size and leathery, just as though he had had an attack of erysipelas, and the parts had been left brawny, dark, and hard. You can see tubercles studding the surface also. In the discoloured parts about the body you will see distinct tubercles in groups. If you look into the mouth you will observe a number of tubercles about the palate and the pharynx, and the huskiness of the voice is due to the presence of tubercles about the mucous membrane of the larynx. The tubercular formation or neoplastic infiltration, you see, is most marked about the face.

Thirdly, as regards anæsthesia. This develops coincidently with the formation of tubercles. It is insidious in its origin; patients sometimes find it out by accident—as by burning a part insensibly, or catching the fingers in the pocket in trying to place the hand therein. You will have observed in this case the patient first had tingling in his fingers; and, indeed,

in the early stage there is hyperæsthesia at times, when the nerve-trunk is but slightly diseased. Here there is decided anæsthesia in the oldest discoloured parts and in his extremities. The explanation of the anæsthesia is to be found in the enlarged nerve-trunks that you may sometimes feel as in this boy, whose ulnar nerves can be detected as huge cords behind the elbow, several times their natural size, and the anæsthesia is most marked in the parts supplied by this nerve. The neoplasm invades the *superficial* nerve-trunks as it does the fibrous structures of the skin. The wasting of the muscles about the hand is explained by the implication of the nerve-trunks, and so is the inability of patients to oppose the fingers, to grasp, or pick up things.

Now, as I have used the term "tubercular leprosy," it will have occurred to you that there is some other form or forms. There is a variety termed *anæsthetic* leprosy. In it the neoplastic deposit is not so decided in the cutaneous surface, but it is specially found in the superficial nerve-trunks; there is consequently more nerve disturbance at the outset, more burning, pricking, shooting pain, tenderness, and the like, about the feet and hands especially; more muscular atrophy, and the like; more anæsthesia, which is developed at an earlier date, and is more marked than in the tubercular form; and there is, as might be expected, not only erythematous eruption, but the development of bullæ, which are large, and occur in parts previously more or less anæsthetic, and leave behind at times ugly sores. Moreover, there is a peculiar form of eruption, admirably described by Dr. Vandyke Carter, but which I need not notice now. This form of leprosy is called anæsthetic. But there is no actual line of demarcation between the two; their characters are often more or less intermingled. So far I have given you a clinical demonstration of tubercular leprosy, as the description of the disease and a case in illustration are before you. There are just two points more which I will briefly notice—first, as to the semi-pyæmic attack the boy suffered from; and secondly, as to the treatment of the case.

I believe that the acute pyrexial attack is to be explained by the resorption of the material of the tubercles and its entrance into the blood-current, and its elimination from the system; the pyrexial or semi-pyæmic condition being the direct result of the absorption of the animal matter into the blood. This is not the first case of the kind I have had. You will perhaps recollect that the same series of phenomena occured in the case of the little leper recently in the children's ward. It is a new fact to me in the history of leprosy. I find from a conversation I had with Dr. Vandyke Carter that the same thing has been observed in Norway, and he has himself seen a case of the kind in his recent visit to that country. You will recollect that I took a pyæmic view of the case of the little girl, every tubercle in whom became red, swollen, and tender prior to its being absorbed. The fact is an interesting one, but I cannot dwell upon it here more fully.

Now as to treatment. Can we arrest the disease in the boy? Well, the pyæmic or septicæmic attacks have done something for him, and I hope that with good feeding and good living more may be done; but he is desirous to return home. I should say that the institution of the best hygienic measures—removal from malarious districts, or those in which leprosy is endemic,—and the provision of a nutritious diet, will often arrest the progress of disease. No medicines directly do any real good, in my experience, except large doses of quinine. As regards local measures, it is possible to cause absorption of the tubercles by friction with various stimulants—carbolic acid, castor oil, gurjun, balsam, and the like. But do not be misled by reported specifics for the cure of leprosy, for they will disappoint you.

THE LATE BALLOON ACCIDENT IN FRANCE.—The subscriptions set on foot by the French Aërial Navigation Society in favour of the relatives of MM. Croce-Spinelli and Sivel, who perished in consequence of the catastrophe of the "Zenith" balloon, has proved very successful. The sum of 93,167 francs has been raised, leaving, after paying funeral expenses and debts, and putting a sum aside for monuments, a net sum of 77,036 francs. This has been distributed according to the wants of those to be relieved, and the residuary sum has been invested so as to provide for a daughter of Sivel, now seven and a half years old, a capital of 27,000 francs on her attaining her majority in 1889; or if she marries after she has attained her eighteenth year, enabling her to use the money as a marriage portion.

ORIGINAL COMMUNICATIONS.

CLINICAL ILLUSTRATIONS OF GRAVES'S DISEASE.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

NOTWITHSTANDING the interesting reports of organic changes which have been described in connexion with Graves's disease, the clinical symptoms will probably constitute the most important element in the history of the malady. Observation shows the presence of a very well-marked association of symptoms, when all are present, sufficient to characterise a distinct clinical group, if not to form a pathological entity. But the special symptoms—the proptosis, the goître, and the palpitation; to which I may add the vascular abnormities—not only vary considerably among themselves, but are often associated, in very different degrees, with other symptoms indicating widespread derangement of the nervous functions, and sometimes, also, with evidence of very profound nutritive degradation. Moreover, the condition, whatever it be, with which these various phenomena are connected, though capable of removal in some cases (as witness my first case, in which the symptoms were very severe), appear to be permanent in many others, or at least remain with greater or less severity for many years. This will appear plainly from some of the following cases.

Nervous derangement, in one form or other, constitutes a prominent feature in the descriptions given by different writers. Mental influences—fright especially—are noticed as antecedents in not a few instances. In some recorded cases the occurrence of intense mental impressions, in the shape of fright or of violent emotion, are very closely associated, at least as antecedents, with the earliest appearance of the proptosis, or the goître, or the palpitation. Tendency to nervous or mental disorder, or the presence of morbid irritability in the constitution of the patient, is specially referred to by Professor Trousseau, by Dr. Stokes, by Dr. Cheadle, and by Dr. Laycock, and such conditions are associated by all with the suggestions they offer in explanation of the phenomena of the disease. "The patient's temper is so altered," says Trousseau, "that the persons about her can scarcely put up with her irritability, her want of grateful feeling, her exacting ways." My first case illustrates this. "In short," says Dr. Laycock, "we may conclude . . . that nervo-vascular women, naturally of an emotional, excitable temperament, or who, during uterine activity or sexual excitement, have had fright, grief, excessive mental labour, or other causes morbidly influencing the nervous system . . . are predisposed to Graves's disease, and that emotional and similar mental states are exciting causes." The prominence acquired by the particular element of the case to which I am now adverting will, of course, be influenced by inherited or acquired predisposition in the patient, or by the presence of other disease, etc.; but I would add that some of the following cases point to considerable independence between this condition of general nervous disturbance and the special symptoms of the disease with which we are now concerned. This independence is illustrated by the different effects of treatment on these two elements of the case, or by different periods of access, or else by considerable disproportion between the general nervous disturbance, and the proptosis, the goître, and even the vascular disorder. If the vaso-motor hypothesis, which is supported by the best authorities, and certainly seems best to bind together the various phenomena of the malady, be accepted in explanation, the question arises, to what extent the general nerve-disturbance is accounted for by the same hypothesis. At any rate it appears that in different cases of the disease there is also a difference in the extent of the nervous centres involved, perhaps also some difference in the tracts which are affected. It is certain that in certain forms of hypochondriasis there is present a form of cardiac derangement apparently identical with that met with in Graves's disease, without any of the other phenomena of the malady being present.

Case 1.—In my first case, by far the most prominent feature was afforded by the remarkable group of symptoms indicating derangement of the moral and emotional elements, which placed the special symptoms of the disease I am now illustrating altogether in the background. These symptoms of widespread disorder of the nervous centres must doubtless be in-

part connected with the marked nervous proclivity exhibited by the patient, and with inherited tendency. One other feature will be remarked: the share taken in the production of the symptoms by excessive muscular exertion and fatigue. The powerful influence of moral treatment is quite in keeping with the assigned cause of this peculiarity in the symptoms, and it will be observed that the benefit was chiefly shown by amendment in the nervous symptoms, rather than of those proper to Graves's disease, which were much longer in subsiding. Nor must the profound change in the nutritive function be overlooked. The sense of heat complained of by the patient is carried even beyond what will be noticed in other cases of this disease. The small size of the goitre will also be found to be in accordance with the report of many of my other cases. According to Trousseau it is in men rather than in women that the absence of goitre mostly occurs; though, in those of the following cases, in which the goitre was very small, the subjects were chiefly of the female sex.

The patient was twenty-three years of age. I first saw her on January 6, 1865. Her family presented a history of grave nervous disease on her father's side, and of consumption on that of her mother. Her maternal grandmother had some mental disorder; her father was subject to paroxysmal melancholy, not altogether without tendency to delusions; of six brothers and sisters, one sister has suffered from temporary but pronounced mental disorder, one died of "pernicious anæmia" (there was not a post-mortem), one of diabetes with serious nervous complication, and a brother has a marked tendency to imbecility. My patient herself was not of a healthy nervous constitution. The proptosis had been first noticed medically twelve months before I saw her, but had undergone such rapid increase during the last two months that a brother, who had been absent, declared he should not have recognised her in consequence of the change in her features. The goitre, which was at no time large, and involved both lateral lobes of the gland, probably commenced before the proptosis. But preceding the proptosis was a striking history of ill-health and of increasing moral and emotional change. Her health had been markedly impaired for three years, and her history during that time presented every cause which could induce physical depression and mental perversion and excitement. Everything the patient undertook to do was made a source of serious exhaustion from the extremes to which it was carried, and there was much reason for supposing that excessive muscular exertion had an important share in producing her ailments; she herself, indeed, admitted that this was probably the case.

Prolonged sleeplessness was one of the first symptoms observed, though with characteristic wilfulness the patient concealed it from her parents. Then followed increasing irritability and restlessness, and hysterical outbreaks. These outbreaks subsequently ceased to happen, but they were succeeded by perversion of temper, which led to an almost insane desire of harassing and disobeying her parents—a tendency which manifested itself in various grotesque ways; indeed, she owed not a little of her late exhaustion to the ill-regulated vehemence with which she pursued her undertakings: more than once, after going out for pleasure or for other purposes, she had to be carried home, through sheer inability to walk back. Nor was perversion of moral sense altogether wanting, for her medical attendant had found her statements unreliable, even in regard to important symptoms. There was no evidence of any intellectual change. The moral management which this condition required constituted the most important, as it was undoubtedly the most difficult, part of the treatment of the case. She gave way to intense irritation on being contradicted, and when an attempt was made to restrain her she would rush away with such violence that when arrived at the end of her race she had neither breath to express her wants nor recollection of what she desired. These outbreaks were frequent during the early part of her treatment, and were excited by very trifling causes. The beginning of her amendment dated from the time when she was kept closely in two rooms apart from the rest of the family.

My attention was early directed to her urgent complaint of a sense of heat over her body and limbs, but especially between her shoulders. She could hardly endure the lightest clothing by day or night, and refused a fire in her bedroom during a very severe winter—that of 1864-65. On one particularly bitter day at Christmas she went out clothed only in a thin gown and a chemise, and this dress, with a woven vest, constituted her ordinary attire. She did not endure even a stuff gown until her recovery was far advanced. By night she lay with merely a sheet and a thin blanket on her bed, and frequently threw off the latter article—and this when sleet and snow were driven outside by a keen north-east wind. I repeatedly took the temperature in the axilla and the mouth; it never rose above 98°, and was frequently depressed to 96°. I have an observation that five months after the beginning of my notes she had felt cold for the first time (in May), and had drawn more clothes over her bed at night. I may here observe that M. Charcot has recorded a similar subjective sensation of intense heat all over the body in paralysis agitans, to such an extent that the patients could hardly bear their clothes in the midst of winter. It was proved by thermometric observations that this sensation did not indicate any elevation of body temperature. Trousseau also notices the same symptom in diabetes as well as in Graves's disease, but I infer that he has found the cutaneous temperature raised.

When I first saw the patient she was considerably emaciated, but I found that this condition was quite a recent symptom. Nevertheless, from that date, emaciation made such rapid and alarming progress as almost to reduce the patient to a skeleton in the short space of six weeks. The appetite was capricious, but she did not refuse food. She frequently vomited, but only after paroxysms of excitement. I may here describe the peculiar character exhibited by her stools through a great part of the case; it is important in connexion with the loss of adipose tissue. They had a singular sour odour, and consisted of large tawny lumps, without softness or moisture or any bilious colour. Her urine was free from sugar or albumen; occasionally it deposited a sediment of urates.

But the recovery of the patient from this condition of advanced attenuation was even more remarkable from its rapidity, and, as will be stated immediately, seemed to be referable to the effect of cod-liver oil with iron and strychnia; a steady control and quiet seclusion in two rooms constituted, moreover, a highly influential factor in the management of the case. She did not present any of the characteristics of anæmia, nor any of its symptoms.

It is not necessary for me to particularise the other symptoms of Graves's disease as they were presented by this patient; my space will be more usefully occupied in noting a few particulars in the course of her recovery. I have already referred to the late appearance of the emaciation, the speed with which it advanced, and the extent to which it proceeded, and I have stated that the rapidity of recovery was equally remarkable. The only remedies which appeared to exercise influence upon the case were cod-liver oil with one-sixteenth of a grain of strychnine and twelve minims of tincture of steel, the oil being gradually raised to half an ounce three times a day; but an equally powerful remedy was unquestionably the exercise of steady control and residence in two rooms. The above-mentioned medicine was commenced on February 15, when symptoms of emotional disturbance and of nutritive deterioration had assumed a very serious aspect. Decided amendment had been effected by March 5, and thenceforward the improvement went on rapidly, in increase both of bulk and of strength. Coincidently with the nutritive improvement set in amendment in the moral and emotional state, and in each particular the progress was the same. By April 18 the patient had regained her natural bulk, and no wilfulness nor excess of irritability remained. Her sleeping power was not recovered with equal rapidity, but a moderate dose of morphia sufficed to procure necessary repose. But now the increase in bulk of the body began to exceed the normal limits, and on April 27, as she began to look bloated, the oil, which had been already much reduced in quantity, was discontinued, and all medicine was suspended. Yet increase of bulk still went on, and the large size to which she attained became a source of serious annoyance and discomfort through the whole of the remainder of the year. Constipation also gave much trouble, as did abnormal appetite—apparently the result of reflex irritation from loaded bowels, for the craving for food was always suspended by the operation of a purgative.

Notwithstanding the general improvement, the pulse continued frequent; it had reached 140 (120 was its usual rate). I never found it so low as 90 until the February of the *following* year; motility of the carotids lasted nearly as long. Menstruation had ceased for two months when I first saw the patient in January; it reappeared in June, and by October was nearly natural. The proptosis took longer to recede; indeed, it was thought that some evidence of its presence could be seen two years afterwards. I believe she never regained her

original character of feature in all respects, but her recovery has been permanent. She has never had return of her former symptoms from that time to the present.

Case 2.—Here we find the characteristic symptoms of Graves's disease assuming their fullest development, in some respects beyond what was observed in the last case. The thyroid gland had undergone considerable increase, and its arterial supply was greatly augmented, whilst the cardiac derangement had attained greater severity. The attendant general nervous disturbance was also very decided, yet differed materially from that which had occurred in the subject of the preceding details: it consisted mainly in excessive irritability; either from loss of that unconscious control over the organic processes which we ordinarily exercise, or else from the increase in the irritability of those processes beyond the normal relation held to the controlling power. The emotions do not seem to have suffered much, nor were the moral functions affected. The nutritive functions were less deeply involved; but one nutritive abnormity—the inordinate appetite—existed in both these patients alike, though at different periods of their ailment. In the case to be now narrated emaciation did not make at all a prominent figure. Relapses, unfortunately, are apt to occur in this disease; in one of Dr. Stokes's cases paroxysms of the symptoms continued to recur during five years, and the whole history of my present patient points to the long persistence of the condition, whatever it be, on which these singular symptoms depend—a condition which, according to Trousseau, is not often entirely removed; and this opinion is confirmed by some of the following cases.

A young single woman, aged twenty-four, was admitted into the General Hospital, Birmingham. Her neck began to enlarge at the age of fifteen, and it increased gradually, but more rapidly during the last six months. Her eyeballs have been prominent for two years, and during the same period she has occasionally had great beating at the heart, and in the ears and neck, occurring chiefly when she lay quiet in bed. Moreover, she has not been able to move about much, on account of the shortness of her breath. Nevertheless, she has done her work in service, excepting that she found difficulty in carrying water upstairs, and lost her breath in shaking the beds. Her present nervous condition dates from the same time with the palpitation and proptosis; she has been told that she was reckoned nervous when a child, but she has never been as now.

She is thinner and weaker than she used to be, although her appetite had not fallen off. Her catamenia have been suspended for some time; they have now returned. She has had slight bleeding at the nose at different times.

She was in a very serious irritable condition, much disturbed by the approach of a stranger. Her eyes were kept shut, the lids quivering, then were covered with her hand. Her neck and the front of her chest were jerked with each impulse of her heart, and the pulsation of the carotids was very visible. Respirations were 40, short, hurried, and interrupted by a cough. She spoke in brief sentences, comprised in a single expiration. Pulse was 136; impulse of heart very abrupt, striking the chest with a violent blow felt over its entire front; there was also a slight diastolic impulse, as if by a rebound of the heart. The violence of the heart's action was greatly increased by excitement. A soft systolic bruit was heard at the base of the heart, and a blowing sound was very distinguishable over the entire thyroid as well as over the vertebræ of the neck. This sound had the character of a venous murmur, but when breathing was suspended it assumed a shorter and sharper character, and was distinctly synchronous with each ventricular systole. A thrill was felt over the carotids and over the thyroids, but was uncertain in its presence, and even was distinctly felt in one carotid when absent from the opposite artery. The proptosis caused the irides to be quite uncovered, and produced a considerable projection of the eye, very noticeable when the lids were closed. The pupils were small.

Considerable and symmetrical enlargement of the thyroid gland somewhat curved backwards each carotid artery. She was well nourished.

She left the hospital in five weeks, and we heard nothing more of her until she applied again nearly three years afterwards. She then told us that on leaving the hospital she rested among her friends for nine months; by that time she had quite lost the palpitation, though her breath remained somewhat short; she, however, became equal to the ordinary labour of a housemaid. She gained flesh considerably, and thought herself in good health. Her menstruation had remained suspended for four or five months, but then resumed its natural character. She, however, continued nervous, though free from headache and vertigo. She mentioned the presence of an additional symptom—an inordinate appetite. She declared she could have eaten at every hour in the day; she, however, had restrained herself, but had eaten largely. She had passed through the preceding winter, which had been exceptionally severe, without being sensible of the cold. She was much better in cold weather, she said; in warm weather she got heated and fatigued. She objects to much clothing, and at night a double blanket is too much for her. She is not liable to perspire.

As regards the special symptoms of her disease, the palpitation had ceased, as already stated. I could not obtain any information as to the state of her eyes, further than that they had receded; and the goître had somewhat lessened in size.

It was a month before her second admission when her former symptoms returned with their original severity, especially the nervous excitement and the palpitation; the latter symptom has even compelled her to lie down in the course of the day. She falls into a perspiration from any excitement. The goître has become very large, though still symmetrical; the middle lobe is now firm; the eyes, too, have again projected. Add to these symptoms that she has been losing flesh rapidly, although her appetite has not been affected. Nevertheless, she has slept fairly, and her spirits have been good.

I need not repeat the details of her physical examination, already fully described. I have only one thermometric observation: on that occasion the temperature in the mouth was 97·5°, in the axilla 97°. She was not under my care, and I have no further report of her case.

(To be continued.)

CALCULUS IN CHINA.

By J. DUDGEON, M.D., etc., Pekin.

In the last Report—the thirty-seventh, that for 1875—of the Mission Hospital at Canton under Dr. Kerr, who, after labouring for upwards of twenty years, has just retired and returned to the United States, we find that the total number of operations for stone from 1854 to the end of 1875 was 432, of which 300 were lithotomy and 87 lithotrity by Dr. Kerr himself; 34 lithotomy by Dr. Wong (the Chinese Edinburgh graduate, now in practice at Canton), and 11 lithotomy by Dr. Dickson; or 345 cases of lithotomy in all, or about twenty cases per annum. The total weight of stone removed was 408 ounces, or 25½ lbs. These figures indicate a vast amount of useful and effective work performed by Dr. Kerr at the Canton Mission Hospital. We have not at hand at present the table of the number of deaths by which to compare the results of these operations with similar results at home, but I am convinced that the mortality in China has been very small, from the non-excitable systems of the Chinese, and the absence of inflammation and shock.

With the exception of Canton and Takow in Formosa, no cases of stone have been reported from any of the other hospitals in China. I am not aware of any explanation having been given of its almost exclusive prevalence at Canton. The Chinese have a strong prejudice against cold water, either taken internally or applied externally. Tea is the universal beverage, and water when drunk at all is swallowed hot, and after precipitation by alum and boiling. The common water at Pekin contains a large quantity of lime, and is, in consequence, very brackish. If, as some writers have observed, calculous diseases are most common where the mineral strata are of a calcareous nature, how are we to account for the absence of stone at Pekin and other places, and its presence at Canton, where river water is, as I suppose, entirely used? Goître is common in the north, and is attributed by the natives to the use of lime-impregnated water, but it is not a common affection in the south. Gout and stone are frequently found together. If uric acid calculi, therefore, depend upon a certain acid form of dyspepsia, and have any connexion with rheumatism and gout, stone ought to be of frequent occurrence in all parts of China. The most common form of indigestion among the Chinese everywhere, from the very nature of their food, is that arising from over-acidity. In the north this disposition to the deposit of uric acid ought to be even still greater, as the diet is much more animal than in the south, as from this form of

diet a greater amount of uric acid is said to be eliminated. Opium-smoking, which prevails as extensively in the northern as in the southern provinces, is not adduced as a factor in the estimate of causes. Stone, too, is generally supposed to be more frequently found in cold than in warm climates; but this seems quite reversed in China. Diseases of the urinary system are extremely rare in China. With the exception of the three cases mentioned below, no case of calculus was seen at the Pekin Hospital during twelve years. In March, 1871, I extracted a stone from the navicular fossa of a man from the province of Shantung, where it had been lodged for the twenty days previous to his appearance at the Hospital. He stated that for four years previously it had been situated at the bulb, and for three years before that he had felt it in the bladder. The stone weighed nearly a drachm, and was extracted by slightly enlarging the urethral orifice. In 1873 I had occasion to remove another stone from the same region in a child ten years of age, where it had existed for four years, giving great pain, and rendering the passage of the urine difficult. The stone, which weighed ten grains, was easily removed. About the same time another case of a similar kind occurred in an adult, who had suffered from dysuria and pain for a month previously; and the stone, which resembled a German toy tree, having a root, neck, and conical body, weighed twelve grains. The Chinese have names for calculus and gravel in their books, and the diseases are not at all unknown by name to the common people.

I may here mention that although I have never had a case of calculus in the bladder, I have had three median operations for the extraction of foreign bodies, all of which made good recoveries. One was for a piece of a round chopstick five inches long and of the size of a No. 9 catheter. It had been in the bladder for four days. The patient could not stand erect, had intense pain, voided urine with difficulty, and there was a constant sanious discharge. He had been in the habit for years of introducing it into his urethra, but on the last occasion he failed to return it.

Another case similar to the above occurred in a youth sixteen years of age, who had been in the practice of introducing a kind of horn bodkin, used by the Chinese for fastening their queue (pigtail) in a knot during night and at other times, into his urethra to relieve (cause?) titillation, as he said, of the canal, of which he complained. Passing, on the last occasion, beyond his reach, he presented himself, eleven days afterwards, passing bloody urine and suffering acute pain. Its length and thickness were similar to those of the chopstick, and it was encrusted with a considerable deposit.

In the third case, a piece of lead two inches and a half long was extracted. It weighed 256 grains. The patient possessed a complete set of such metallic sounds or rods. The full-sized one weighed 570 grains, and measured in length two inches and a quarter. The calibre of the largest was of the size of our largest catheter. He had practised introducing these instruments into the urethra for ten years, with the view of strengthening the constitution and preventing spermatorrhœa. He was an opium-smoker. Lead instruments of this sort rubbed with mercury are likewise used in gonorrhœa and other affections of the urethra. These practices, the patient informed me, constituted part of the observances of one of the Tauist sects in Manchuria, where, while on Government duty, he had acquired the habit.

NOTES ON

INFANTILE DISEASES IN INDIA.

By F. R. HOGG, M.D., Surgeon-Major.

I.—Scarlet Fever.

In August, 1869, Dr. Garden at Saharunpore treated an Eurasian girl aged seven, who was ten days ill with suspicious symptoms—namely, fever, sore throat, characteristic eruption, and the skin peeled off. None of the other numerous children in the unclean, untidy house suffered at that time, when scarlatinal fever in India was doubted and denied by very many authorities of experience. From 1824 to 1853, and from 1860 to 1868, in Upper India cases somewhat similar occurred at different periods. It is somewhere in print that in 1824 an inflammatory fever in Bengal, characterised by sore throat, rheumatic pains, cutaneous eruption, great prostration, spared neither age nor sex, the resident nor the stranger, neither the natives nor the animals. Hot sultry months, irregular rains suddenly checked, had something in connexion with this fever, which, specially prevalent in May, was treated by bleeding, purgatives, and emetics. After death, amongst other points the spleen was found enlarged, the liver mottled, the skin yellow as in typho-malarial fevers. In 1874, one or two children, besides a couple of soldiers' wives at Meerut, presented some of the symptoms detailed by Dr. Garden, but so mildly as not to require hospital or regular treatment. One of the women, for fear of spreading the uncertain complaint, gave up a situation as nurse, and the other eventually had a sharp attack of jaundice. According to the *Indian Medical Gazette*, as late as 1870 great doubts existed about the presence of scarlet fever, for the isolated non-spreading instances of so infectious and contagious a disease puzzled practitioners. Drs. Maunsell, Bradshaw, and Thorp, at Simla, noticed cases—for instance, at the Punjaub Girls' School—in 1870, and near the latter place to my own knowledge in 1874 genuine attacks occurred. At Mecan Meer, Umballa, Deolallee, Aden, Kirkee, Kamptee, the disease appeared in 1871, and in December the *Jumna* was in quarantine in Bombay harbour with cases on board. The evidence of importation into Jullundur and Sealkote appears indisputable. The 58th suffering on the voyage left cases at Aden, and soon after arrival at Sealkote a few children were affected. At Poonah, in one of the four blocks occupied by married families, the disease appeared, but by prompt isolation never spread beyond that block. Very difficult at all times is it to keep children in bed, and as during the monsoons the little patients would run about the verandahs with scarcely any clothes on, six of the thirteen attacked had dropsy afterwards. Cases were noticed at Dacca and Dinapoor, also at Umballa, in 1874, in the Rifle Brigade just out from home. In 1875 scarlet fever notices in Bengal were either *nil*, or put into the shade by those of cholera. Formerly on the long voyage round the Cape the seeds of scarlet fever starved and withered away through want of encouragement, for although cases must have occasionally embarked, the disease did not spread, otherwise every susceptible person on board would have suffered and conveyed pestilence to Indian stations. In modern days the greatest vigilance is required to prevent the embarkation, especially at Queenstown, of suspicious sickness. The disinfection of vessels for years has occupied the attention of the most experienced chemists. So far, May, June, July appear the worst months for scarlet fever, which, arising *de novo* or imported, shows no great tendency to spread here as in England, where the contagious, infectious, and malignant character of the disease is simply frightful, and the after-consequences of the most trifling variety may permanently damage certain constitutions. The same observation somewhat applies to whooping-cough in my experience. Therefore all the more necessary to be careful about sanitation in the hills, where the climate resembles that of England. The late lamented Professor Parkes, reminding us that the skin and the throat are the points to attack for disinfection in scarlet fever, recommends bodily inunction with camphorated or carbolised oil, the throat washed with solution of Condy or sulphurous acid, the clothes baked, and, if washed in solution of chloride of lime, sulphate of zinc, or chloride of zinc, to be separate from other people's things. Dr. Day states that ozonic ointment, destroying the poison emanating from the patient's body, gives him a purer atmosphere and checks the spread of disease. This ointment, to be well rubbed over the body thrice a day for three weeks, costs 4s. per pound. One objection to gasoline is its inflammability.

Plenty of room, plenty of constantly changing air, prevent the birth and progress of many a pestilence. It is an excellent plan to anoint the patient with carbolised oil, and let him wear a jacket and trousers suit of flannel, to be burnt with everything that can be spared afterwards; and in India the large houses in the plains, as well as the hot, dry air, are antagonistic to the germination and fructification of the seeds of scarlet fever. It is one of the filth fevers, encouraged by heat, moisture, overcrowding, putrefaction, and finding a ready welcome in the bodies of weakly, scrofulous children, there increasing its virulent intensity. People treated in the open air at first have done the best, but the old plan was to keep children warm at the onset; they became more liable to chill and catching cold when the skin commenced to peel, and suffered from kidney dropsy after. The incubation is very uncertain, perhaps a day, possibly a week or longer, but as a rule short. The intense fever, with red-hot burning skin, racing pulse or great prostration, will persist when the eruption appears on the

second day, in large red patches commencing at the root of the neck, spreading to face, chest, and all over the body, the joints often specially red and painful. After seven days continuance, this rash is followed by the whole of the skin peeling off. The cayenne pepper or strawberry tongue, early vomiting, inflamed throat, tonsils, and glands of the neck, difficulty of swallowing, are significant symptoms. There may be grave delirium, convulsions, dangerous diarrhœa, sanious discharge from nose and ears. Urine may be suppressed, else contain albumen, discovered by putting a little into a test-tube, adding nitric acid, then boiling, when a white cloud turning to a white sediment appears. The poison, so fond of woollen materials, may also be conveyed in water and milk. In the *Lancet* is recorded that in 1875 an emigrant vessel had cases before leaving the Thames, and during the voyage to New Zealand 100 instances with twenty deaths occurred. In the *Medical Times and Gazette* for the same year Dr. Brakenridge praises the system of treating scarlet fever by internal disinfection—that is to say, he gives the sulpho-carbolate of sodium in doses varying according to age, from five to thirty grains three or four times a day, not merely to persons affected, but also to all individuals exposed to infection who were not protected by a previous attack. Other sulpho-carbolates, as of lime, magnesia, potash, and ammonia, have been recommended by Dr. Sansom. In the *British Medical Journal* for February, 1875, in an interesting paper by Dr. Ransome, drawing the distinctions between diphtheria and scarlet fever, he states that diphtheria is common enough in India, where scarlet fever is unknown. Colonies and all new settlements are peculiarly liable to diphtheria, which selects high and well-drained districts, for instance in California at 4000 feet; and the author goes on to state that scarlet fever cases do not occur at high levels. How about Simla, Murree, and Subathoo? Scarlatina may co-exist with, or closely follow, measles, chicken-pox, typhus, typhoid or other fevers. For instance, rheumatism may be mistaken for the "fire measles" of the Germans, but the latter shows fever several days before any eruption, the rash comes out all at once, the patches elevated, not flat, and although desquamation ensues, the scales are very small. There may be sore throat, swelling, or even abscesses about the neck, so that really it is very difficult at times to tell the difference. Scarlatina may be present without any rash at all, and thought lightly of; the body has not been protected during desquamation,—thus dropsy follows. Besides the latter complication, ulceration or enlargement of tonsils, scrofulous ulcers anywhere (especially of glands), deafness, rheumatism, ophthalmia, cardiac affections, kidney mischief, pleurisy, and a host of other ailments, may follow. Formerly belladonna had the character for averting scarlet fever; an idea now almost abandoned. There are no particular medicines or specifics; but aperients at the onset should be avoided, for fear of increasing the diarrhœa. A large room with free circulation of air, an emetic of ipecacuanha, perhaps (but not necessarily) the administration of dilute nitro-hydrochloric acid in doses of from one to ten minims in water according to age of child, the reduction of high fever, and the calming of delirium by means of tepid or cold baths or wet sheet treatment, the inunction of the body with carbolised, camphorated, or any other disinfecting combination with oil, will be useful. Personally I have never at home regretted the application of a leech or two to relieve the throat and glands of the neck; at the same time supporting strength with strong beef-tea, and all the usual dietetics, specially iced milk and lime-water, beef-juice, egg-flip. If old enough, the patient might keep lumps of ice in his burning throat until dissolved. A mixture containing a combination of chlorate of potash with perchloride of iron, a few grains of the one, a few drops of the other, according to age, might be given iced every two or three hours; so might the sulpho-carbolates, the dilute acids, the carbonate of ammonia, or any other remedies used. Babies often shudder at ice. The cold bath treatment, commenced at the onset, moderates the violence of the fever. The inunction with oils protects the skin when changing, indeed from the very first, and lessens the liability to kidney dropsy so often caused by cold caught during the period of desquamation. To the very last almost the poison clings to the patient; every minute shred of old skin, every portion of clothing or furniture, everything which has been exposed to the same pestilential atmosphere, may start trouble afresh. Iron and quinine being found useful remedies in certain stages, it is curious to know that quinine, amongst other properties, is powerfully antiseptic, and a solution will long prevent the decomposition of meat. The incubation of scarlatina, though short as a rule, may be indefinitely extended; for, according to the *Lancet*, instances have occurred at sea more than fifty days after exposure. In England the bodily temperature, as registered by the thermometer, may continue exceedingly high up to the tenth day; the lulls possibly on the fifth, tenth, and fifteenth days of disease. Books speak of 105° to 112° of Fahr. occasionally encountered. Some authorities consider enteric fever to be abdominal scarlatina, and all agree as regards the vital necessity of disinfecting everything excreted by the skin or bowels, the clothes, surroundings, everything around and about the patient: and our best disinfectants are fire and hot dry air. The question was raised during the Royal visit to the Terai whether or not the natives suffered. The eruption has been mistaken for measles, typhus, dengue, nettle-rash, lichen or miliaria, and, as said before, for *Rotheln* or "fire measles." Dr. Sinclair, R.A., states that in 1866, at Kamptee, from March to June, forty children had *Rotheln*, with five deaths. In October, 1871, a boy aged five (the third case admitted), besides fever, scarlet rash, sore throat, desquamation, and other symptoms, had dropsy, which terminated fatally November 14. This case arose from infection, but two other children living in the same quarter escaped.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. BARTHOLOMEW'S HOSPITAL.

CASES ILLUSTRATING THE TREATMENT OF GASTRIC AFFECTIONS AFTER PROF. ZIEMSSEN'S PLAN.

(Under the care of Dr. ANDREW.)

The following cases show very well the success which may result from the treatment of gastric affections on Professor Ziemssen's plan. Dr. Andrew has tried it in his wards several times, and Dr. Wharry, his house-physician, has been good enough to supply notes of five successful cases. The *rationale* of this treatment (so Professor Ziemssen says) is that for the cure of gastric ulcer it is necessary to neutralise the contents of the stomach at least once a day, and at the same time to produce a thorough evacuation of its contents; this, he asserts, can be effected by administering the Carlsbad water or a solution of Carlsbad salt in warm water every morning, while the patient is fasting. In this way the acid fermentation is checked, the contents of the stomach are neutralised; the peristaltic action of its walls is excited, and the organ empties its contents into the intestine. The most marked benefit, in the cases in which Dr. Andrew adopted the treatment, resulted where there was pyloric obstruction with dilated stomach.

Case 1.—H. B., aged thirty-four, a labourer, was admitted into St. Bartholomew's Hospital, March 27, 1876, suffering from pyloric obstruction. He had been a dyspeptic many years. About eighteen months ago he began to suffer with abdominal pain, and on two occasions vomited large quantities of blood. Since then he has been much troubled with abdominal pain, relieved by vomiting. At present he vomits on an average once daily. Condition on admission: Thin and anæmic-looking. Examination of the abdomen showed fulness in the epigastric and left hypochondriac regions; the outline of the stomach could be indistinctly recognised by palpation; while percussion showed the stomach resonance to be increased considerably, and to agree with the outline. Succussion sounds were also to be recognised. The appetite was stated to be good, but pain, coming on two hours after food, and continuing till vomiting occurred, was complained of; the vomit was found to be copious, yeasty, brown, and to contain sarcinæ ventriculi. The bowels were, as a rule, constipated. Milk diet, with two ounces of brandy, was ordered; and one drachm and a half of Carlsbad salt was to be given every morning, one hour before breakfast, in three-quarters of a pint of warm water—the whole being administered in three doses. Upon this treatment he rapidly improved, the bowels at once became relaxed, and five or six watery motions were passed daily. The pain had disappeared by April 7; the vomiting ceased altogether on the 10th; the succussion sounds had gone on the 17th, and the epigastric bulging had become very much less distinct. Fish and one egg were added to the diet, and on the 24th fish was exchanged for a chop, and on

the 28th ferri et ammon. cit. gr. viij., ammon. carb. gr. ij., sp. chloroformi ℥x., inf. quass. ʒj., bis die, was ordered. On May 1 his general condition was very much improved; he had a better complexion, and had gained flesh; the outline of the stomach was hardly recognisable; there was no return of the pain or vomiting, and the patient was in all ways convalescent.

Case 2.—W. B., aged fifty, was admitted to the hospital, June 16, 1876, with well-marked symptoms of chronic gastritis and dilatation of the stomach, which had existed about twelve months. He suffered with loss of flesh, epigastric pain coming on two hours after food, daily vomiting (the vomit containing sarcinæ), flatulence at night, and constipation. He was dieted with milk, beef-tea, two eggs, and bread-and-butter. One drachm of Carlsbad salt dissolved in three-fourths of a pint of warm water was given every morning before breakfast. The bowels became relaxed, being open four or five times daily; the vomiting occurred less often (and the sarcinæ disappeared), and the pain grew less. On the 25th, fish was added to the diet; and on July 4, tinct. ferri perchlor. ℥xv., inf. quass. ʒj., bis die. was given. On July 15 his condition was very much improved; he had gained considerably in weight, had lost all pain, the vomiting had entirely ceased, and but little flatulence remained. The Carlsbad salt was stopped, and chop was given instead of fish.

Case 3.—E. S., aged forty-five, fishmonger, admitted May 25. He had been suffering for some time with symptoms of gastric ulcer, with some dilatation of the stomach. He had lost flesh, and had recently vomited large quantities of blood (coffee-grounds vomit). He always suffered pain, which came on two or three hours after food, and was relieved by vomiting. He was troubled with flatulence, and his bowels were constipated. There was epigastric distension, and succussion sounds could be produced. Dieted with milk, beef-tea, one egg, brandy ʒij. One drachm of Carlsbad salt in three-fourths of a pint of warm water every morning before breakfast, and pil. rhei co. gr. x. omni mane. The patient rapidly improved; the bowels became relaxed, the pain and vomiting ceased, and on June 5 he complained only of slight flatulence, and said he was very hungry. Bread-and-butter were added to the diet. On June 8 fish was given; and on the 12th fish was changed for meat. On June 16 the patient was discharged, convalescent.

Case 4.—Anne S., aged thirty-five, admitted April 4 with symptoms of gastric ulcer, which had existed for about eight years. She had pain after food, with vomiting and flatulence, hæmatemesis, and constipation. A similar plan of treatment was employed, and the patient recovered, though with much less rapidity than the previous patients.

Case 5.—In this case the Carlsbad salts did not seem to have so much effect in the cure of the affection, but certainly afforded some relief to symptoms. J. O'C., aged fifty-six, a labourer, admitted into Mark ward on May 16, 1876. Has lost flesh for twelve months; face is pale and thin; tongue clean, red, and fissured; temperature 98°; pulse 100, small and soft; thorax emphysematous; respirations 28; tenderness on percussion over both apices of the lungs; percussion high-pitched at the right apex; heart-sounds feeble, no murmur; tenderness in epigastric region extending over towards the right; liver not enlarged; evidence of dilated stomach; extended area of stomach percussion-note and succussion sounds; sarcinæ ventriculi present in vomit; urine pale, acid—no albumen or sugar; appetite capricious; thirst constant; bowels constipated. Double inguinal hernia; varicose veins on right leg; no glandular enlargement; no œdema of legs. He complains of pain in epigastric region occurring at intervals without apparent cause; has been subject to abdominal pain off and on for five years. Seven months ago this pain became much exaggerated, and he was in the hospital; he was then much relieved by treatment, but pain returned soon after his leaving the hospital. During the last two months has vomited daily, generally in the afternoon. No history of hæmatemesis. Ordered a warm bath, milk diet, arrowroot, two eggs, and two ounces of brandy, and was told to take two drachms of Carlsbad salt in three-fourths of a pint of hot water every morning, and syrupi ferri iod. ℥xx. ter die. May 19: Submaxillary glands swollen and painful on both sides; bowels not open; vomited yesterday afternoon; pain continues about the same; temperature 98°; sarcinæ in vomit less distinct. 20th: Swelling in glands less; bowels not open; vomited last night, but less in amount. 22nd: Ordered mist. creasoti ʒj. omni nocte. Bowels relieved; glands still painful; epigastric pain continues; patient vomited about three pints last evening; pulse 90 23rd: Stomach ordered to be washed out. Attempt to carry out order proved abortive; an œsophageal tube could not be passed, owing to some irregular growth behind larynx. Patient afterwards managed to pass a very small tube himself, and the stomach was partially washed out. The epiglottis is placed far back against the spinal column, and is felt to be thickened. There is some hard irregular tissue blocking up the direct passage to the stomach. 26th: Pain continues; bowels opened on 23rd; no vomiting. Passes a full-sized tube himself, and washes out the stomach. Ordered salicylic acid ʒss. to Oj. aq., with which to wash out the stomach. 29th: No vomiting since 26th; bowels open. 30th: Pain less; no vomiting. June 5: Stomach washed out daily; pain perhaps a little increased. From this day the patient went on improving, the pain and vomiting continuing, only to a much less degree. Shortly after, he was able to leave the hospital, and when last seen had continued in much the same state.

HERNIOPIA AND PARTIAL PARALYSIS.

(Under the care of Mr. POWER.)

[For notes we have to thank Mr. Barton, Ophthalmic House-Surgeon.]

D. G., aged sixty-four, a gardener, admitted into the hospital on April 7; is a fairly healthy-looking old man. He had rheumatism three years ago acutely, and has been subject to occasional attacks since, having had an attack three months ago. Was fairly well, except slight lumbago, up to April 4, when he rose on the morning of that day and went to dig in the garden. After a short time he felt giddy, and a mist came over his eyes; at the same time he had pain in both temples. He noticed he could see nothing to his right hand.

Condition on Admission.—Eyes normal on inspection and on ophthalmoscopic examination; pulse and temperature natural; vision of right eye $\frac{20}{30}$; vision of left eye normal. Urine acid; specific gravity 1030; lithates; no albumen or sugar.

April 10.—For white light the fields of vision are nearly similar with both eyes. On looking at the centre of a horizontal board of letters straight in front of him, he can only read those letters lying to the left of the centre; none on the right. His field of green light is larger than the white, and his red field is smaller. As a gamekeeper, he always used his left eye for covering the bird.

11th.—Fixing on a point twelve feet from him, he loses sight of objects placed in field of vision at eight inches to the right of the fixed point; sees objects in the field for some distance to his left. Ophthalmoscope shows atrophy of both choroids, and the retinal vessels increased in number; the discs less distinct than natural, and hazy at margins.

On waking on the 26th the flexors and extensors of arms were found to be impaired in power. He had some headache.

At this period he was transferred to a medical ward from the ophthalmic department. It was found that the power in the legs was somewhat impaired, although he could walk very well. There was no facial paralysis. The diminution of power was greater in the right than in the left arm.

On May 3 he felt numbness in both hands several times; complained of frontal headache.

On the 22nd he lost power entirely in left forearm; but from this period the power returned gradually in all his limbs, the herniopia continuing.

Towards the end of June he was discharged convalescent as regards the paralysis, but still with vision limited towards the right. He was able throughout to take the full meat diet of the hospital, and had quinine and strychnine in combination as medicine, with belladonna to his back, which was generally the seat of myalgic pains. There was no conclusive proof of syphilis to be discovered.

THE INTERNAL ADMINISTRATION OF CHLOROFORM.—M. Jaillard, a French army *pharmacien*, after alluding to the difficulties that occur in the internal administration of chloroform, states that the following simple procedure is by far the best:—The prescribed quantity of chloroform should be poured into from 100 to 120 grammes of milk (which may be either pure, or sweetened and aromatised with a few drops of cherry-laurel water), and then briskly stirred. The chloroform in this way becomes easily divided into an infinity of minute globules, exactly resembling in appearance the fat globules which exist in the milk, in the midst of which they remain suspended for an indefinite period.—*Recueil de Méd. Militaire.*

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, SEPTEMBER 2, 1876.

THE PRACTICE OF VACCINATION.(a)

We have received a pamphlet on Vaccination Statistics which shows such very good and thorough work, by a man altogether in earnest, that we hope the author may be induced to take up some other point of medical practice, and deal with it as ably as he has done with vaccination. He is the Public Vaccinator for the Greenwich District of the Greenwich Union, and gives us, in the form of a report to the Greenwich Board of Guardians, the statistics of vaccination from February 23, 1870, to September 29, 1875. The statistics are embodied in tables, which are illustrated by a commentary on the most prominent points. The lymph which Mr. Purvis uses he believes to be the descendant of that used by Jenner: at any rate, although it must be very many years since it proceeded from the cow, it is perfectly active, and produces normal vesicles if used fresh, though it loses much of its activity if kept for twenty-four hours. We need not say how much this tells in favour of arm-to-arm vaccination, and of giving each public vaccinator a large area from which to collect children, so that the succession may be kept up unbroken. In only two weeks of the five years reported on was there any need to fall back upon reserved lymph. With regard to success or failure in the operation, Mr. Purvis has attained a high degree of success himself, and demands it from others. He is dissatisfied with Mr. Marson's statement that an expert vaccinator should fail only once in 150 times, and has himself failed in only thirty out of nearly 3000 cases, of which thirty, twenty-six succeeded in a second attempt; but in the last four years, taken by themselves, the failure of vaccination at the first operation occurred only once in 240 cases. He disbelieves utterly in "insusceptibility to vaccination," and has never had to sign a certificate to that effect.

Mr. Purvis takes pains to record not only the bare fact of success, but the number of vesicles produced, and the quality of these. For instance, out of 1063 cases, 695 (or 65 per cent.) were normal, 85 rubbed, 143 prematurely developed, and 51 inflamed. This minute system of registration enables the vaccinator to find out imperfections in his work; as, for instance, if one baby's arm be inflamed, others vaccinated from the same source will be found so likewise. In the operation itself Mr. Purvis follows the example of most successful vaccinators, and, instead of a simple puncture, jobs or scratches the cuticle over a space equal to about half the diameter of a split-pea, and does this in five places, half an inch apart, over the insertion of the deltoid, in the form of the "five of diamonds." The greatest care is taken not to admit the mixture of blood, or of inflammation products. For this purpose, when the vesicles of the *vaccinifer* have been punctured with a very sharp lancet, and the lymph has exuded in beads, these are sucked up by a Husband's tube, so as to fill it one-third. The lymph so taken up is then blown on to the point of the vaccination lancet, which need not be very sharp. After each vaccination the lancets are washed and wiped.

The greatest attention is paid to the selection of the vaccinifer, who should be (if possible) a baby with a typical arm of the eighth day, free from inflammation or premature areolæ of good health, of a large family, with brothers and sisters living, under three months of age, not scrofulous, and not illegitimate.

Sequelæ have not much troubled Mr. Purvis, and when they have occurred have been the same as might have followed any other wound or scratch. The only serious one was erysipelas, of which there were seven cases and three deaths. Two of these deaths occurred to two infants in succession in one family. "The first child," says Mr. Purvis, "distinctly caught the erysipelas from a sister who had just returned from a hospital, where she had been with erysipelas of the face; and I have every reason to believe that the second infant wore the same clothes as the first who had died eighteen months previously, and that these clothes, being infected, gave the second the same disease. Strange to say, since I commenced this report the mother has brought a third infant to have vaccination performed; and on my questioning her about the clothes, acknowledged that they had not been destroyed." Vaccination alone cannot produce erysipelas.

This leads to the subject of transmission of syphilis by vaccination—on which, and a few other points, we notice with regret that Mr. Purvis's enthusiasm leads him into some of those exaggerations which have been the bane of vaccination from the first. He is fully convinced that if nothing but "vaccine lymph" be used, and the taking of blood be carefully avoided, nothing but vaccinia can be conveyed from one person to another. Vaccine, he says, is vaccine and nothing else, and can no more propagate any other disease than any other specific poison can; or any more than a person who caught small-pox from a consumptive patient must catch consumption also. Mr. Purvis does not see that vaccine, or *vaccinia*, as W. Farr called it, is an abstraction—a name for the supposed matter in which the power of the disease resides, but which has never been isolated—which exists in the vaccine lymph if good, though there may be, as proved by vaccination failures, lymph which contains none. The liquid lymph which the operator takes is the vehicle of the vaccine poison, but may have in it more poisons than one, especially if taken from a syphilitic subject. We may be thankful that a syphilitic patient can yield vaccine lymph free from syphilis, but we have no right to presume upon it.

Mr. Purvis makes some severe remarks on the negligence of some private practitioners who are content to produce a small number of vesicles, and reiterates the evidence which shows that the larger the number of good marks, the less likely is the patient to take small-pox severely.

(a) "Statistics of Vaccination at the Greenwich Public Vaccination Station." By John Prior Purvis, M.R.C.S.E. Pamphlet, pp. 48.

Revaccination at puberty is now generally acknowledged to be expedient, and (spite of the assurances confidently given that it will afford a life-long protection) the common sense or alarm of the public will justly demand a repetition of vaccination at any time when small-pox is epidemic. When small-pox is at a low ebb, nobody seeks revaccination; when it is virulent, the public stations are crowded, and private practitioners urgent in their demands for lymph—so that good lymph becomes scarce, the public vaccination of infants is less well done, and failures are more common. Do not these facts show the expediency of resorting to the calf as a vaccinifer at epidemic times, if at no other?

ON THE SO-CALLED ORGANISATION OF THROMBUS.

We have recently drawn attention to some important papers on arterial pathology which have appeared in Germany, and which not a little tend to modify our views on the important subject of which they treat. In connexion with this same subject we would direct attention to a paper which appears in the *Centralblatt für die Medicinischen Wissenschaften*, No. 34. To that number of this periodical Dr. Baumgarten contributes a valuable paper "On so-called Organisation of Thrombus." The author is preparing a work on the subject, and the article to which we refer is a preliminary communication, in which his main views are briefly expounded. Stopping for a moment, we may be allowed to congratulate our German neighbours on these very useful "*vorläufige Mittheilungen*," *i.e.*, "preliminary notices," which, if not peculiar to, certainly originated among them. In these communications an author may briefly analyse his facts and his deductions, and may point out how he differs from or agrees with other writers. This, too, gives critics an opportunity for expressing their opinions before a work is actually published, and often places an author in possession both of *matériel* and of facts which enable him to settle points that without this intercommunication would be called doubtful, and to clear up many subjects which, from comparatively restricted opportunities, might otherwise seem unfathomable.

From Dr. Baumgarten's communication it appears that if the arteries or veins of rabbits be ligatured in such a manner that in performing the operation about one inch of the vessel be completely exposed and included between two separate ligatures, the second of which is to be so applied that the circulation of the blood is suddenly arrested, there results, both above and below the seats of ligature, as well as within the portion of vessel lying between the ligatures, a cell-proliferation in the internal coat. This takes place whether a clot be formed or not, for the blood may remain fluid twelve or fifteen days. This change is seen in cross-sections of arteries—where the changes, in consequence of the very definite, shining nature of the internal lining membrane, are remarkably obvious—as a filling-out of the folds of the lamina elastica interna, with (apparently) larger or smaller nuclei, over which the endothelium, as though raised by it, passes as a continuous cellular band. In its further course this mass of cells increases in extent, and for the most part concentrically narrows the lumen of the vessel. A differentiation of the newly formed elements now begins, and those nearest the interior of the artery assume a long spindle form, and arrange themselves in concentric bands, resembling a new muscular coat, while the cells, placed more externally, resemble rather an open, irregularly arranged network. The thrombus, as may be demonstrated by successive cross-sections, and in exact ratio with the proliferation just referred to, contracts towards its interior, *without there being any visible evidence of cell-proliferation about it*. The original vessel may become narrowed until its lumen is no larger than a pin, and without any further progressive metamorphoses—*namely, the formation of vessels*—taking place.

While this process is occurring in the central portion of this doubly ligatured artery, proliferation of the original cell elements and migration of corpuscles have been going on at the spot where the ligature divided the media and intima, leaving, as the only bridge of communication between the divided parts, the constricted adventitia. New vessels—arteries—form in this cell-growth, often in obvious connexion with the pre-existing bloodvessels of the surrounding connective tissue. These highly vascular granulations proceeding from the point of ligature grow into the interior of the vessel, encroaching gradually on the thrombus, but from *below* upwards, just as the endothelial proliferation had been doing *laterally*. In this way there is complete obliteration of the lumen, and the thrombus disappears. Cross-sections of arteries will, at certain stages, show a sharply defined peripheral, non-vascular zone of spindle and oval cells, and a central highly vascular one of round cells. In process of time a mutual adhesion between adjacent portions of these outgrowths takes place, the vessels ramify laterally, and finally anastomose with those of the old media, and through these with the vessels of the surrounding structures.

The author next considers the source of this cell-proliferation, and adduces ample grounds for his belief that it proceeds entirely from the intima. First, because the intima of the vessels of the calibre which he examined was the only cell membrane which could produce such results, unless they are to be attributed entirely to wandering cells, which is, no doubt, just possible. He scarcely considers it necessary to argue against the view that these wandering cells could proceed from the thrombus. At no period of the process, except perhaps just at the point of ligature, is there any very active cell-proliferation in the adventitia or media; and finally—and this is very important—the very earliest products are exquisitely formed endothelial elements. Secondly, because an identical process may be set up artificially by any long-continued irritation acting on it. Dr. Baumgarten sums up the results of his researches as follows:—

1. The so-called organisation of red thrombus (he only refers to this, and not to mixed or white thrombi, the origin of which Zahn has described) is due to two distinct processes—first, to proliferation of the arterial endothelium; and secondly, to an invasion from without of connective-tissue elements, from which, in his opinion, the new bloodvessels are solely formed.

2. The part played by the blood-clot in the organisation is *nil;* an occasional morsel of encapsuled pigment is the only remnant it leaves.

From what has been said it will be rightly inferred that the above-named processes go on in just the same manner even when all blood is allowed to escape from the vessel between the two ligatures.

The author concludes his paper by stating his own belief that the proliferation of the intima after simple ligature of the artery is histogenetically the same as that described by Heubner as the result of syphilis, and by Friedlander as occurring in the cerebral arteries even without such a cause. It becomes obvious, therefore, that changes in the arterial intima such as are found in chronic inflammations of organs, in new growths, possibly also primarily in syphilis (in the cerebral arteries), may be produced experimentally by simple traumatic causes.

THORACENTESIS.

In an article on "Rapid Death after Thoracentesis," published in the *Medical Times and Gazette* of January 15, 1876, an attempt was made to point out how far the operations for pleuritic effusion and empyema were concerned in causing the sudden death which in some cases has been known to follow them.

Without denying that there is any relation between them, much hesitation was felt in drawing the conclusion, from the facts then known, that the operation had in any instance been the direct cause of the death. There were three reasons for suspending judgment on this point—viz., that sudden death has occasionally occurred in simple pleurisy, as well as during other diseases, such as typhoid fever and cancer; that there has been no uniformity in the stage after thoracentesis at which sudden death has occurred; that there has been no uniformity in the mode of death, nor in the pathological conditions found after death. Further, to the theory that the fatal result was the effect of syncope due to reflex action on the heart, excited either by the pain of the puncture, or by the contact with the pleura of an irritating fluid used for washing out the cavity, no great importance was attached, for the reason that in some cases death had been delayed too long to be thus explained. Nothing has since been published which demands a modification of these views, or which justifies the expression of a more positive opinion upon the subject.

It is pretty well known that besides sudden death other and slighter phenomena have occasionally followed thoracentesis. Convulsions, sometimes terminating in coma and death; partial loss of muscular power; and profuse albuminous expectoration, have been reported, and one or other of the various assigned causes of the fatal terminations has been called into requisition to explain these less serious sequelæ. The theory of reflex paralysis has been lately employed by M. Lépine to account for a temporary paralytic condition (following the operation for empyema), which certainly could not be explained by the mechanical theory of cerebral embolism propounded by M. Vallin with regard to some cases of hemiplegic paralysis.

Two cases have been published by M. Lépine. One was that of a man, aged fifty-two, who suffered from empyema of the right side. The operation for empyema was performed after, but in the same month that two punctures, at intervals of a few days, had been made. Fifteen days afterwards the right upper extremity became feeble, and later on the muscles of the right shoulder and arm became soft and flaccid, and the skin dry, rough, and scaly. The right arm could be scarcely extended, nor could the hand be brought to the face, neither could the hand be firmly closed. The patient complained of lancinating pains which seemed to take origin from the wound in the chest, and to radiate to the shoulder and along the arm to the elbow. Sensation was not impaired. There was no feebleness of the lower limb. With the exception of slight alternations of diminished and aggravated pain, the symptoms remained unaltered for some weeks; then the muscles slowly improved in power and nutrition until they had pretty completely recovered their normal state.

The second case was that of a man, aged thirty-four, who was attacked with pleuritic effusion of the right side. Seven punctures were made in two months, but after leaving the hospital apparently convalescent, the patient returned, and two more punctures were required. At the second of these a solution of weak iodine was injected. As soon as this fluid reached the pleural cavity, the patient felt a sudden pain, and a numbness of the limbs, especially of the same side as the effusion. Some days afterwards the power of the right upper limb was by degrees lost. In June, 1875, the operation for empyema was performed, and between three and four months afterwards the man, commencing to get up, discovered that his right leg was partially paralysed. In November, 1875, he could walk and exercise every movement with his right arm, but both limbs on the right side were very soon fatigued. There was no loss of sensation. There was no alteration of face, nor of any organ of sense. The intelligence was unaffected. The feebleness of the right arm, which had nearly passed away in December, returned after an injection of iodine into the pleural cavity, and disappeared again in the month of January.

Neither of these patients had ever had any previous illness. Neither had been affected with syphilis, rheumatism, or any nervous affection.

The symptoms, M. Lépine thinks, ought not to be attributed either to progressive muscular atrophy, or to rheumatism, or to any cerebral lesion, but to a kind of reflex paralysis. He considers that in these cases an irritation excited by the wound in the chest-wall, and acting on the spinal cord, had produced the paralytic and trophic conditions described. And further, he is of opinion that the cases themselves establish the fact that the operation for empyema, as also the injection of an irritating fluid into the pleural cavity, can produce paralysis of the muscles of the upper and lower extremity of the corresponding side.

M. Lépine's theory is ingenious, though the grounds upon which it is founded do not allow of its being considered conclusive. It will be observed that in neither of the cases did the loss of muscular power come on until several days after the act which is supposed to have been its exciting cause. There seems as much, if not more, difficulty in accepting the theory of reflex action in explanation of the symptoms above described, as in explanation of sudden death after thoracentesis or washing-out of an empyema. With regard to the treatment of empyema, these cases can have no influence in practice, because, if the theory is correct, the symptoms are liable to follow the mere washing-out of the pleural cavity, as well as the insertion of a drainage-tube through an intercostal space; so that the one proceeding is not attended with less risk than the other.

THE WEEK.

TOPICS OF THE DAY.

In June last the Richmond Select Vestry made application to the Local Government Board for the formation of the urban and rural sanitary districts between Hampton and the western boundary of the metropolis into several united districts, for purposes of sewage disposal. In answer thereto, the Board sent a copy of their reply to an application of the Hampton Wick Local Board for the formation of the districts between Hampton and the western boundary of the metropolis into one united district, adding that Colonel Cox would shortly communicate with the Urban Sanitary Authority on the subject of the proposed united district. A meeting of the Select Vestry was held last week, to consider the reply of the Local Government Board, when it was resolved, by a majority of ten to three, to write to the Board, stating that the Vestry were prepared to support the action of the Hampton Wick Board.

A voluminous Blue-book on the Health of the Crews of Merchant Ships has recently been issued, which contains particulars of reports, correspondence, and papers relating to recent cases of scurvy which have occurred on board British merchant ships. The sanitary clauses of the Merchant Shipping Act introduced by the Duke of Richmond had, up to last year, effected the purpose so well that scurvy was reduced in the mercantile marine by from 70 to 80 per cent. During the past eighteen months, however, the disease has again exhibited an increase. The report above quoted contains particulars of no less than 46 vessels as to which official inquiries have been held on account of scurvy, 29 of which have occurred since the beginning of last year, and the majority of these within the last nine months. Analyses of the reports handed in by the medical inspectors show that, of the 46 vessels, 24 belonged to Liverpool, 4 to London, 8 to Glasgow and Greenock, and 1 each to Dublin, Leith, Scarborough, Belfast, Hong-Kong, Carnarvon, Nevin, Northwich, Halifax (U.S.), and Sittingbourne. The causes of

the outbreak of scurvy are variously reported, the chief being insufficiency of lime-juice, bad food, insufficient rations for the voyage, proper allowance of lime-juice not served out, etc. The report also contains a summary of forty-six cases reported to the Board of Trade, in which, on account of the small number of cases of scurvy, or on account of other circumstances, no further action was considered necessary. The balance of evidence adduced goes to prove that sufficient care is not exercised by some owners and captains in ascertaining that the meat shipped for the use of the crew is of good quality, and in serving out the lime-juice regularly and in sufficient quantity.

One of the very worst localities in the metropolis is at last to be improved. Last week the surveyors and other officials of the Metropolitan Board of Works inspected the houses in the neighbourhood known as the Mint, Southwark; it being the intention of the Board, subject to the approval of Parliament, to construct a new thoroughfare from St. George's Church, Borough, through the Mint to the Southwark-bridge-road. At the present time the Mint comprises within its limits a number of low lodging-houses, which afford shelter to a great number of tramps and disorderly people well known to the police. The cost of the new street has been estimated at £73,000. The full importance of this improvement will be realised by referring to the annual report of Dr. Bateson, the Medical Officer of Health for Southwark, in which he states that, in connexion with the homes of the working-classes, the Peabody Buildings deserve special attention, as they and others of a like kind clearly show what benefit to health will follow from housing the working population in a way which befits humanity. The structural completeness of the buildings, the care exercised over them as regards repairs and cleanliness, and the improved character of the occupants, all combine to produce the best possible sanitary results; consequently the death-rate was only 12 per 1000 in these Buildings, although the death-rate of the parish was returned as 24·5 per 1000 persons living, or not one-half of the mortality occurring in the district outside them.

A fresh element of discord seems likely to be imported into the Hospital Saturday movement this year. As the London Temperance Hospital does not participate in the distribution of the Fund, it is announced that arrangements are being made for several ladies belonging to the Good Templar movement to have stations in different parts of the metropolis for the collection of subscriptions for that particular Hospital; and special collections are to be made in the temperance-halls during next week in aid of the funds of this institution.

The following medical men left London last week, with tents and medical supplies for the sick and wounded Turks and Servians:—Dr. A. Leslie, Mr. E. M. Little (St. George's Hospital), Mr. Brock, M.R.C.S., Mr. White, M.R.C.S., Mr. Bernard Pitts, and Mr. F. Barker (St. Thomas's Hospital). The Turkish Government have signified their willingness to employ any surgeons who may volunteer from this country, the promise being that they shall be equipped and sent off to the seat of war at once. The Society for Aid to Sick and Wounded in War have purchased from her Majesty's Government a quantity of hospital tents, etc., marked with the Red Cross of Geneva, which have been sent off through France. These tents are of the size of a large room, with accommodation for beds, chairs, etc., an outer tent enclosing an inner one, so as to exclude the sun and rain, and the effects of variations of temperature.

The new Act for making further provision for the Prevention of the Pollution of Rivers has just been printed. The principal object of the statute, as declared by the preamble, is "to prevent the establishment of new sources of pollution." There are twenty-two sections, divided into six parts. The first relates to prohibiting the putting of solid matters into streams; the next to sewage pollutions; the third as to manufacturing and mining pollutions. The fourth part has reference to the administration of the law; and sanitary authorities are to afford facilities for factories draining into sewers, and those authorities have powers to enforce the statute, as also the Lea Conservancy Board. The other provisions relate to legal proceedings, etc. Offences are to be restrained by summary orders of county courts, with the right of appeal to the High Court of Justice. The inspectors of the Local Government Board have similar powers with the inspectors under the Public Health Act of last year; they are to give certificates as to the best practicable means for rendering harmless any sewage matter falling or flowing into any stream. There are provisions as to the execution of the new law in Scotland and Ireland. Under this Act sanitary authorities and the Local Government, by active exertions, may prevent the pollution of rivers.

A searching inquiry has elicited the fact that the present outbreak of small-pox originated in Blackburn, and was not imported there from any other place. The disease began in Moore-street, where the ventilation is extremely deficient, and the floors are black with damp. The Sanitary Committee has issued a notice demanding that cottagers shall whitewash their houses within ten days, and use carbolic acid. Fresh cases of the malady are reported every day, and active measures will be necessary to render the town once more healthy. It is also reported that small-pox has broken out in Derby; eight cases have been recorded, some of them of a malignant type.

The Medical Society of Victoria, after a protracted discussion, which was adjourned from time to time during several weeks, have at length arrived at certain resolutions on the subject of Professor Halford's mode of treating snake-bites. There were several amendments on the original resolutions proposed by Mr. Wooldridge, but those proposed by Dr. Martin were finally carried by thirteen votes to four. They are as follows:—"1. That the bite of Australian poisonous snakes is extremely deadly. 2. That the symptoms are the same in Australia and in India; that they differ somewhat in the lower animals and man; and that they are distinct in character from those of alcoholism. 3. That ammonia is the best form of stimulant to exhibit, and that the intravenous injection is the best method for its administration." The final meeting was a small one, as members were not generally aware that the division would be taken on the evening in question. It appears, however, to be the general opinion that the numbers on both sides nearly represent the feeling of the profession in the colony on this subject. All the points were stoutly contested. The result is, no doubt, gratifying to Professor Halford, though whether the scientific questions in connexion with this matter have been advanced by the discussion, and whether the profession out of Victoria will acquiesce in the decisions arrived at, remains to be proved.

The annual meeting of the supporters of the Royal Sea-Bathing Infirmary at Margate, an institution established for the scrofulous poor of the kingdom, was held on Monday last. The Secretary, Mr. John Walker, read the report, from which it appeared that 821 patients were treated during the past year, being an increase of 103 on the previous year; the death-rate is also smaller. The receipts were £7301 5s. 8d., and the expenditure £8580 19s., and an urgent appeal was made for further assistance towards the support of an institution which might claim to be almost national in its character.

Mr. William Wallace, late of Curtain-road, Shoreditch, has bequeathed £500 to the London Hospital, and a like sum to the Hospital for Diseases of the Chest, Victoria-park; also a sum of £200 to the Royal Hospital for Incurables. These sums are to be handed over free of legacy duty.

Chelius has just died in Heidelberg. His work on Surgery was translated and edited by Mr. J. F. South, formerly President of the College of Surgeons. The work is a perfect mine of information on surgical subjects.

AN EXTRAORDINARY PROSECUTION.

A RATHER extraordinary prosecution is reported from Glasgow. Several druggists were brought before the Justice of the Peace Court there, at the instance of the Excise, on the charge of having sold wine without a licence. The first case called was that of Thomas Davison, Buchanan-street, who was charged with having, on April 13, 1876, sold spirits without a licence; and there was a second charge of having, on the same day, sold foreign wine without a licence, the penalty in each case being £50. Mr. Lindsay contended that Mr. Davison sold the article in question in ignorance that it required a licence. It was sold on the understanding that it was a proprietary medicine, as it was sealed and capsuled. It was not sold in bulk, and it was advertised in the usual way as "Liebig's Liquid Extract of Beef." It had been recently introduced as a medicine, and had been sold by Mr. Davison on the order of medical men who had recommended its use to their patients. It was sold at the price of three shillings per bottle, which was double the ordinary price of the quantity of wine, so that the price precluded the idea of its having been sold as a beverage, for there was no one who wanted a beverage who would pay double the price for such a wine. Mr. Douglas, for the Board of Trade, said the object of the prosecution was certainly not with the view of stopping the sale of this or any other wine or compound; it was merely with the view of compelling people who sold wines or spirits under any guise to take out the usual licence. It could be shown that the compound sold in this case was simply a wine—a wretched wine called Tarragona, the lowest species or imitation of port,—with almost no appreciable quantity of quinine in it, and very little, if, indeed, any, of the extract of beef. There was 84 per cent. of wine in it. Mr. Watson said the Bench had no alternative but to impose a penalty on account of Mr. Davison having pleaded guilty. The highest penalty was £50, and they had only power to mitigate it one-fourth, but they would recommend that the Inland Revenue Commissioners should further modify the penalty. Common sense, if not justice, would impose the penalty on the proprietor of this remedy, and not on the vendor, who merely acted as agent.

THE HEALTH OF LONDON.

FROM the Registrar-General's return for the week ending 19th ult., it appears that 2285 births and 1509 deaths were registered in London during that period. Allowing for increase of population, the births were 5, and the deaths 107 below the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the three preceding weeks had been equal to 29·5, 25·1, and 23·5 per 1000, further declined that week to 22·6. The 1509 deaths included 5 from small-pox, 25 from measles, 46 from scarlet fever, 3 from diphtheria, 26 from whooping-cough, 24 from different forms of fever, and 232 from diarrhœa; thus to the seven principal diseases of the zymotic class 361 deaths were referred, against 699, 522, and 415 in the three preceding weeks. These 361 deaths were 124 below the corrected average number from the same diseases in the corresponding week of the last ten years, and were equal to an annual rate of 5·4 per 1000; this zymotic rate ranged from 4·0 in the West, to 6·0 in the South groups of districts. The deaths referred to each of these seven zymotic diseases were below the corrected average weekly numbers. The fatal cases of scarlet fever showed a further increase upon those returned in recent weeks, and included 10 in the North, and 20 in the South groups of districts; 4 occurred in Fulham, 4 in Islington, 4 in Greenwich and Deptford, and 7 in Woolwich and Plumstead. Of the 5 deaths from small-pox, 4 occurred in the Stockwell Small-pox Hospital, including 3 admitted from South London; the fifth case was of an unvaccinated infant in Kennington. All the four deaths in the Stockwell Hospital were of adults who had been vaccinated in infancy. Of the 24 deaths from fever, 5 were certified as typhus, 13 as enteric or typhoid, and 6 as simple continued fever. Different forms of violence caused 55 deaths; the deaths of 1 adult and 2 children were referred to sunstroke; and during the seven weeks ending the 19th ult. 99 deaths from drowning were registered in London, which exceeded the corrected average for the period by 23, or 30 per cent.

ARMY MEDICAL SERVICE.

THE following is a list (in order of merit) of gentlemen who competed successfully for appointments in her Majesty's Army Medical Service at the examination held at the University of London on August 14:—

	Marks.		Marks.
1. Allin, W. B.	2220	18. Robinson, R.	1600
2. Ryan, M. R.	2081	19. Allen, W. H.	1505
3. Robbins, H. J.	1976	20. Lamprey, J. J.	1485
4. Reynolds, E. O.	1935	21. Murchison, F.	1435
5. Carey, J. T.	1925	22. Bourke, U. J.	1409
6. Morris, J. J.	1869	23. Keith, A. C.	1395
7. Rainsford, W. J. R.	1858	24. Peyton, J. S.	1340
8. Tuthill, P. B.	1850	25. Russell, G. M.	1325
9. Williamson, J. F.	1840	26. Large, W. B.	1305
10. Boyd, J.	1790	27. Carleton, A. W.	1295
11. Hayes, A. E.	1782	28. Brodie, J.	1285
12. Hewett, A.	1745	29. Gunning, R. C.	1255
13. Johnston, P. H.	1744	30. Cotton, H.	1230
14. Boulger, J.	1675	31. Hunt, J. P.	1215
15. Laffau, G.	1675	32. Hughes, G. A.	1180
16. Roche, E. A.	1625	33. Eager, F. G. L.	1055
17. Emerson, J. B.	1615		

THE BURIAL OF PAUPERS IN ISLINGTON.

AT the last meeting of the Islington Board of Guardians, a letter was read from the Clerk to the Burial Board, directing attention to the fact that the bodies of paupers are sent to the cemetery for interment in coffins so badly constructed that the bodies can be seen through the interstices left in the sides, through the boards not being joined in a proper manner; and as no sawdust or pitch is used, it has been found that disgusting smells proceed from the coffins highly dangerous to the health of those obliged to handle them. If the bodies of paupers are taken to their last resting-places in such apologies for coffins, it is easy to understand why the poor have such a deeply rooted dislike to having their relatives buried by the parish.

AGED AND INFIRM MARRIED PAUPERS IN WORKHOUSES.

BY a clause in the new Poor-law Act, the guardians of the poor are empowered to permit a husband and wife, being inmates of the workhouse, to live together, provided that either of them is infirm, sick, or disabled, or above the age of sixty years. This regulation is intended to remove a blot on our Poor-law administration, and does credit to the humanity of those who were instrumental in bringing about the alteration. Boards of guardians will, however, have to exercise great caution in granting the privilege to married couples, or we can readily understand that mischievous results might follow.

ALCOHOLIC STIMULANTS IN WORKHOUSES.

A FEW weeks ago the Bridgwater Board of Guardians decided to discontinue the supply of alcoholic stimulants to the patients in the Workhouse Infirmary. The proceeding was strongly condemned by public opinion, with such happy effect on the minds of the guardians, that at a subsequent meeting it was

resolved to order the usual quantity of stimulants to be supplied to the Infirmary for the present. The total abstinence party are determined to bring forward the subject again at an early meeting, but we hope that the majority of the guardians will see the propriety of leaving the prescribing of alcoholic stimulants to the discretion of the medical officer.

VITAL STATISTICS OF GLASGOW.

"The Annual Report upon the Vital Statistics of Glasgow for the Year 1875," by William West Watson, F.S.S., City Chamberlain, has just been published, from which we make the following extracts:—The natural increase of the population of Glasgow during 1875 amounted to 5471, raising the population of the municipal city to 534,560. The year has not been characterised by any remarkable variations as regards weather and rainfall, except in the first and last four months of the year, in which the rainfall was very heavy, amounting in the last four months to 5·45, 5·86, 5·19, and 5·58 inches respectively. The average temperature of January, February, April, and May was exceptionally high; but that of March, July, and October was low, while that of the other months did not exhibit any remarkable variation. The total number of births during the year amounted to 20,828, of which 10,621 were males, and 10,207 females. With regard to the mortality of Glasgow, it is gratifying to note that, notwithstanding the considerable increase in the population, the death-rate for 1875 falls short not only of 1874, but even of 1871; and this is all the more striking when it is remembered that in 1875 an additional population of from 15,000 to 16,000 was added, which formed no part of the population in the preceding years. During 1875 the total number of deaths amounted to 15,357, of which 7644 were males, and 7713 females. Of these 6990 were under five years of age; 1813 from five to twenty; 4592 from twenty to sixty; and 1962 over sixty. Of the fatal diseases which prevailed during the year, typhus fever caused 96 deaths; enteric fever, 252; relapsing fever, 3; simple continued fever, 11; infantile remitting fever, 19; rheumatic fever, 24; scarlatina, 715; measles, 353; small-pox, 9; phthisis, 1918; bronchitis, 2622; pneumonia, 849; whooping-cough, 730; croup, 163; diphtheria, 104. With regard to typhus fever, it has been less prevalent in 1875 than in any of the nine preceding years, except in 1873, when the deaths amounted only to 79; but in 1870, 1869, and 1866 they amounted to 544, 970, and 596 respectively. With regard to enteric fever, it cannot yet be said to have adopted a prominent place in the mortality of Glasgow, inasmuch as the average deaths from this cause during the last ten years amount only to 208. The report also alludes to intra-mural interments, and it is gratifying to note that all the intra-mural burial-grounds, which are under the control of the Corporation, are now closed, except under special circumstances of relationship. The total number of interments in these burial-grounds during 1875 amounted to 131.

Collegiate Prizes.—The following is the subject for the Jacksonian Prize of the Royal College of Surgeons for the present year, viz.:—"The Treatment of Cancer of the Rectum, particularly as regards the possibility of curing or relieving the patient by excision of the affected part." The essays must be delivered on or before December 30. The subject of this prize for the ensuing year is "The Disease of the Lymphatic System known as Hodgkin's Disease or Lymphadenoma." For the Collegial Triennial Prize, which consists of the John Hunter Medal executed in gold to the value of fifty guineas, or, at the option of the successful author of the dissertation, of the said medal executed in bronze, with an honorarium of £50, the prize will be awarded to the author of the best essay "On the Radicles of the Lymphatic System in relation to the External and Internal Surfaces of the Body.' The essays are to be sent in on or before December 30.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

ON TWO CASES OF HEMIPLEGIA.

(*Continued from page* 233.)

History of a Patient seized with Apoplexy, Alternate Paralysis following thereupon—Hemiplegia of the Limbs on the Right Side—Paralysis of the Facial, the External Motor of the Eye, and other Nerves arising from the Medulla on the Left Side—Analysis of the Symptoms—Topographical Diagnosis—Question of Unity and Plurality of the Lesion—Discussion and Conclusion.—Nosological Diagnosis—Cerebral Syphilis—*Indirect Diagnosis, or Diagnosis by Exclusion—Apoplexy in Syphilis of the Brain—Some Aids to the Prognosis in Cerebro-Spinal Syphilis—Rules of Treatment.*

Gentlemen,—In accordance with the announcement I made to you at our last meeting, we shall occupy ourselves to-day in studying, side by side with the last case, that of another hemiplegic patient, which, notwithstanding apparent analogies with the first, is actually very different. Moreover the condition of this patient to-day is quite unlike what it was at the time of her admission; she has so far improved as to be scarcely recognisable. The difficulties in the way of coming to a conclusion are also notably fewer. Still, the case is an interesting one. At the outset it offered a most delicate clinical problem; and yet its solution needed to be quickly arrived at—any delay might have imperilled the patient's life. Let me carry you back, then, in imagination to that time, and allow me to unfold before you, in a retrospective account, the incidents of this history, as they came under my observation: in this way you will better understand the reasons for my opinion, and you will be able to be present (*assister*), if I may use the expression, at the various phases of my diagnosis.

The case is that of a robust girl, of five-and-twenty years, who was brought to us on December 6 last, completely comatose; breathing was stertorous; a frothy saliva ran from one corner of the mouth; there could be heard at a distance that snoring which betokens an unusual flaccidity of the velum palati; muscular relaxation was general. The bed was soiled with urine and fæces, passed involuntarily.

The people who accompanied this patient only gave us the following information:—For several days she had complained of headache and dizziness; on December 2—that is to say, four days previously—these phenomena became much worse; they were still more marked the next day; and on the 4th they suddenly culminated in complete loss of consciousness, and the condition that we ourselves witnessed on the 6th. During this interval of forty-eight hours the state of the patient had undergone no modification; the coma had been equally profound from the first.

For reasons I have already stated, a thorough examination could not be made that day; we had before us an inert mass, defying all analysis. Next day things were in the same condition; but the day following, after copious serous evacuations, the result of repeated purgative enemata, consciousness had returned to some slight extent, and the coma had disappeared, but speech, almost confined to monosyllables, was confused, or, to use a better word, unintelligible. The most important change, from a diagnostic point of view, was the discontinuance of the muscular relaxation: the subsidence of this phenomenon indeed permitted us to ascertain the seat, distribution, and nature of the paralyses which outlived the apoplectic attack, and the four days' coma which immediately followed it. The complex results of this examination were as follow:—Complete motor paralysis of the limbs on the right side; also motor paralysis of the left half of the face, which was drawn altogether towards the right; and internal strabismus of the left eye—that is to say, paralysis of the abducens nerve of that side. Independently of these leading phenomena, which arrested attention first of all, I ascertained the absence of reflex movements in the left half of the velum pendulum palati, and pharynx, a marked difficulty of deglu-

tition which lasted more than a week, and a deflection of the tip of the tongue which continued for nearly the same length of time. But while, in the majority of cases of lingual hemiplegia, the tip is directed towards the paralysed limbs, owing to the sole action of the genio-glossal of the other side, in this case the deflection of the organ was towards the sound side —towards the non-paralysed limbs—towards the left; it was therefore the left genio-glossal which was affected, and the unilateral paralysis of the tongue had the same seat as that of the face and eye; the left hypo-glossal was implicated. With regard to the disorders of the velum palati and the pharynx, that of the former showed that the facial was involved in its deep portion as well as its superficial; that of the latter proved that the spinal accessory participated in the pathological complication.

Sensation was unimpaired, both in the limbs and in the face, in each of its manifestations. The absence of blinking on the left side on applying the stimulus of light was attributable to the paralysis of the facial, for the contraction of the pupil at the time of this experiment left no doubt as to the integrity of the retinal impression.

Following the method, the principles of which I have laid before you, I next inquired into the condition of the heart; it was healthy. I examined the vessels; such as were within reach of the finger were intact. Lastly, the temperature, taken night and morning for several days, remained normal.

I was then in possession of all the material necessary for a preliminary diagnosis, which may be expressed thus:—Motor paralysis of the limbs on the right side, of the left half of the face, of the velum palati, of the pharynx, of the tongue, and of the left abductor muscle of the eye, supervening upon a very severe apoplexy, in a girl of twenty-five, whose heart and bloodvessels remained unaltered, and whose temperature was normal.

The *topographical diagnosis*, you see for yourselves, gentlemen, was beset with more serious difficulties in this case than in that of the other patient, by reason of the motor paralyses extending to the two sides. Nevertheless, amidst this apparent confusion there was one circumstance favourable to the forming of an opinion—I allude to the regular distribution of the akinesiæ: that of the limbs was on one side; and those which involved the so-called cranial nerves, although numerous, were all on the opposite side. It was typical of that topography which is known under the names of alternate, crossed, reversed, or antagonistic paralysis.

In order to settle this question of seat, I divided the inquiry —as I always do, and as I recommended you to do—into two stages; and I first of all asked myself whether a single lesion could account for these complex phenomena. Well, the thing was possible, but, in order to do so, this lesion, *supposing it to be single*, must fulfil certain conditions.

And first of all, the paralysis of the right extremities, having been simultaneous and preceded by apoplexy, necessarily implies a lesion of the encephalon on the left side, above the decussation of the pyramids; but inasmuch as the lesion is supposed to be single, it is not the less necessary that it should be situated where it can involve the left facial, abducens, and hypo-glossal. Therefore it must at the same time implicate the fibres conducting the motor impulses to the limbs of the right side, and certain cranial nerves on the left side, which must be affected before they reach their point of decussation—that is to say, below the spot where those of their fibres which connect the medulla with the hemisphere cross completely over the median line to reach the right hemisphere by means of the corresponding crus cerebri.

This method of reasoning, gentlemen, is applicable to all cases of reversed or alternate paralysis. It has been said that in these cases the lesion must be situated in the pons: but this statement is too restricted; the change may equally involve the upper portions of the medulla. In the case before us, for instance, it is impossible to localise the lesion in the pons. Taking into account the complex disorders to which it gives rise, this lesion must occupy the middle layer of the pons Varolii on the left side, and that in the greatest part of its antero-posterior extent: now, I fail to see any rational or logical means whereby this hypothesis can be reconciled with the perfect integrity of the left trigeminal. It cannot be admitted that it has its seat in the pons, and, if it be really a single lesion, it must occupy the left superior portion of the anterior aspect of the medulla. The interpretation of the symptoms, as well positive as negative, loses in this way the greater part of its difficulty, at least from an anatomico-physiological point of view. For all that, I have rejected this conclusion, and that for clinical reasons which appeared to me peremptory.

From the third day, reckoning from the time of her admission into the hospital, the condition of the patient had undergone a marked change for the better; and to have admitted a serious lesion of the medulla, with this undoubted amendment before our eyes, would have been at least bold, if not an absolute mistake. On the other hand, there had neither been rigidity nor epileptiform phenomena; and, for a lesion in the medulla oblongata, the absence of these symptoms was peculiar. Lastly, the integrity of the trigeminal was not less inexplicable. Note, in fact, that the lesion must affect that portion of the left cranial nerves which lies within the medulla, because it affects at the same time the motor fasciculi of the right extremities; and I do not see how it can fulfil this condition without embracing the nerve of the fifth pair, since this last (commencing from the pons, where it first makes its appearance, and tracing it backwards) enters the substance of the medulla, where it takes its real origin, and passes beneath the floor of the fourth ventricle through its whole length, being brought into relation with the centres of origin of all the motor nerves successively. In the hypothesis of a single lesion, then, I come into contact with difficulties at every point; for this problem in diagnosis to which I call your most earnest attention may be thus summed up: Anatomy and physiology permit us to assume a single lesion, and fix its locality either in the pons or in the medulla; but the clinical history of the patient presents peculiarities which are incompatible with either the one or the other of these conclusions. In this dilemma I could not hesitate, and, rejecting the possibility which, as being the most simple, must always be entertained first, I admitted the existence of multiple lesions, or, at any rate, of a double lesion—namely, an alteration posteriorly, directly involving the trunks of such of the left cranial nerves as I ascertained to be paralysed, where they extended beyond the medulla; and a lesion, also anteriorly, affecting the left crus cerebri, and giving rise to paralysis of the limbs on the right side.

The topographical diagnosis, thus completed, though satisfactory to us, was of absolutely no use to the patient; and so it is, you will observe, in all analogous cases. The determination of the seat of cerebral lesions, so clinically interesting from a scientific point of view, so important, moreover, with reference to the prognosis, is valueless in estimating the condition of the patient, and valueless, therefore, therapeutically. The undeniable superiority of medical over physiological diagnosis is here apparent in all its force. Several times already I have pointed out this contrast—too often lost sight of by physiological practitioners of medicine; but the principle is of such importance that I return to it on every opportunity with renewed persistence.

In cerebro-spinal diseases the solution of the question of seat is always a difficult and delicate matter; so that for this class of cases I expressly recommend to you the method of diagnosis by exclusion, the slowness of which is largely compensated by its sureness. In applying this method you must always commence by examining into the most common contingencies—a rule which admits of no exception. It is only when you are convinced of the impossibility of including the case in point in the group of ordinary lesions that you ought to approach the discussion of the rarer and more exceptional alterations. Allow yourself always to be guided by these principles, and, though this field of inquiry is beset with stumbling-blocks, you will enter upon it with comparative security. I myself proceeded after this method with regard to the case under our observation; and it was due to this method, from which I never depart, that a diagnosis was arrived at which saved the life of the patient.

The hypothesis of a *hæmorrhage*, which necessarily had the first claim on our attention, could not be accepted: the apoplectic attack had not been sudden, it had been preceded by prodromata of several days' duration; the information furnished to us, although in many respects incomplete, left no room for doubt upon this particular point. To this very important consideration was added another of no less significance —namely, the integrity of the heart and vessels. The former fact was inconsistent with the ordinary course of encephalic hæmorrhage; the latter was incompatible with such a pathogeny as was enjoined by this woman's age.

Softening from embolism was more consistent with the age; nevertheless it held its ground no better after thoughtful

inquiry than did an effusion of blood. The existence of prodromata was sufficient to decide the question at once; they occur even more rarely in connexion with embolism than with hæmorrhage, or, to speak more correctly, they are constantly absent in embolic apoplexy, which is absolutely sudden. On the other hand, for there to be an embolism, there must be an embolus; and I did not see where I was to look for its source, or, at least, where to find it, since the heart and arteries were perfectly healthy. This circumstance, too, taken together with the patient's age, unanswerably precluded the idea of *softening from an indigenous thrombosis*, the only fact in favour of which was the existence of prodromata.

Softening from inflammation—encephalitis—was in no degree more consistent with the symptoms observed. It is true that the prodromata were in wonderful agreement with this contingency; but the supposed encephalitis was apoplectic, and a cerebral inflammation of such intensity ought to have produced rigidity after the attack, and a constant elevation of temperature—phenomena which were entirely absent.

I was led, in the course of this process of elimination, to consider the hypothesis of an encephalic tumour, which agreed fairly well with the locality I had assigned to the lesions. But, gentlemen, at all events, the question of a tumour, in the ordinary sense of the word—that is to say, of a circumscribed morbid product of some size—could not be entertained. It was impossible, for the following reasons: Such tumours may certainly provoke an attack of apoplexy during their evolution, but this event is preceded by a period—frequently a very long one—during which the patient is tormented by most violent cephalalgia, by obstinate vomiting, by epileptiform seizures, which are never absent when the product causing the irritation (*qui fait office d'épine*) is in the neighbourhood of the mesencephalon. You see, here again I encountered numerous difficulties, and to persist in the idea of a tumour I should have been obliged to admit that the lesion in this case had run an utterly abnormal course—a conclusion which, in matters of such a nature, is not justifiable.

I was constrained, then, by reasons which will, I trust, appear as imperative to you as they did to me, to exclude one by one all the usual apoplectic lesions of the encephalon. That being so, I once more passed in review this question of diagnosis, and, feeling sure that I was justified in my elimination, I turned my attention to a much rarer alteration—chronic meningitis at the base, with general exudation about the nerves of the left side of the medulla and about the crus cerebri on the same side, and consecutive or simultaneous lesion of the continuous nerve-substance. Whence a single step led to the conclusion that we had to deal with a syphilitic encephalopathy, and that for reasons to which I invite your serious attention.

An apyretic meningitis, which gives no sign up to the moment when the products of inflammation give rise to circumscribed paralyses, is only observed in lesions of the cranial bones, insanity, alcoholism, and syphilis. The first two were evidently out of court. Alcoholism was altogether an unlikely cause, for, supposing the patient to have been habituated to the immoderate use of spirits—a point upon which I had no information—I could not, on account of her age, readily admit that in her case alcoholism had reached the point of giving rise to meningeal lesions, which always take place under these circumstances very slowly. In this predicament, notwithstanding the absence of any corroborative evidence or actual sign of syphilis (there were neither eruptions, glandular swellings, throat lesions, nor enlargement of the articular ends of the bones), I looked upon the case as cerebral syphilis, and treated it accordingly.

It was fortunate that I did so, as you will presently see.

I have told you that repeated purgative enemata had produced copious serous evacuations, and that in consequence of this the coma and muscular relaxation had begun to disappear. Two or three days after commencing special treatment the general symptoms following the seizure had vanished; with the return of complete consciousness, memory had also returned; the speech, although still faltering and confused, was intelligible; and the patient was in a condition to supply us with more complete information. The replies to our first questions entirely confirmed the diagnosis we had before arrived at. This woman informed us, in fact, that she had suffered from syphilis rather less than three years ago; that she had had mucous patches on the vulva and in the throat, with spots on the skin; that she had been for several weeks in the Lourcine Hospital, where pills of the protoiodide were given to her; but that since leaving that hospital (now two years since) there had been no new manifestation. I pointed out to you, on the other hand, the absence of any actual manifestation of syphilis; consequently the patient was passing through that transitional period, uncertain in its duration, which separates secondary symptoms from the deeper lesions which we in France class together under the name of the tertiary period.

This is not all. The woman soon added to this first piece of information, which proved the truth of my nosological diagnosis, other details which, with equal certainty, justified my conclusions touching the seat and the nature of the encephalic lesion. The progress of events had been entirely different from what had been told to us; and now see what actually occurred. For eighteen or twenty days before the appearance of that alarming giddiness which preceded the loss of consciousness, the patient had suffered from extremely violent pain in the head,—that we knew; but further, three or four days after the onset of the cephalalgia, strabismus of the left eye set in, which she found out from being obliged to look altogether on one side in order to guide herself properly in the street; soon after, the face became drawn to one side; and these symptoms had persisted without variation up to the seizure itself. The earlier cranial paralyses had not therefore been simultaneous, they had been separated from one another by a distinct interval; and again another period had separated them from the stroke of apoplexy. This successive evolution, occurring as it were step by step, clearly proved that the nerves of the sixth and seventh pair on the left side had been affected in their efferent portion, and not at their origin within the medulla; and inasmuch as a little later on right hemiplegia of the limbs had supervened, the lesion was evidently at least a double one, if not multiple. The spread of the lesions was further established by this other peculiarity, which would alone have sufficed to prove it: at the commencement of the period of giddiness, from December 2 to 4, the patient had noticed a sudden weakness, followed by powerlessness of her left extremities, while the right side remained as strong as ever; then came the attack, after which we find right hemiplegia, without a trace of paresis in the extremities of the other side. Thus, therefore, while the lesions of the left cranial nerves have the persistence of the paralyses to bear witness to their stability, a temporary affection of the motor nerves on their way to the left limbs testified as to the progress and spread of the pathological process. Supervening upon this episode, which was doubtless owing to a temporary determination of blood, new lesions occur at the time of the attack, not less persistent than that of the cranial nerves originally affected, and which involve, on the one hand, the left hypo-glossal and spinal accessory, on the other, the motor nerves going to the limbs on the right side, and that probably in the left crus cerebri. The march of the phenomena, when thus more fully known, at once proved the existence of diffused meningeal exudation, which I had already made out by the process of elimination.

After fifteen days the patient's face had become straight, the strabismus had disappeared, the deflection of the tongue and the dysphagia had ceased, movement had begun to reappear in the limbs; and to-day, twenty-five days after commencing the treatment, only slight traces can be made out of these disturbances, which, however, would inevitably have caused the death of this woman if medicinal interference had been postponed.

Authentic instances of cerebral syphilis are now very numerous, and already, in the work of Gros and Lancereaux, you may find a rich collection of them. The majority of the cases exhibit cranial lesions extending towards the nerve-centres, or more or less circumscribed foci in the cerebrum (the cerebral syphilomata of Wagner); or, again, tumours properly so called, arising either in the brain-substance or in the membranes.

The lesion with which our patient was affected—multiple meningeal exudations, or syphilomata, at the base—is unquestionably the rarest form. Nevertheless, several instances are already on record, some of them confirmed by clinical analysis, others by pathological anatomy. Such are the cases recorded by Gjör and Knorre. Such also the cases of Westphal, Ziemssen, Tüngel, Quaglino and Scarenzio; or that of Dixon, in which exudations, more circumscribed than in our case, have only resulted in the successive development of cranial paralyses.(a)

(a) Westphal, "Ueber zwei Fälle von Syphilis des Gehirns" (*Allg.*

These syphilitic products may separately attack the dura mater, the nerve-substance, perhaps also the pia mater, as the cases observed by Gildemeester and Hoyack, and by Griesinger, tend to show; but most frequently the meninges are involved in all their layers, as is seen in the two cases of Howitz,(b) and if the nerve-substance is involved, the coverings at that point participate in the alteration. One may easily be convinced of this by referring to the remarkable cases recorded by Wagner.(c)

An event of rarer occurrence is that of an attack of apoplexy in the course of multiple lesions at the base. Notwithstanding its infrequency, the fact has been already recorded, notably by C. Meyer, and by Esmarch and Jessen; this last case is most important of all, for the apoplexy caused the death of the patient, so that the pathogenic conditions of the accident could be cleared up. You understand, gentlemen, that, as a matter of fact, exudation at the base of the cranium, although implicating both the meninges and nerve-tissue, cannot, of itself, directly provoke that sudden suspension of cerebration which constitutes apoplexy. Between the cause and the effect there must of necessity be something intermediate, an instrumental condition of the phenomenon; and, in the case recorded by Esmarch and Jessen, this intermediate condition was a remarkably abundant effusion of serum beneath the arachnoid. Fortified by this knowledge, I do not hesitate to refer the apoplexy which gradually seized our patient to the same cause. Owing to their situation, the lesions were capable of compressing the sinuses and venous plexuses at the base, perhaps they even caused thrombosis of some of the vessels of the pia mater, and at a given moment the increase of the intravascular pressure, resulting from the obstruction to the return of the blood, was sufficiently great to determine a sub-arachnoid serous transudation, and probably also an effusion into the lateral ventricles. The patient having fortunately recovered, this interpretation has, I know, something of the character of hypothesis, but it is in the closest agreement with cases previously recorded, and with the whole series of pathological phenomena observed.

The woman whose clinical history I have just traced and discussed is to-day in a condition bordering on recovery; and, from the uninterrupted and rapid progress of the amendment, it is certain that a few days hence she will be restored to perfect health. But be careful, gentlemen, not to suppose that matters always take so favourable a turn, or that from the mere fact of a lesion of the nerve-centres appearing in a syphilitic subject it must get well under appropriate treatment. That would be an error that might lead you into lamentable mistakes in prognosis.

There are two sources of error and failure—namely, the age of the lesion and the presence of concurrent disease.

Though unquestionably syphilitic, if the lesion be of old standing it is no longer susceptible of repair: the neoplastic elements have lost the instability and aptitude for reabsorption which they possessed in the earlier part of their existence; and the morbid process, in place of being limited to a new growth of cells and nuclei infiltrated and diffused in the nerve-tissue, has led to the development of connective tissue, whose persistence is proportionate to the age of the lesion. The structure of cerebral syphiloma, well understood since Wagner's publications, accounts on anatomical grounds for this fact, which we have learned empirically from the too numerous instances of therapeutic failure.

Zeits. f. Psychiatrie, 1863). C. Tüngel, "Chronische Gehirnkrankheit mit Beziehung zur constitutioneller Syphilis" ("Klinische Mittheilungen von der Medicinischen Abtheilung des allgemeinen Krankenhauses in Hamburg," 1861; von C. Tüngel, Hamb., 1863, p. 87). Ziemssen, "Ueber Lähmung von Gebirnnerven durch Affectionen an der Basis Cerebri" (*Archiv f. path. Anat.*, etc., von R. Virchow, Berlin, 1858; Bd. xiii., pp. 210 und 376). Quaglino e Scarenzio, "Tributo alla Storia delle Malattie sifilitiche del Sistema nervoso" (*Annali Univ.*, 1863-4). J. Dixon, "Two Cases of Paralysis from Syphilitic Neuromata of the Intra-cranial Nerves" (*Medical Times and Gazette*, vol ii. for 1868, p. 419). Compare also—Galligo, "Trattato Teoretico-Prattico delle Malattie Veneree" (Firenze, 1864); M. Leidesdorf, "Einige Fälle als Beitrag zur Gehirnsyphilis" (*Zeits. der K.k. Gesellschaft der Aerzte in Wien.*, xx. Jahrg., ii. Band, Wien., 1864, p. 112); H Zeissl, "Lehrbuch der Constitutionellen Syphilis," Erlang., 1864, p. 247; F. J Behrend, "Gehirnsyphilis" (*Berl. Klin. Wochenschrift*, 1864, p. 489); C. Meyer, "Syphilis des Gehirns" (*id.*, p. 490).

(b) Howitz, "Ueber syphilitische Knochenleiden und ein eigenthümliches noch wenig bekanntes syphilitisches Lungenleiden bei kleinen Kindern" (*Behrend's Syphilologie*, neue Reihe, Band iii, 1862, p. 601: aus den *Hospitals-Tidend.*, 1862, Nr. 10 and 11).

(c) E. Wagner, "Das Syphilom des Nervensystems" (*Archiv der Heilkunde*, iv. Jahrg., Leipz., 1863, p. 161). Gildemeester and Hoyack (*Nederl. Weekbl.*, 1854). W. Griesinger, "Diagnostische Bemerkungen ueber Hirnkrankheiten" (*Archiv der Heilkunde*, i. Jahrg., Leipz., 1860, p. 68).

You may perhaps recollect one of the cases of aphasia which I brought under your notice in a preceding lecture—I mean the hemiplegic patient with glosso-ataxy in St. Jérôme ward. That individual had unquestionably been affected with syphilis fifteen years ago. The precise and circumstantial account which he gave established the fact with absolute certainty. Well, at the outset of his cerebral disease he was placed by his physician upon anti-syphilitic treatment, which was duly persevered in without any effect. When this man came under my care, in spite of this want of success, I carried out the same indication, and instituted a regular plan of treatment, the inefficiency of which is to-day too clearly proved. Observe what an error of prognosis that physician would have made who, arguing from the previous syphilis, had rashly promised a cure.

This question of age is not all; the possibility of concurrent disease must always be borne in mind. Because a person is syphilitic it does not follow that all his later diseases will originate from syphilis; to reason in this way would be to expose oneself to serious blunders. In such a case this pathogenic influence is probable, but not certain, and, in fact, there is no reason why a syphilised subject may not be affected by an ordinary lesion of the nervous system, unconnected with diathesis. In the month of June, 1870, I was consulted by a gentleman from Bordeaux, whom Dr. Azam had done me the honour of sending to me. This patient was suffering from almost complete paraplegia, coming on in the course of an attack of syphilis of still recent date. The conclusion to be come to was self-evident: the spinal mischief must be held to be syphilitic, and treated accordingly. My able professional brother at Bordeaux had very wisely taken this course, but in vain. The paraplegic symptoms continued to get worse, and when I saw the patient he was in an almost helpless condition. The etiological indication nevertheless appeared so clear, that I persisted in the course previously adopted, only taking the precaution to modify the mode of administration of the remedies. Still there was the same want of success, and the patient returned home as paraplegic as ever. Ten months latter, passing through Bordeaux, I learnt from Dr. Azam that the patient's condition had become worse and worse, and that he had reached that stationary and indolent phase which characterises the later period of chronic diseases of the spinal cord.

After all, it was not altogether a novelty for me to be deceived in this way. Two years previously I had had under my care, in the Saint Antoine Hospital, a patient of thirty with paraplegia, in whom the spinal affection had been developed two years after an undoubted attack of syphilis. Here again my efforts were fruitless, and I was forced to conclude that the patient had become the subject of an ordinary lesion of the cord, having no connexion with his constitutional affection.

Thus, gentlemen, the age of the lesion and the possibility of a simply concurrent affection constitute elements of failure which I advise you never to lose sight of, and which must needs modify the too favourable prognosis commonly given when visceral lesions occur in syphilitic subjects. When you are fortunate enough to escape these two rocks, and specific treatment effects an improvement in the cerebro-spinal symptoms, bear in mind that you cannot continue the treatment of your patients for too long a period. When the cure is complete, still persevere, prolong the treatment for six months or a year; you cannot exercise too great prudence. Cases abound which show that where medication is interrupted on the disappearance of the cerebral phenomena the patient is placed in imminent danger of relapses, and that the issue is frequently fatal. I remember a gentleman of fifty-two whom I saw in 1868. He was the victim of cerebral syphilis which twice already had manifested itself in an attack of apoplexy with temporary hemiplegia. On each occasion specific treatment had been enjoined, but had been laid aside by the patient when the paralytic phenomena subsided. On the occurrence of the third attack the family transferred the man to my charge in the municipal *maison de santé*; but the coma could not be dispelled, and the patient succumbed in this condition two or three days after his admission, a victim to his own carelessness.

A case of cerebral or cerebro-spinal syphilis, gentlemen, is always a serious matter, and the treatment requires to be conducted with energy. I have said elsewhere that because a lesion is syphilitic it does not the less behave as a foreign body—a source of irritation. It produces determinations of blood, serous effusions, and inflammation of the neighbouring

parts just as much as any encephalic tumour whatsoever; and these accidents, which reach their maximum in the apoplectic forms, must be combated by general or local depletion, or by drastic purgatives. When the comatose or congestive phenomena are subdued, constitutional treatment must be commenced; and I advise you to have recourse always, as I have myself, to the mixed treatment. The date of the initial symptoms of syphilis is not always well defined, the stage of the disease is not rightly made out, the previous treatment is frequently imperfectly ascertainable; and for these various reasons I regard it as dangerous to found my therapeutic measures on information furnished by the patient. Whatever his statements may be, I administer at once, and in combination, mercury and iodide of potassium—namely, in the morning, on an empty stomach, one, and afterwards two, pills, each containing a centigramme (nearly one-seventh of a grain) of the bichloride; and, half an hour before the evening meal, the potassium salt, in a dose of two grammes (half a drachm) to begin with, gradually raising it to four or six grammes (one drachm or one drachm and a half) according to the case. Thrice already it has happened to me to obtain a complete cure by this method in patients previously treated ineffectually by the iodide alone. I mentioned two of these cases in my "Leçons cliniques de la Charité"; the third I saw in 1869. A provincial pharmacist came under my care at the *maison de santé*, with right hemiplegia and aphasia, syphilitic in their origin; the patient, perfectly aware of the cause of his symptoms, had treated himself for several weeks by large doses of the iodide, without witnessing any improvement in his condition, and it was precisely that want of success which led him to betake himself to Paris. I put him upon the mixed treatment, according to the rules I have just indicated to you, and in five or six weeks afterwards I had the satisfaction of sending him home perfectly cured.

ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

The following are the questions which were set at the recent examination of candidates for her Majesty's Army, Navy, and Indian Medical Services:—

Anatomy and Physiology.—1. Give the surgical anatomy of the ischio-rectal region, and describe the dissection required to display it. 2. How is vision adjusted to varying distances? 3. Classify the various kinds of articulation. Give an instance of each kind, and notice those which illustrate the various forms of lever. 4. Give the dissection required to expose the quadratus femoris, and mention the parts in immediate relation with it. 5. Name, and give the relative position of the parts divided, in the operation known as Chopart's. 6. Describe the minute anatomy of the retina, and the mode in which you would proceed to examine its structure.

Surgery.—1. Describe the symptoms of caries of the four upper cervical vertebræ; its effects, if not arrested; and the treatment to be adopted. 2. A patient has a compound fracture of the right parietal bone, with some depression of the fragments, but without symptoms of compression. Describe the treatment to be pursued in the early and subsequent stages of the case, in accordance with the symptoms. 3. Describe the symptoms which indicate the commencement of tetanus, following any external injury, and the usual progress of an acute case. What treatment should be adopted? and what are the pathological changes usually observed after death? 4. What are the early indications of enlargement of the prostate gland? Describe the treatment to be recommended, and the pathological changes which usually follow a continuance of the enlargement. 5. Describe the symptoms of dislocation of the ulna and radius backwards on the humerus. At what period of life does it more frequently occur; what complications may attend it (without external wound); and how should the dislocation be reduced, and the arm subsequently treated? 6. Describe the condition of a phagedænic ulcer of the penis; the probable cause of its origin; its usual progress, and treatment.

Medicine.—1. Define what is meant by (1) thrombosis, (2) embolism. Then describe (1) the nature of the morbid conditions under which each of these forms of lesion may occur, and their probable consequences; (2) the symptoms of complete embolism of the middle cerebral artery on the right side; and the morbid conditions in other organs which usually precede such an attack. 2. Describe fully a case of acute rheumatism, contrasting it with such diseases as may resemble it. What are the cardiac signs and symptoms which may occur during the progress of such a case? After mentioning these, suppose that severe pericarditis supervenes; give fully the physical signs; describe the effects upon the heart produced by universal adhesions; and what will probably be the future progress of the case. 3. Give the signs, causes, symptoms, and treatment of stricture of the pyloric orifice of the stomach. 4. Describe the structural changes in the liver in cases of cirrhosis. How would you diagnose such a condition of the liver? and what treatment would you adopt? 5. What is the usual period of utero-gestation in the human female? What is meant by the term "abortion"? What are the risks which attend abortion? at what periods of utero-gestation are these risks the greatest? and in what respects do the phenomena of abortion differ from those of natural labour at the full time? 6. What are the physiological properties and medicinal uses of arsenious acid and carbolic acid? What are the preparations of each, according to the "British Pharmacopœia" (of 1867)? and what are the doses of each when used internally? What are the symptoms (acute and chronic) of the poisonous action of each of these drugs? and mention the appropriate antidote or remedy for each.

Natural History and Physics.—Zoology: 1. Describe the structure of the placenta in the different divisions of mammals. 2. Give the characters of the class Molluscs and of its principal divisions. 3. In what parts of animal tissues is phosphorus present, and in what state of combination in each case? 4. What is meant by hybernation? How is it explained? In what animals does it occur? 5. Give a sketch of the geographical distribution of mammals.—Botany: 6. What are the characters of the natural order *Amentaceæ* in its widest sense, and of its principal subdivisions? What British trees belong to the order? 7. Describe the physical structure, and state the chemical composition of starch. Give an account of its function in the vegetable economy. 8. What officinal plants belong to the natural order *Compositæ*? State in each case the part of the plant used, and the properties of the product. 9. Describe the vegetative and reproductive organs of *Equisetum*. 10. What are the principal kinds of parasitic plants? Point out their differences, and give example of each.—Physics, etc.: 11. In what states are carbon, sulphur, phosphorus, and magnesium found in nature? 12. Describe the principle of the thermometer, the mode of making it, and the different kinds used. 13. What is the cause of volcanic action? What are the principal volcanic areas? 14. How is ice prepared artificially? What are the chief freezing mixtures commonly used? 15. Give an account of the theory of the tides.

During a recent outbreak of cholera in India, Dr. Boustead prescribed salicylic acid in eight-grain doses. In cases of vomiting it was injected hypodermically.

The present system of granting wines and spirits as out-door relief by boards of guardians is, no doubt, unsatisfactory, and subject to great abuse. This question was under discussion at the last weekly meeting of the Hackney Board of Guardians, and it resulted in their resolving to place alcoholic liquors strictly within the category of medicines alone, and to require the district medical officers, in all cases where they think it right to prescribe wines and spirits for the use of the sick, to state on the prescription paper the exact quantity to be given by the dispensers in computed ounces, and the latter to keep an exact record of the distribution under the orders of the medical officers.

The Peabody Buildings, Blackfriars-road.—Dr. Bateson, the Medical Officer of Health for Southwark, in his annual report, recently issued, on the health of the district, observes that the Peabody Buildings deserve special attention, —the structural completeness of these buildings, the care which is exercised over them as regards repairs and cleanliness, with the character of those who occupy them, and who are in the main the most temperate and provident of their class, naturally led him to expect a most favourable issue, and he was pleased to report this to be the case. The death-rate in the parish was 24·5 per 1000. There were registered in the Peabody Buildings, situated in the Blackfriars-road, twenty-seven deaths during the year, making the death-rate only 12 in the 1000.

FROM ABROAD.

"Le Délire des Opérateurs."

This is, as the *Revue Médicale* (July 3 and 10) remarks, a somewhat singular title for a Professor of Midwifery at the Paris Faculty to give to one of his lectures. Yet Prof. Guéniot has much to say in its favour, and his observations will meet with a response from many persons who, like ourselves, have been startled at the occurrence of malpraxis in operative midwifery every now and then in the hands of persons of competent knowledge.

M. Guéniot observed that his object was to treat of a true delirium which may seize a surgeon during an operation, consisting in a more or less temporary mental aberration, during which he may inflict injuries on his patient, always of a serious character, and usually fatal. The young surgeon is especially predisposed to this terrible attack, affected as he may be by the sight of blood, anxious with regard to the opinions of others, and menaced alike in his interests and self-esteem. This delirium is much oftener observed during obstetrical operations than in those of ordinary surgery. They, in fact, are often undertaken by practitioners only imperfectly acquainted with the proper manœuvres, while the execution of these in the depths of the organs concerned conceals the extent and importance of the lesions produced. Numerous cases were cited which either have been published by authors or have fallen under Prof. Guéniot's personal observation, in which fearful and fatal lesions have been produced, when neither the circumstances of the case nor the ignorance of the operator afforded any explanation—nay, in more than one of these he was a person of expertness.

Symptoms.—This "delirium" does not usually commence suddenly, for, however rapid its occurrence may be, there can usually be recognised two successive phases—vertigo and confirmed delirium. In the first stage the operator may exhibit some disturbance of the senses—nervous tremor—with obscurity and confusion of ideas. His memory is somewhat affected, and his thoughts are not exactly rendered by his words.

"There may be observed in him fear, hesitation, and manifest embarrassment—in a word, a visible pre-occupation of not conducting the operation properly. He presents at the same time all the signs—but these have nothing characteristic about them—of a cephalic congestion, joined to a kind of fatigue or depression, flushing of the face, general perspiration, palpitation of the heart, and a want of precision of movement. Thus far there is no great danger, for what seems to possess the operator is fear and hesitation. He acts tremblingly, with his mind more or less disturbed; but he acts with reserve. But do not believe that such a condition is a matter of indifference, for, according to the circumstances and his temperament, the disturbed condition will remain circumscribed within inoffensive limits, or it will be but the prelude to an eminently dangerous affection—confirmed delirium. Let an unexpected difficulty suddenly arise, and the anxious operator becomes impeded in his actions by some cause, and at once his fear of failure is redoubled, his mind is irritated, and his hand fails him; and if among those surrounding his patient he suspects distrust and believes his self-esteem wounded and his reputation menaced, such dispositions suffice to induce an attack of delirium. Confirmed delirium, as I have said, represents the disease in its highest and most terrible expression. The moral and intellectual faculties are now perverted. The accoucheur is astray, and impatient to finish his task. No longer master of himself, he employs violence to overcome obstacles, and sometimes exhibits a kind of furor. By the very fact that he is operating in deep-seated regions he appreciates with difficulty the extent of the injuries and lacerations which his hand is producing. His movements are executed without direction or proportion; everything is irregular in his actions; and the sight of blood derived from a hæmorrhage, so far from bringing some calm to his disturbed mind, only maddens it yet more. Indeed, one might say, without much exaggeration, that the surgeon, even when ordinarily endowed with patience and gentleness, is sometimes liable to resemble the soldier who, drunk with blood, rushes with fury into the midst of the fray. Then his blindness no longer knows any limits, and he attacks the obstacles with frenzy in order to triumph over them, lacerating or tearing away the portions of the child or the organs of the mother."

In general this delirium is very easily recognised. It must not be confounded with the faint-heartedness of operators, for this depends upon a frame of mind entirely different, and is attended with results having nothing in common with delirium. In the latter the life of the patient is menaced by the lesions actually induced by the operator; but in timidity the danger, on the contrary, results from the inertia and abstention of the surgeon. The preparations for the operation, the cries or terror of the patient, and especially the sight of blood, suffice with many surgeons to induce this faint-heartedness—fear then paralysing all power of action. What may be called *la manie des opérateurs* must, also, not be confounded with *le délire des opérateurs*.

"The *manie des opérateurs* is another mental disposition which must be entirely distinguished from this delirium, for it differs from it essentially. There are surgeons who operate on all occasions without sufficiently considering the indications or the consequences of their intervention. For them, it would seem that the result is well-nigh a matter of indifference, that which is before all else desirable being active surgery. Yielding to this impulse, they operate, then, on every occasion, and naturally far oftener than there is any occasion for. Is not this, I ask, a true mania?"

Passing over Prof. Guéniot's account of the predisposing and determining causes of this delirium, we transcribe his excellent advice for its prevention:—

"How are we to preserve ourselves from the attacks of this redoubtable affection? The remedy in this case is especially preventive, and its application has this singularity about it—that the practitioner here has to guard himself against himself. When you have to undertake an obstetrical operation, begin by divesting yourself, as far as you are able, of all excess of self-esteem, as well as of those ambitious pretensions which sometimes assail the mind of the surgeon. Do not pre-occupy yourself with the judgments which those who are present may pronounce upon you. Forget yourself and think only of your patient, and the operation she is about to undergo. Avoid announcing a rapid result, certain success, an assured deliverance from the sufferings she endures. It would then suffice for any obstacle or unforeseen difficulty to occur in the course of the operation to induce you to hurry on your procedure. Above all, guard against precipitation. A hurried operator is a dangerous operator.

"In spite of all your efforts to remain always master of yourself, if the operation does not proceed according to your desire, and you feel yourself attacked with vertigo, do not persist, but suspend your manœuvres without delay, and under some pretext, calculated to conceal your embarrassment, retire for a few minutes. Hardly will you have quitted the heated and enervating atmosphere of the lying-in room than, feeling yourself relieved both in body and mind, you will be easily able to collect yourself and recover all your presence of mind. But when, in spite of these precautions, you are, nevertheless, unable to recover sufficient calmness, then, without hesitation, putting aside all questions of self-esteem and interest, at once summon to your aid a more experienced colleague, who will assist you with his advice, and, if necessary, complete the operation. In thus averting the attack of delirium, you will spare your patient useless violence and menacing danger; while, instead of being ill at ease, your conscience will applaud an act of disinterestedness from which sooner or later you will reap the fruit."

Instantaneous Sinapisms.—Dr. Rigabert describes a sinapism invented by M. Vincent, a chemist at Saintes, which he says for promptitude and certainty surpasses Rigollot's papers. These last are apt to deteriorate by keeping, and at all events require the aid of water to produce their effects. M. Vincent's procedure is as follows:—Into a tube, open at the end, five centimetres in length, and having a calibre of half a centimetre, he pours a certain quantity of freshly prepared essence of mustard; the tube is corked and hermetically closed, and is wrapped up in a piece of paper of tolerable consistence, of the size of one of Rigollot's sinapisms. When it has to be used some drops of the essence are poured on the paper, which is applied as an ordinary sinapism. The effect is instantaneous and certain; and by pouring on the paper the contents of two tubes at the same time vesication can be produced.—*Bull. de Thérap.*, Aug. 15.

REVIEWS.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen. English Translation edited by Albert H. Buck, M.D., New York. London: Sampson Low and Co. Vol. i., pp. 708.

The first volume of this great undertaking is devoted to Acute Infectious Diseases, not including the exanthemata, which form a second volume. The articles, of course, differ much in merit; but all of them attain a high standard, and are fairly congruous in tone, though, necessarily, conflicting views show themselves. The translation is decidedly well done, and reads easily—no light merit for a translation from the German. Of course, occasional blots are met with: thus one translator converts *Durchführung* into "inauguration"; another always speaks of Alexander of Tralles, a Greek physician of the fifth century, as "Alexander de Tralles," as if he were a modern French nobleman. These, however, are trifles; and, on the whole, the translation is to be highly commended.

The volume opens with an excellent introductory article by Liebermeister, on the nature of infectious diseases—the term being used in a wide sense, so as to include all diseases caused by the infection of the system by a specific poison capable of multiplying either in or out of the body, whether such disease be transmissible from one person to another or not; thus malarious diseases are included. The hypothesis of a *contagium vivum* for all these diseases is most ably supported, each disease being considered as produced by a specific organism, probably a fungus. This he considers to be proved in the case of many diseases, both of man and of the lower animals and plants—as malignant pustule, the silkworm disease, the potato-rot. According to this theory, each disease can only arise from its own contagium; and thus the notion that typhus can *originate* from overcrowding, or typhoid from decomposing sewage, is as unreasonable as to suppose that dirty habits can generate the itch.

These diseases must be classed—not as was done by the old physicians, by their symptoms; nor, as was the case in modern times, by their pathological anatomy, but—according to their cause. Thus, an extremely mild case of diarrhœa, produced by the poison of Asiatic cholera, is to be considered as that disease; while a violent or even fatal attack of English cholera is a perfectly distinct disease. So with regard to the disputed identity of croup and diphtheria. The point to be determined is the cause; whether the anatomical lesion and symptoms be the same, or different, is of no import.

The poison of infectious diseases may be either volatile or fixed; the volatile poison—the term not being used in its chemical sense—is capable of being suspended in the atmosphere and so transmitted, as malaria, typhus. The fixed, as the poison of rabies and syphilis, cannot be so suspended and transmitted. A more important distinction is the division of infectious diseases into miasmatic and contagious.

By a miasm is meant a poison which propagates itself out of the body, and which, when introduced, produces a specific disease, but is incapable of transmission from one person to another. A contagious disease is a disease which propagates itself in the body of the affected person, and can be conveyed directly from one person to another.

Of infectious diseases, one class is purely contagious, one purely miasmatic, and a third presents some characters of both.

Among the purely contagious diseases are the exanthemata, typhus, diphtheria, syphilis, glanders, pyæmia, etc. In all these diseases, though the poison may exist and retain its vitality for a long time outside the infected organism, it does not, under the circumstances, go through any of its stages of development and multiplication.

Malaria is a purely miasmatic disease. The poison propagates itself out of the body, and its reception into a higher organism is not necessary for its reproduction. It is also incapable of transmission from one organism to another.

The third class may be termed miasmatic contagious diseases, and comprises cholera, typhoid, dysentery, etc., and probably yellow fever and the plague.

Take, for example, cholera: it is seldom or never conveyed directly from person to person; the attendants on the sick are not more liable to be attacked than other persons; inoculations with the blood and the fresh excreta, and swallowing them, give negative results. It is not, therefore, a contagious disease. On the other hand, it is quite certain that cholera never originates spontaneously in any place, but is always conveyed to it by persons from an already infected place. Quite similar phenomena are observed in typhoid fever, dysentery, etc. The difficulty of explaining these facts is at once removed by the supposition that the organisms which give rise to these diseases pass through two stages of development—one in, and one out of the body. The fresh discharges of cholera patients contain germs in a stage of development in which they are incapable of multiplication in the human body. They require first to go through another stage, which takes place after they have been standing for some time, especially in contact with decaying organic substances. Even in the purely contagious diseases the morbid agent goes through at least two stages of development, though both take place in the body. Thus, after the reception of the scarlatinal poison, the effects do not show themselves at once, as they would do in the case of a chemical poison, but only after a stage of incubation, and then suddenly, and not gradually, as would be the case if nothing more took place than a gradual multiplication of the poison. Infectious diseases may be local—*i.e.*, confined to a small part of the body—as gonorrhœa, soft chancre, and even whooping-cough, or may be distributed through the whole system. Others, again, may be at first local, and then become generalised by the poison being taken up by the circulation, as in diphtheria.

Among the local infectious diseases he classes dysentery, probably cholera and yellow fever, the manifestations of which he considers due to a parenchymatous hepatitis.

The next treatise is one on Typhoid Fever, by Liebermeister, and this is unquestionably the best article in the volume. Notwithstanding the limits necessarily imposed by such a work, it is very complete, both in the etiology and pathology of the disease; and the account of the treatment, which will be the part most interesting to English readers, is especially good, and is perhaps the best exposition of the antipyretic system of treatment which has appeared. The whole article is written with a freshness and enthusiasm which cannot fail to excite the interest of the reader. The literature of the subject has been well worked up, but the account of the disease in mainly based upon the cases observed in the Hospital at Basle, which has long been notorious for its devastating epidemics of typhoid. Between 1865 and 1871, 1900 cases were under treatment by the author.

The article begins with a brief discussion of the distinction between typhus and typhoid, and a short sketch of the history of the disease. It is here impossible not to be struck by the deplorable confusion which is caused by the Germans giving the same name—"typhus"—to two entirely distinct diseases. Though, when writing precisely and with a view to the distinction, they use the terms "typhus exanthematicus" and "typhus abdominalis" for typhus and typhoid respectively, yet in common parlance the qualifying adjective is omitted, and the nature of the disease is left doubtful, though, as a rule, "typhus" alone stands for typhoid. Even in this translation, in which the English nomenclature is employed, in some of the articles "typhus" will occasionally be found when "typhoid" is probably meant.

Next the etiology is discussed, and the disease is classed among the miasmatic contagious diseases, *i.e.*, the poison consists of living organisms, which, though they multiply in the body of the affected person, go through one stage of their development outside the body, and therefore the disease cannot be communicated by direct transmission from person to person; neither, of course, can it ever originate spontaneously. This he considers to have been proved by Dr. Budd. The poison is contained in the excreta, in which, when left to themselves, as on dirty linen, or collected in privies or sewers, it has to go through a certain stage of development before it acquires the power of setting up the disease. He gives interesting examples from his own observation, as well as from Murchison, of the great length of time the poison may retain its vitality out of the body in a suitable soil—months, or even years.

The period of incubation after the access of the poison into the body appears, from his observations, to vary very much. At Basle a few persons were attacked who had only been in the city from seven to fourteen days; in most cases it appeared to be about three weeks, and in a few cases as long as twenty-eight days. With regard to the way in which the poison obtains access to the body, his opinions are quite in accordance with those generally entertained in England. It is, however, interesting to see the same results arrived at by independent

observations in other countries where the conditions of life are somewhat different. It is probably necessary that the poison-germs should be swallowed; this is most commonly effected through the agency of polluted drinking-water, but may also take place by inhaling into the mouth and throat air in which they are suspended. They are then directly absorbed by the intestinal lymphatics, and so give rise to the local lesions.

Passing over the symptomatology, the morbid anatomy, the description of the irregular forms, and the diagnosis, we may note that, in considering the prognosis, it is necessary to bear in mind that in all typhoid patients who do not die of any of the complications—including under this head the intestinal lesions—the immediate cause of death lies in the fever and its effects. Death either takes place from weakness of the heart, and its consequences—as hypostatic congestion of the lungs—or from paralysis of the brain, which is likewise dependent on the high temperature. Hence the importance of the temperature in estimating a prognosis. But it must be remembered that patients differ very much in their powers of supporting a high temperature. Of 400 cases treated before the antipyretic system was adopted, 9·6 died where the temperature did not reach 104° in the axilla, 29·1 per cent. where the temperature exceeded 104°, and above 50 per cent. where 105·8° was attained. The greater the daily fluctuations of the temperature caused by the morning remissions, the more favourable is the prognosis, as a fever of a remittent type is much better borne than one which remains steady at the same height. Fiedler saw all patients die whose morning temperature rose to 106·25°. Of those whose morning temperature rose to 105·44°, even on a single day, more than half died. The prophylactic treatment depends on well-known principles, and presents nothing novel.

With regard to the specific treatment, it is well known that at present we have no specific antidote to the poison, though there is no reason why such should not ultimately be discovered. Of the numerous remedies which have been supposed to exercise a specifically favourable influence on the disease, iodide of potassium and calomel appear to have the greatest claims.

The author has used iodide of potassium, sometimes combined with free iodine, in 200 cases; it did not appear to produce any distinguishable effect on the course of the disease, but the mortality was much less than in those cases treated at the same time and in all other respects exactly in the same way.

The results of the use of calomel were still more favourable. The author gives three or four doses in twenty-hours, the first of ten grains, the subsequent ones of seven grains and a half. The first increase of the diarrhœa soon subsides, and afterwards seems to be less. The mouth, as a rule, only became affected in those cases in which it was thought advisable to repeat the dose on successive days. Of 377 cases not treated specifically the mortality was 18·3 per cent.; of 223 cases treated by calomel the mortality was 11·7 per cent.; of 237 cases treated by iodine the mortality was 14·6 per cent. Besides reducing the mortality, calomel appears to shorten the duration of the attack. It is not improbable that the good effects of the calomel are due to its purgative action, by which some of the poison which may be still lodged in the intestines may be expelled. It is, of course, only adapted for the earlier stages of the disease before ulceration has begun. The author gives it to all cases which come under treatment before the ninth day of the disease.

The chief indication of the symptomatic treatment is to reduce the high temperature, which is the main cause of the parenchymatous degenerations of the heart and brain, to which about 41 per cent. of the deaths are directly due.

The means employed by the author to reduce the temperature are the cold bath, quinine, digitalis, and veratria—the cold bath being the one mainly relied on; and the rule he adopts is, whenever the temperature in the axilla reaches 102·2°, a bath of a temperature of 68° or lower is given. He recommends the duration to be ten minutes; we have, however, come to the conclusion that it is better, if there is no collapse, not to take the patient out till the rectum temperature has fallen about 3°, which will often not be the case for twenty minutes or even longer. In very feeble patients, a bath of higher temperature may be used, and the water may be gradually cooled down. At the commencement of the treatment, the temperature soon rises again, so that often a succession of baths will be required—as many as twelve in twenty-four hours in very severe cases. We have found, however, that by prolonging the bath the necessity of their frequency is much diminished. But if any good is to be expected from the antipyretic treatment, perseverance is absolutely necessary, otherwise the previous baths will have been thrown away. As a substitute for cold baths, cold packing may be employed; this method is much less efficacious, and on the whole more disagreeable to the patient, but it may be used in the case of very feeble or timid persons, or children. Hæmorrhage from the bowels, and still more perforation, counterindicates the use of the bath, as does great feebleness of the heart. In pneumonia and congestion of the lungs they are well borne.

As a supplement to the cold baths, or a substitute where they are counterindicated, quinine holds the first place, but it must be given in sufficiently large doses. The author gives twenty-two to forty-five grains in the space of half an hour; we have frequently given one-drachm doses without producing any distressing effect. In smaller doses given at intervals through the day no effect on the temperature is produced. Soon after taking the drug the temperature begins to fall, and in from six to twelve hours reaches its minimum, and then rises again, but usually rather slowly. In this way a temporary fall of three or four degrees, or even more, may be produced. He recommends the quinine to be given at night, in order to increase the natural morning remission, the important point being to break the continuous course of the fever. Where there are naturally well-marked morning remissions quinine is less indicated, and its effects in preventing the nocturnal exacerbations are much less certain.

A great advantage of the use of quinine is that it obviates the necessity of giving so many baths, and enables them often to be omitted for a day or longer; and in cases where they are counterindicated it may be safely used. Thus, when the heart is already too much weakened for the bath to be employed, quinine will often bring down the temperature and save the patient. The other remedies are digitalis and veratria. Digitalis is only to be used where there is yet no considerable degree of cardiac weakness, and will often, in severe and obstinate cases when quinine alone fails to lower the temperature, when combined with quinine, produce a complete intermission. He gives from eleven to twenty-two grains of the powder in the course of twenty-four to thirty-six hours, and follows it by a full dose of quinine.

Veratria also has a powerful antipyretic effect; but the collapse it produces seems to us a strong counterindication to its use. The author, however, appears to think well of it.

If we now ask what are the results of this energetic antipyretic treatment—which requires great firmness on the part of the physician, and involves great labour on that of the attendants—we find them extraordinarily favourable. At Kiel, from 1850 to 1861, under varying, not very energetic treatment, the mortality was 15·4 per cent.; from 1863-66, under systematic antipyretic treatment, 3·1 per cent. At Basle, from 1834-64, under expectant treatment, cases 1718, deaths 27·3 per cent.; from 1865-66, under incomplete antipyretic treatment, cases 982, deaths 16·2 per cent.; from 1866-72, under systematic antipyretic treatment, cases 1121, mortality 8·2 per cent. Similar results have been obtained at Bremen, Erlangen, Greifswald, Halle, Jena, Leipzig, Munich, Prague, Zürich, etc.

The treatment of the complications, the diet and general management of the patient, and the rules for the administration of stimulants, are extremely judicious, but do not call for any special notice.

Next follow articles on Relapsing Fever, Typhus, Cholera Nostras, and Cholera Asiatica, by Professor Lebert, preceded by an introduction on the relation of contagium to the development of living organisms. This is of great interest. The author supports the view of a *contagium vivum* due to different protomycetes, under which name he includes forms of bacteria and micrococci.

The articles on Cholera Nostras and Cholera Asiatica are of great interest. He considers it probable that the former, like the latter, is due to parasitic germs, but that they are those of common decomposition; while the latter is caused by a foreign specific germ which has been imported. He thinks it likely that cholera nostras may be disseminated by soil-infiltration and polluted drinking-water.

That, in the main, these opinions are correct cannot, we think, be doubted; but it would seem more in accordance with facts to attribute cholera nostras also to a specific germ differing from those of ordinary putrefaction, though indigenous and not imported.

A very good but necessarily compressed historical account of Asiatic cholera is given; but the most valuable part of the article is the etiology, in which the germ theory and the mode of dissemination of the poison are fully discussed, and overwhelming evidence is adduced from foreign examples, in addition to the well-known English ones, of the dissemination of the poison by drinking-water, though he rightly considers this to be only one way in which it may be distributed.

In his account of the pathology and treatment the views of Dr. George Johnson are entirely ignored, and the symptoms ascribed, in the main, to draining away of fluid from the blood. He also strongly recommends that the prodromic diarrhœa should be checked at once by opium and astringents, though, when these fail, mild laxatives may do good service.

The next article is a short one by Liebermeister on the Plague, the chief interest of which consists in the view put forward that the plague is not directly contagious from person to person, but is one of the miasmatic contagious diseases, the poison-germs, like those of cholera and typhoid, requiring to pass through some intermediate development out of the body.

The article on Yellow Fever, by Dr. Haenisch, and that on Dysentery, by Professor Heubner, we have not space to notice.

The article on Diphtheria, by Oertel, is an extremely able one. The following are the chief conclusions maintained by the author:—The disease is caused by peculiar vegetable organisms—viz., micrococci (*i.e.*, spherical bacteria)—which are always found accompanied by a larger or smaller number of the bacterium termo. It commences as a local disease at the point where the mucous membrane is first brought into contact with the poison, but becomes generalised by the fungi being taken up by the bloodvessels and lymphatics, and disseminated through the body. These facts are proved by the results of inoculation experiments on the lower animals. The diphtheritic poison first excites a local inflammation of the mucous membrane, which may be either catarrhal, or croupous (giving rise to the exudation of false membranes), or even gangrenous. The disintegration of the exudation may give rise to septicæmia, by the penetration of the fungi into the circulation; and by the septicæmia the various general and constitutional effects are produced.

A very full and complete account is given of the pathological anatomy and symptomatology of the disease and its sequelæ, especially of the lesions of the muscles, nerves, and nervous centres, to which the secondary paralyses are, no doubt, due. The treatment he divides into local and general. With regard to the identity of croup and diphtheria, the author speaks doubtingly, but does not enter largely on the question.

GENERAL CORRESPONDENCE.

THE EVIDENCE AT THE BALHAM INQUEST.

[To the Editor of the Medical Times and Gazette.]

SIR,—Every member of the profession will agree with your remarks on the Balham inquest, and the kind of evidence allowed to be offered there. Since the flourishing time of the Holy Inquisition, or since the last trials for witchcraft, no such irrelevant, gossiping, and utterly unfair evidence has been heard of. It would seem as if the "learned gentlemen" engaged in the case did their best for their clients, supposing these desired to indulge private malignity and public pruriency—not otherwise. You have justly stigmatised the reception of evidence as to the probability or otherwise that any given person shall commit suicide, provided such evidence is volunteered by persons who know nothing of suicides in general, and who do not know the private griefs of the person whose mode of death is the subject of inquiry. But there was another kind of evidence—or no-evidence—which flourished rampantly at this inquest. This is *subjective* evidence, consisting of statements not of any object or transaction, but of what the witness thought, felt, or "said to himself." Thus, one witness was allowed to say, with regard to the conduct of Mrs. C. Bravo during her husband's illness, "I did not think she seemed very much grieved; dinner went on as usual, and was served in several courses" (as if people must not eat when there is illness in the house). Other witnesses deposed that they were surprised at such and such things; or were surprised that certain persons did not seem surprised or grieved enough, etc.

It will be noticed that this evidence presupposes a kind of orthodox quantity of emotion which persons ought to exhibit under certain circumstances, and that the person who tenders the evidence knows exactly what that should be, and that his account of his own sensations is valid evidence against a suspected person.

Anyone who will take the trouble to refer to an old trial for witchcraft will see that this is the kind of testimony on which so many persons in ages not long ago were condemned to be tortured and burnt.

Most people will agree with you in the belief that a few minutes only could have passed between the times when the deceased took the poison and when he called for hot water.

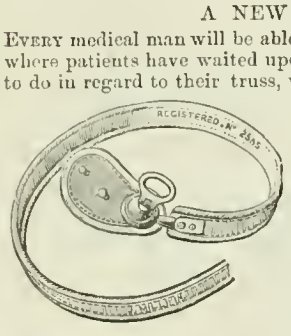
Further, it would seem that the stable was the readiest means of procuring antimony, for I am told that tartar emetic is not uncommonly bought by grooms in quantities of a drachm for administration to horses for colds. A friend who has been many years in practice tells me that his only case of irritant poisoning amongst private patients was that of a boy, son of a coachman, who took out of his father's drawer a teaspoonful of tartar emetic, thinking it to be cream of tartar.

London, August 28. I am, &c., A. B.

NEW INVENTIONS AND IMPROVEMENTS.

A NEW TRUSS.

EVERY medical man will be able to call to mind many instances where patients have waited upon them to know what they are to do in regard to their truss, which they find impossible to make fit properly so as to keep up the hernia, and upon examination have found that the pad only requires to be turned a little to the right or left, or a little upwards or downwards or inwards, as the case may require. They have done this so as to make the pad nicely cover the ring, but have found that so soon as the patient moves the pad slips back into its old position and allows the hernia to pass as before. They have sent their patient back to the instrument maker to have the direction of the pad altered, which in some few instances has been done to their satisfaction; but how often has the patient got tired of calling to have fresh alterations made, which, perhaps, so far as comfort is concerned, is only going from bad to worse!



To obviate this, we see that Mr. J. Millikin, of 3, St. Thomas's-street, Borough, S.E., has brought out and registered a truss which we have now before us, and which certainly bids fair to overcome nearly, if not quite, all of these unpleasant difficulties. It will be seen by the diagram that the truss consists of the old German spring and pad, between which there is a ball and socket joint, which can be fixed in any direction, and also allows of great or little pressure to be exercised at will. The fixing handle folds down upon the truss, and so it does not show through the dress. This truss is certainly worthy of a trial.

A DEPUTATION of clergymen, ministers, and manufacturers presented memorials at the Accrington Brewster Sessions on the 24th ult., against any further licences being granted. The magistrates refused all the applications for new licences over which they had discretionary power. There are 199 licensed houses in the division, but there has been during the year a striking decrease in proceedings for drunkenness.

THE SEWAGE QUESTION.—An application has been made to the Local Government Board to prevent the sewage of Helmsley flowing into the river Rye. A vestry meeting will be called to take the subject into consideration. Last week the Dudley Town Council accepted Lord Dudley's offer of a site for the disposal of the town sewage, and appointed a sub-committee to arrange the details. After the resolution was come to, one alderman threatened to remove his works, and another said that the highest ratepayers were opposed to the scheme.

OBITUARY.

SIR EDWARD HILDITCH, M.D. Aber.,

Died on the 24th ult., at his residence, 18, Arundel-gardens, Notting-hill. He was the son of the late Mr. John Frederick Hilditch, of Hammersmith, and born in 1804. He became a Member of the Royal College of Surgeons in 1826, and entered the Naval Medical Service, and attained the rank of Inspector-General of Hospitals and Fleets in 1854. He became M.D. of Mareschal College, Aberdeen, in 1859, and was knighted for his long and efficient services in the Medical Department of the Navy in 1865. He was also an Honorary Physician to her Majesty.

MEDICAL NEWS.

University of London.—The following are lists of candidates who have passed the recent examinations:—

First M.B. Examination (for Honours).

ANATOMY.

First Class.—Saunders, John Charles (Exhibition and Gold Medal), Downing College, Camb. and St. Bartholomew's; Boyd, James Stanley Newton (Gold Medal), University College.

Second Class.—Baddeley, Charles Edward, King's College; Sheppard, Charles Edward, St. Thomas's Hospital.

Third Class.—Gabb, James Percy Alwyne, University College; Heath, William Lenton, St. Bartholomew's Hospital.

PHYSIOLOGY, HISTOLOGY, AND COMPARATIVE ANATOMY.

First Class.—Tuke, William Samuel (Gold Medal), University College; Saunders, John Charles (Gold Medal), Downing College, Camb., and St. Bartholomew's Hospital; Neale, John Edward, University College.

Second Class.—Uhthoff, John Caldwell, Guy's Hospital.

Third Class.—Mackern, George, Guy's Hospital; Whitney, Neville Scott, University College.

ORGANIC CHEMISTRY, AND MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

First Class.—Smith, Kenneth Rawlings (Exhibition and Gold Medal), University College; Uhthoff, John Caldwell (Gold Medal), Guy's Hospital; Whitney, Neville Scott, University College.

Second Class.—Berry, Frederic Haycraft, Guy's Hospital.

Third Class.—Lory, William Manley, University College.

First B.Sc. and Preliminary Scientific (M.B.) Examinations (for Honours).

(*First B.Sc. and Preliminary M.B. conjointly.*)

CHEMISTRY.

First Class.—Cook, Ernest Henry (First B.Sc.—Exhibition), Royal College of Science, Dublin; Maguire, Robert (Prel. Sci.), Owens College.

Second Class.—Higgin, William Henry (First B.Sc.), Owens College; Gough, Thomas (First B.Sc.), private study, Paul, James Hugh (First B.Sc. and Prel. Sci.), private study, and Rake, Beaven Neave (Prel. Sci.), Guy's Hospital, *equal*.

Third Class.—Fream, William (First B.Sc. and Prel. Sci.), Royal College of Science, Dublin, Groom, Henry Thomas (Prel. Sci.), St. Bartholomew's Hospital, Bowe, Francis (Prel. Sci.), St. Bartholomew's Hospital, and Norie, James (Prel. Sci.), University College, *equal*.

ZOOLOGY.

First Class.—King, David Alexander (Prel. Sci.), St. Bartholomew's Hospital.

Second Class.—Dawson, Arthur George (Prel. Sci.), Owens College; Lukis, Charles Pardey (Prel. Sci.), St. Bartholomew's Hospital; Sayer, Mark Feetham (Prel. Sci.), University College; Hoyle, William Evans (First B.Sc. and Prel. Sci.), Owens College and Christ Church, Oxford; Chaffey, Wayland Charles (Prel. Sci.), St. Bartholomew's Hospital; McDonnell, Denis (Prel. Sci.), King's College.

Third Class.—Spicer, Robert Henry Scanes (Prel. Sci.), private study; Maguire, Robert (Prel. Sci.), Owens College; Groom, Henry Thomas (Prel. Sci.), St. Bartholomew's Hospital.

EXPERIMENTAL PHYSICS.

First Class.—Morley, Henry Forster (B.A., First B.Sc.—Arnott Exhibition and Medal), University College.

Second Class.—Bolton, Thomas (First B.Sc.), University College.

Third Class.—Stephens, Julian (First B.S. and Prel. Sci.), University College and private study.

BOTANY.

First Class.—Fox, Joseph Tregellcs (Prel. Sci.), London Hospital.

Second Class.—Atmaram, Anundrao (First B.Sc. and Prel. Sci.), University College; Spicer, Robert Henry Scanes (Prel. Sci.), private study; Atkinson, John Mitford (Prel. Sci.), London Hospital; Dallmeyer, Andrew William (First B.Sc. and Prel. Sci.), University College, and Sisley, Richard (Prel. Sci.), St. George's Hospital, *equal*.

Third Class.—Lukis, Charles Pardey (Prel. Sci.), St. Bartholomew's Hospital; Groom, Henry Thomas (Prel. Sci.), St. Bartholomew's Hospital.

University of Edinburgh.—The following is a list of candidates who received the degrees of Doctor of Medicine, Bachelor of Medicine, and Master in Surgery, respectively, on Tuesday, August 1:—

Doctor of Medicine.—Under the New Statutes: Barry, Frederick William, Scotland, M.B. and C.M., 1874; Calantarients, Johannes Aveticion, Armenia, M.B., 1874; Cameron, James Angus, Scotland, M.B. and C.M., 1867; Cash, Alfred Midgley, England, M.B. and C.M., 1873; Chalmers, Thomas Dodson, England, M.B., 1869; Cotton, Holland John, England, M.B. and C.M., 1874; Cowan, John Sim, Scotland, M.B. and C.M., 1871; Cunningham, Daniel John, Scotland, M.B. and C.M., with First-class Honours, 1874; Dickinson, Edward Harriman, England (M.A. Oxon.), M.B. and C.M., 1870; Eddowes, Alfred, England, M.B. and C.M., 1873; Gailey, John Alexander, Scotland, M.B., 1874; James, Alexander, Scotland, M.B. and C.M., 1872; Macfie, Johnstone, Scotland, M.B. and C.M., 1871; Macgillivray, Charles Watson, Scotland, M.B. and C.M., 1873; Murray, William Henry, Scotland, M.B. and C.M., 1874; Pairman, Robert, Scotland, M.B. and C.M., 1872; Phillips, Robert Edward, England (M.A. Cantab.), M.B. and C.M., 1874; Plant, Henry Walter, England, M.B. and C.M., 1874; Wallace, Abraham, Scotland, M.B. and C.M., 1873. Under the Old Statutes: Lithgow, Stewart Aaron, Scotland.

Bachelor of Medicine and Master in Surgery.—Adams, Robert Frederick, Scotland; Anderson, James, Scotland; Baker, James, England; Berry, George Andreas, Scotland; Boothroyd, Joseph Senior, England; Bouchet, George Victor Louis, Mauritius; Boyce, Charles, Ireland; Burlingham, Daniel Catlin, England; Campbell, Robert Neill, Scotland; Cash, John Theodore, England; Channer, Osborne Henry, India; Chavasse, Thomas Frederick, England; Clark, Robert Maxwell, India; Cleland, William Lennox, China; Coleman, Charles Alfred, Nova Scotia; Craig, James, Scotland; Curror, Alexander Lesslie, Scotland; Dewar, Michael, Scotland; Dobson, Henry, England; Dodds, William John (B.Sc. Edin.), England; Emerson, George Augustus, India; Eyre, Montague Stokes, India; Fionisse, John Henry Suffield, Mauritius; Gibson, George Alexander (B.Sc. Edin.), Scotland; Grant, David (M.A. Edin.), Scotland; Grant, James Duudas (M.A. Edin.), Scotland; Grant, William Thomas, Scotland; Gray, James Allan (M.A. Edin.), Scotland; Guppy, Henry Brougham, England; Hassall, John, England; Hay, Henry, Scotland; Hay, John Home, Scotland; Irvine, Robert William (M.A. Edin.), Scotland; Johnson, William Hadden, Australia; Jones, David Johnston, England; Keay, Joseph Hay (M.A. Edin.), Scotland; Kilner, Charles Scott, England; Kirk, Robert, Scotland; Lamb, William, Scotland; Laycock, George Lockwood, England; Leeson, John Rudd, England; Linton, Simon, Scotland; Logie, William, Scotland; Lyall, Alexander, Scotland; Maberly, William Henry, England; M'Bride, Peter, Hamburg; Macdonald, Thomas Ranken, Scotland; M'Dougall, Aymer, Robert, Scotland; M'Laren, Hugh, Scotland; Menzies, David, Scotland; Miller, John Bell, Scotland; Moir, Byers, England; Murray, James, Scotland; Nasmyth, Thomas Goodall, Scotland; Ogilvie, George (B.Sc. Edin.), Scotland; Ogilvie, Leslie (B.Sc. Edin.), Scotland; Pringle, John James, Scotland; Robertson, James George, Africa; Robertson, John (B.Sc. Edin.), Scotland; Rose, William James (M.A. Aber.), Scotland; Russell, Arthur Pickston, England; Russell, William, Isle of Man; Stewart, Duncan Robert, Scotland; Thew, Edwin Pringle, England; Thomas, Abraham Garrod, Wales; Underhill, Thomas Edgar, England; Underwood, John James, England; Walker, Alexander, Scotland; Wallace, David Wylie, England; Waller, Bryan Charles, England; Wanostrocht, Vincent, England; Waterhouse, Charles Henry (B.A. Lond.), England; Watson, Charles Scott, Scotland; Watt, John Douglas, Scotland; White, William Henry, England; Wright, John Henderson, Scotland; Young, Alfred Harry, England.

Bachelor of Medicine.—Baker, Edward Leopold, England; Barnes, Arthur Richard, England; Galletly, William, Scotland (received the degree on April 20, 1876); Montgomery, William Henry, America; Moolman, Hans Jurgens, Cape of Good Hope; Roxburgh, Robert, Scotland; Smith, Andrew, Scotland; Warren, Charles Edward Henderson, England.

Master in Surgery.—Harker, Thomas, England (received the degree on April 20, 1876); Smith, John Bisset, M.B. 1873 (M.A. Aber.), Scotland.

The Ettles Prize for 1876 has been awarded to David Grant, M.A., M.B., C.M.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 24:—

Dunstan, William, Liskeard, Cornwall.
Gairdner, John, Maidenhead Thicket.
Holdsworth, Samuel Rayner, Wakefield.
Nicholson, William Rumney, Burnley, Lancashire.

The following gentleman also on the same day passed his primary professional examination:—

Rule, Geo. Frederick Henry, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Forty, Daniel Herbert, M.R.C.S. Eng., L.R.C.P. Lond.—Resident Medical Officer to the Swansea Hospital, *vice* Walter C. Grosett Collins, M.B., resigned.

Shepherd, Dr.—Surgeon to the Herbert Hospital, Woolwich.

Walker, Henry.—Clinical Surgeon's Assistant to the Glasgow Lock Hospital, *vice* H. Lowther, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

War Office—Medical Department.—Surgeon George F. Hume Spry, M.D., to be Surgeon-Major, *vice* F. G. Kerin, deceased; Surgeon-General James Gordon Inglis, M.D., C.B., retires upon half-pay; the promotion to the rank of Surgeon-Major, on April 28, 1876, of Surgeon Henry Frank Housman, is cancelled; the honorary rank of Deputy Surgeon-General conferred on Surgeon-Major H. F. Smith, M.D., in the *Gazette* of May 30, 1876, should bear date April 24, 1876, and not as therein stated.

BIRTHS.

Armstrong.—On August 27, at 196, Parr[illegible]-street, Gravesend, the wife of John C. Armstrong, M.R.C.S.E., of a son.

Burkitt.—On August 23, at St. Alban's, Herts, the wife of Surgeon-Major W. R. Burkitt, 52nd Light Infantry, of a son.

GOODING.—On August 29, at Heath Lodge, Blackheath, the wife of Ralph Gooding, B.A., M.D., F.L.S., of a daughter.

HILLIARD.—On August 23, at 5, Belgrave-terrace, Holloway, N., the wife of R. Harvey Hilliard, M.D., of a son.

LEWIS.—On August 27, at 73, Albert-street, Regent's-park, the wife of Louis Lewis, M.D., of a son.

WELCH.—On August 26, at Itchen, Southampton, the wife of F. H. Welch, F.R.C.S., Army Medical Department, of a son.

MARRIAGES.

BEDWELL—TAITTON.—On August 29, at St. James's, Norlands, Edward, only surviving son of the late John Adolphus Bedwell, M.R.C.S., of Cirencester, to Gertrude, younger daughter of Alfred D. Tritton, of St. James's-square, Notting-hill.

BROXHOLM—ELLIS.—On August 24, at the parish church, Willingham, St. Ives, Hunts, Frederick Alleyn Broxholm, B.A. Trin. Coll., Camb., barrister-at-law, son of Frederick Giles Broxholm, M.D., of Richmond-road, Barnsbury, N., to Sarah Carter, daughter of Robert Sage Ellis, M.R.C.S.E., of Willingham.

CARPMAEL—BUTLER.—On August 23, at Christ Church, Streatham, Ernest Carpmael, M.A., F.R.A.S., seventh son of the late William Carpmael, Esq., of Streatham-hill, Surrey, to Matilda Catherine, only daughter of the late James Henry Butler, F.R.C.S., Deputy Inspector-General of Hospitals, Indian Army, Bengal.

CLARK—TERRY.—On August 22, at Trinity Church, Hethe, Owen, second son of the late Esau Clark, M.D., of Twyford, Bucks, to Maria, second daughter of J. P. Terry, Esq., of Putlowes, Bucks.

HAYDON—YATES.—On August 24, at Morthoe, North Devon, William Rudall Haydon, M.D., of Tiverton, late of Bovey Tracey, Devon, to Charlotte Eliza Chatterley, second daughter of Major George Hay Smyth Yates, of the Madras Presidency.

HOOKER—JARDINE.—On August 22, at St. Nicholas Church, Hereford, Dr. Hooker, C.B., D.C.L., Pres. R.S., etc., to Hyacinth, widow of the late Sir William Jardine, Bart., of Applegarth, and only daughter of the Rev. W. S. Symonds, J.P., F.G.S., of Pendock, Worcestershire.

PALMER—AMY.—On August 23, at the parish church, South Hackney, Thomas Hurlston Palmer, M.R.C.S. Eng., of Madeley, Staffordshire, youngest son of John Palmer, Esq., of Baginton, Coventry, to Marian Amy, of 127, Victoria-park-road, Hackney, youngest daughter of the late Mr. F. H. Amy.

REID—DODSON.—On August 22, at St. John's, Horselydown, Matthew Reid, M.R.C.P.E., to Alice Blanche, eldest daughter of Henry Dodson, Esq., of the County Court Department, H.M.'s Treasury.

DEATHS.

BARKER, CHARLES HEMSTED, youngest son of R. H. Barker, M.R.C.S., at Hungerford, on August 24, aged 19.

BADGLEY, Major ALEXANDER JAMES WEEDING, 33rd Regiment, third son of the late Francis Badgley, M.D., at Ahmadabad, of cholera, on July 14.

DE MÉRIC, VICTOR, F.R.C.S., Surgeon to the Royal Free, French, and German Hospitals, and late President of the Medical Society of London, at 52, Brook-street, Grosvenor-square, on August 29, aged 65.

FALLS, KATHLEEN AGNES, the infant daughter of W. Stewart Falls, M.D., at Marden Ash, Bournemouth, on August 23.

HADOW, GILBERT BETHUNE, Surgeon-Major in H.M.'s Bengal Medical Service, at Aligarh, N.W.P., India, on July 31, in his 41th year.

HILDITCH, Sir EDWARD, M.D., at 18, Arundel-gardens, Bayswater, on August 24, aged 71.

HUME, HENRY, M.D., M.R.C.S., L.A.C., son of the late Mr. John Hume, of Newcastle-on-Tyne, on his passage home from Jamaica, on July 12, aged 35.

LAWRENCE, JOSEPH, M.R.C.S., at 11, Queen-square, Bath, on August 21, aged 51.

ROSEATON, JOHN, L.R.C.S.E., late of Brighton-place, Manchester, at Holly Bank, New Mills, Derbyshire, on August 24, in the 80th year of his age.

SAUNDERS, NORMAN VICTOR STYLES, infant son of W. Sedgwick Saunders, M.D., at Elmstead-wood, Chislehurst, on August 26.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIGHTON AND HOVE DISPENSARY.—Resident Medical Officer and Dispenser. Candidates must be Members of one of the Royal Colleges of Surgeons of Great Britain or Ireland, and Licentiates of the Royal College of Physicians of London or Licentiates of the Apothecaries' Company of London, and duly registered under the Medical Act, 21 and 22 Vict., c. 90. Diplomas and other testimonials to the Chairman, on or before September 4.

GENERAL INFIRMARY AT LEEDS.—House-Surgeon. Candidates must be Members or Licentiates of a British College of Surgeons. Copies of testimonials to Dr. Heaton, The Infirmary, Leeds, on or before September 6.

HULME DISPENSARY, MANCHESTER.—Assistant Medical Officer. Candidates must be legally qualified in medicine and surgery. Applications, stating qualifications, with testimonials, to Dr. Wahituch, Honorary Secretary, Medical Committee, on or before September 9.

NEWARK HOSPITAL AND DISPENSARY.—Resident Medical Officer and Secretary. Candidates must be duly registered, and hold a diploma or diplomas licensing to practise medicine and surgery from one or more of the examining bodies of Great Britain and Ireland. Applications, with testimonials, to Dr. Quinton, Secretary, Newark, on or before September 4.

NEWCASTLE-UPON-TYNE INFIRMARY.—Junior House-Surgeon. Candidates must be registered in medicine and surgery, unmarried and free from the care of a family. Applications and testimonials must be in the hands of the Chairman of the House Committee on September 5.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—Assistant to the House-Surgeon. One qualification preferred. Applications to the Chairman of the Medical Committee, on or before September 18.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Eastbourne Union.—The Fourth District is vacant; area 9814; population 1480; salary £95 per annum.

Eltham Union.—Dr. Bain has resigned the Selbridge District; area 5683; population 1306; salary £25 per annum.

Louth Union.—Mr. McBeath has resigned the Withern District; area 18,123; population 2969; salary £50 per annum.

Sleaford Union.—Mr. Wm. Bower has resigned the Blankney District; area 26,260; population 3149; salary £12 per annum.

APPOINTMENTS.

Glamorgan.—Wentworth L. Scott, F.C.S., as Analyst for the County.

Greenwich Union.—Philip Thornton, M.R.C.S. Eng., L.R.C.P. Edin., to the Infirmary and Workhouse.

Mansfield Union.—George W. Sparke, M.R.C.S. Eng., L.S.A., to the Second District.

Newton Abbot Union.—Wm. Wills, M.R.C.S. Eng., L.S.A., to the Torquay District.

North Witchford Union.—Wm. Easby, L.R.C.S. Edin., L.R.C.P. Edin., to the Second District.

Oldham Union.—Henry L. Smith, L.R.C.S. Ire., L.K.&Q.C.P. Ire., the Second District.

Sudbury Union.—John McCreery, L.R.C.S. Ire., L.K.&Q.C.P. Ire., to the First District.

Thingoe Union.—John Richardson, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Fourth and Fifth Districts.

THE LILLE INSTITUTE.—In November next, faculties of medicine and law will be added to those of letters and sciences recently established at Lille.

A PHOTOGRAPH.—How modesty, says the *World*, always waits upon true greatness! An eminent medical man, whose name has been in everyone's mouth lately, has nobly requested a photographer, of Brighton, to discontinue the sale of his photograph.

INTENDED SPOLIATION.—The Corporation of Dublin last week agreed to a memorial to the Lord Lieutenant against the proposed alienation of a portion of the Phœnix-park—a proposal which has called forth a strong and general feeling of dissatisfaction on the part of the public.

INCREASE OF THE LARIBOISIÈRE HOSPITAL.—The *Progrès Médical* protests against the projected increase of this hospital, in defiance of the opinions of the most competent physicians and surgeons, who a few years since, in discussion at the Academy of Medicine and Society of Surgery, declared emphatically against large hospitals, recommending that in future only small hospitals should be erected outside the town. It is proposed to add a new wing to the Lariboisière (which has even now a bad sanitary reputation,) accommodating 300 patients in addition to the 606 which it now contains.

ERGOT IN PURPURA.—At the annual meeting of the New York State Medical Society, Dr. Bulkley read a paper advocating the hypodermic use of ergot in purpura. From ten to fifteen minims (or exceptionally twenty to thirty minims) of the fluid extract may be injected every hour and a half about the pectoral muscles or sides of the chest. Given by the mouth, as much as two ounces has been used in half-drachm doses within ten days. Cleanliness of the syringe, slowness of injection, and depth of insertion must be observed if the best effects are to be realised, and the production of abscesses avoided, these being of infrequent occurrence when the injections are properly given. Dr. Squibb, however, regarded Dr. Bulkley's experience on this last point as very exceptional; and Dr. Wey stated that Dr. Squibb's solution of aqueous extract (a minim representing a grain) is far less irritating, and less likely to cause abscess than the ordinary fluid extract. As to poisoning by ergot, Dr. Squibb observed that no such symptoms are produced by its use like those detailed in the older text-books. He had frequently known of drachm doses being administered three or four times a day without rendering the patient uncomfortable in any such sense as being toxic.—*New York Med. Record*, July 1.

CRUELTY TO ANIMALS.—The law as amended is contained in twenty-two sections, but whether it is so clearly defined as to be understood is another question. It commences with the declaration that a person shall not perform on a living animal any experiment calculated to give pain, except subject to the restrictions imposed by this Act. Any person performing or taking part in performing any experiment calculated to give pain in contravention of this Act shall be guilty of an offence, and liable for a first offence to a penalty not exceeding £50, and for a second or subsequent offence, at the discretion of the Court, to a penalty not exceeding £100,

or to imprisonment for a period not exceeding three months. There are general restrictions as to the performance of painful experiments on animals. The experiments must be with a view to the advancement by new discovery of physiological knowledge, or of knowledge which will be useful for saving or prolonging life or alleviating suffering. The experiments must be performed by a person holding a licence from one of her Majesty's principal Secretaries of State. In the case of a conditional licence, or of experiments for the purpose of instruction in a registered place, the animal must during the whole of the experiment be under the influence of some anæsthetic of sufficient power to prevent its feeling pain. If pain is likely to continue after the effect of the anæsthetic has ceased, or if any serious injury has been inflicted, the animal is to be killed before recovery from the anæsthetic. The experiment shall not be performed as an illustration of lectures in medical schools, hospitals, colleges, or elsewhere, and shall not be performed for the purpose of attaining manual skill. There are four provisos to the restrictions which are set forth. In the other sections there are special restrictions as to painful experiments on dogs, cats, etc. Any exhibition to the general public of experiments on living animals is strictly prohibited under heavy penalties, and any person "publishing any notice of such intended exhibition by advertisement in a newspaper, placard, or otherwise, shall be liable to a penalty not exceeding £1." The Secretary of State may license any person whom he may think qualified to hold a licence to perform experiments, and may insert the place where they are to be performed, and may require reports to be made to him of such experiments. The Secretary of State "shall cause all registered places to be from time to time visited by inspectors, for the purpose of securing a compliance with the provisions of this Act; and the Secretary of State may, with the assent of the Treasury as to number, appoint any special inspectors, or may from time to time assign the duties of such inspectors to such officers in the employment of the Government who may be willing to accept the same as he may think fit, either permanently or temporarily." Any application for a licence and a certificate must be signed by one or more of the following persons:—The President of the Royal Society, the President of the Royal Society of Edinburgh, the President of the Royal Irish Academy, the Presidents of the Royal Colleges of Surgeons in London, Edinburgh, or Dublin, the Presidents of the Royal Colleges of Physicians in London, Edinburgh, or Dublin, the President of the General Medical Council, the President of the Faculty of Physicians and Surgeons of Glasgow, and the President of the Royal Veterinary College, etc. (but by the last mentioned authority in the case only of an experiment under anæsthetics, with a view to the advancement, by new discovery, of veterinary science), and also by other persons mentioned. A certificate is given for such time, and for each series of experiments, as the Secretary of State may think fit. The Secretary of State may at any time disallow or suspend any certificate given under this (11th) section. A judge is empowered to grant a licence for an experiment when necessary in a criminal case. A justice may grant a warrant on grounds that experiments are made by unlicensed persons in places not registered under the Act, with penalties to be imposed. Offences may be prosecuted in a summary manner. A person accused may elect to be tried on an indictment, and not by summary jurisdiction. An appeal is given in England to the sessions, and the manner of procedure in Scotland and Ireland pointed out. The Act is not to apply to invertebrate animals, and the medical profession is protected by the 21st section, which declares that "a prosecution under this Act against a licensed person shall not be instituted except with the assent in writing of the Secretary of State."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

E. S. K.—The paper shall appear as soon as possible.

Mucor.—By all means. At all events, we shall see what we can do.

T. G.—We think not. It is the fluffy paper, which holds the poisonous colour lightly, that is most dangerous. Firmly fixed, the colour could hardly entail risk, except it were volatilised.

L. Buchan M.—The examinations at the University of Dublin for a diploma in State Medicine is open to all Doctors of Medicine of the Universities of Oxford, Cambridge, and Dublin.

L.S.A.—The honorary degree of Doctor of Medicine was conferred by the University of Oxford in 1834 on Dr. John Abercrombie—a somewhat rare mark of respect to the *alumni* of Scottish universities. He died suddenly, on November 14, 1844. On a post-mortem examination it was found that the bursting of the coronary artery of the heart had been the immediate cause of death.

G. G., Yorkshire.—Dr. Nathan Allen, an American physician, says, of the comparative infecundity of that part of the population of the United States described as "native Americans," that he regards the physical weakness of American women, their inattention to the rules of health, and the overstraining of their nervous system, as the chief determining causes of the small number of children in a family. We have, he adds, the usual complaints of tight lacing, low dresses, insufficient exercise, and so on, which have been urged by physical moralists in all countries; but more special evils are pointed out in "the excessive use of fine flour bread," and the overstrained intellectual education of girls. To the latter cause Mr. Herbert Spencer has already ascribed the same consequences. The fact of the general physical weakness in American women is curiously illustrated from one point of view by the estimate of a manufacturer, that more than seven million *feeding bottles* are annually sold in the United States—so many mothers are unable to nourish their offspring.

J. Thompson.—You are too late in your application for the Arts examination of the College of Surgeons. The time for sending in the forms expired on the 22nd ult., as stated in the advertisements in the *Medical Times and Gazette*.

Bibliopole.—The Library of the Royal College of Surgeons, which was closed on Thursday last, will be re-opened on Monday, the 2nd prox. The same information applies to the Museum.

F.R.C.S. Exam.—The gentlemen elected members of the Council of the College of Surgeons in 1865 were Sir James Paget, Bart., and the late Mr. Turner, of Manchester; and of the 355 Fellows who voted at that election, no less than 105 resided beyond twenty miles from London, 132 voters were Fellows by examination, and 223 honorary and elected Fellows. In 1860, only 37 Fellows recorded their votes, viz., 4 by examination, and 33 honorary and elected Fellows.

Argus.—The branch of science now known as "social" may be traced back to the parish registers of 1538, and the enactment of Henry VIII. respecting leases for three lives, or twenty-one years; through the London bills of mortality, and the commentaries of Grount and Petty; through the early attempts of Halley to construct a table of mortality from the death-registers of Breslau; through the prison inspections of John Howard, up to the establishment of the Statistical Society in 1834, and the foundation of the Social Science Association in 1857: the Statistical Society having been set on foot with the object of collecting "facts calculated to illustrate the condition and prospects of society." The Social Science Association was a second development, and a modified culture of that branch or division of human knowledge, that science of states, to which had previously been given the name of statistics.

The Fragrant Weed.

An early mention of tobacco is that in Hakluyt's "Voyages," by M. Jaques Carthier, in 1534. Referring to the people of "Hochelaga, up the river of Canada," he says, "There groweth also a certain kind of herbe, whereof in sommer they make great prouision for all the yeere, making great account of it; and onely men vse of it, and first they cause it to be dried in the sunne, then weare it about their neckes wrapped in a little beast's skinne made like a little bagge, with a hollow peece of stone, or wood, like a pipe, then when they please they make powder of it, and then put it in one of the ends of the said cornet or pipe, and laying a cole of fire upon it, at the other ende sucke so long that they fill their bodies full of smoke, till it cometh out of their mouth and nostrils, even as out of the tounell of a chimney. They say that this doth keepe them warme and in health; they never goe without some of it about them. We ourselves have tryed the same smoke, and having put it in our mouthes, it seemed almost as hot as pepper."

Blood-letting.

"Homer," says M. Milne-Edwards in his "Leçons sur la Physiologie," "whose poems constitute a sort of encyclopædia of the science which the Greeks possessed about the ninth century before Christ, does not speak of bleeding; but if we are to believe an author of the fifth century, Stephanus of Byzantium, this operation was known to the surgeons of the army of Agamemnon. In fact, he relates that one of them, Podalirius, son of Æsculapius, and brother of Machaon, on the return from the siege of Troy, practised it on a patient, whose cure obtained for him the sovereignty of the Chersonese. This would be the first case of blood-letting of which the remembrance has been preserved; and on consideration of a fable reported by Pliny, I am induced to believe that this practice had taken its rise in Upper Egypt; in fact, this naturalist tells us that the hippopotami, when they become too obese, have the habit of piercing for themselves the vein of the thigh, by pressing against a pointed reed, and that these animals have thus taught physicians to practise analogous operations. Now, this account does not apply to the sea-horse, or syngnathus, as the author of an estimable work on the history of medicine (Leclerc) supposes, but to the great pachyderm which inhabits the rivers of the interior of Africa, and which is found in Upper Egypt. It is evidently a fable, but this fable could only have reached us from Egypt."

Glycerine and Tannin in Infantile Diarrhœa.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—At this season of the year, when so many children are suffering and even dying from diarrhœa, any hint as to its treatment is welcome. Having had several little patients under my charge during the past few weeks, suffering from this distressing malady, I have been put nearly to my wits' end to know what to do to check the complaint. Having exhausted the usual run of remedies, such as chalk, bismuth, kino, catechu, logwood, ipecac, etc., and even minute doses of opium, without success, and not knowing what else to try, I eventually decided upon an injection of glycerine and tannin, and an equal part of water. This I gave two or three times a day, directly after an evacuation, causing it to be retained in the bowels some short time by closing the anal orifice, and by this means I was certainly enabled to control the disease most effectually, and often only one injection was sufficient. I venture to recommend this treatment with all confidence, for the following reasons:—1. The good results obtained. 2. It does not interfere with and upset the stomach, and remedies given by the mouth do. 3. It is equally serviceable in cases accompanied with vomiting. 4. It may be tried *with* other remedies at the same time. 5. If unsuccessful, it does not in any way weaken the child or prevent the use of other remedies. 6. It may obviate the undesirable necessity of resorting to opiates. 7. It tends to obviate the danger of the occurrence of prolapsus ani, by acting as a local astringent upon the tissues of the rectum.

J. M. Elgorocoh Scatliff, M.D.

13, Charlotte-street, Marine-parade, Brighton, August 22.

COMMUNICATIONS have been received from—

Dr. Dauitt, Christchurch, Hants; Dr. Tilbury Fox, Filey, Yorks; Dr. C. Bell Taylor, Nottingham; Mr. C. J. Cullingworth, Manchester; Mr. J. Chatto, London; Dr. Rodolfi del Castillo, Spain; The Secretary of the Army Medical Department, London; Mr. Messenger Bradley, Manchester; Dr. C. Caroler, Melbourne; Dr. Lawson, Edinburgh; T. G.; Mr. T. Boacheth, Netley; Dr. Dunderson, Philadelphia; Dr. E. S. Kino, Ilfracombe; Mr. Geo. Brown, London; Dr. B. Foster, Birmingham; Dr. Tuson, India; Dr. Sparks, Crewkerne; Mr. C. Aldridge, Plympton; Dr. Eo. H. Dickinson, Liverpool; Messrs. Tidman and Son, London.

BOOKS AND PAMPHLETS RECEIVED—

Austin Flint, M.D., A Manual of Percussion and Auscultation; Of the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism—Cassell's History of India, part 9—Professor Rudolph Virchow, Method of Performing Post-Mortem Examinations—Robert Brown, M.A., F.R.G.S., etc., The Countries of the World, part 1.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wocheoschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Morningside Mirror—Glasgow Medical Journal, July—El Siglo Medico—Sunday at Home, September—Leisure Hour, September—Gazeta Medica da Bahia—Melbourne Argus—New York Druggists' Advertiser—Bombay Gazette—Students' Journal—Obstetrical Journal.

APPOINTMENTS FOR THE WEEK.

September 2. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

4. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

5. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

6. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

7. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

8. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 26, 1876.

BIRTHS.

Births of Boys, 1366; Girls, 1250; Total, 2616.
Average of 10 corresponding years 1866-75, 2128·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	712	658	1370
Average of the ten years 1866-75	732·3	686·1	1418·4
Average corrected to increased population ...	...	...	1518
Deaths of people aged 80 and upwards ...	...	...	41

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Popnla-tion, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	5	...	2	...	2	...	30
North	751729	...	2	17	6	2	2	4	...	43
Central ...	334369	...	1	...	...	2	...	...	...	15
East	639111	1	3	9	...	4	...	4	1	43
South	967692	9	4	26	2	11	...	2	...	67
Total	3254260	10	10	57	8	21	2	12	1	198

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·696 in.
Mean temperature	50·0°
Highest point of thermometer	77·5°
Lowest point of thermometer	41·1°
Mean dew-point temperature	50·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·64 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 26, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Aug. 26.	Deaths Registered during the week ending Aug. 26.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2616	1370	77·5	41·1	59·0	15·00	0·64	1·63
Brighton	100632	42·7	70	49	71·8	45·1	57·8	14·34	1·75	4·44
Portsmouth ...	124867	27·8	79	50	71·2	47·3	59·6	15·34	0·63	1·60
Norwich	83430	11·2	68	64	79·2	42·0	59·0	15·00	0·18	0·46
Plymouth	72230	51·8	47	28	74·5	48·0	60·3	15·73	1·35	3·43
Bristol	199539	41·8	142	67	77·2	39·8	59·6	15·34	0·17	0·43
Wolverhampton ...	72549	21·4	63	35	78·7	39·7	59·8	13·78	0·28	0·71
Birmingham ...	371839	44·3	309	215	...	...	...	...	...	...
Leicester	113581	35·5	104	100	82·5	37·8	56·3	13·50	0·19	0·48
Nottingham ...	93627	46·9	62	53	82·7	36·7	57·5	14·17	0·33	0·84
Liverpool	521514	100·1	428	283	78·2	46·5	57·6	14·23	0·12	0·30
Manchester ...	357917	83·4	293	227	...	...	...	...	...	...
Salford	138425	26·8	113	97	80·9	36·0	55·5	13·06	0·57	1·45
Oldham	88609	19·0	73	31	...	...	...	...	...	...
Bradford	173723	24·1	141	90	75·6	44·0	58·0	14·44	0·26	0·66
Leeds	291580	13·5	242	163	78·0	44·0	59·3	15·17	0·22	0·56
Sheffield	274914	14·0	206	166	78·0	42·4	57·3	14·17	0·36	0·91
Hull	136933	37·7	111	91	75·0	41·0	57·4	14·11	0·10	0·25
Sunderland ...	103343	32·8	84	66	76·0	42·0	57·5	14·17	0·03	0·00
Newcastle-on-Tyne	139929	26·1	122	58	...	40·0	...	...	0·12	0·30
Edinburgh	215146	54·3	143	67	...	...	...	...	...	...
Glasgow	515144	90·4	377	200	...	...	...	...	...	...
Dublin	314066	31·3	164	103	73·2	36·9	57·1	13·95	0·02	0·05
Total of 23 Towns in United Kingdm	8028595	37·7	6057	3676	82·7	36·0	58·0	14·44	0·41	1·04

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·70 in. The lowest reading was 29·56 in. on Sunday morning, the 20th, and the highest was 29·87 in. on Friday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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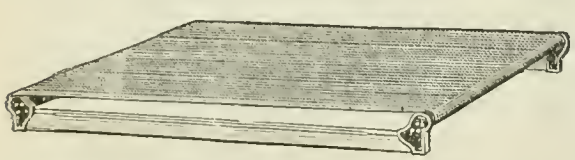

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ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture IX.

DEATH BY DROWNING.

(*Concluded from page* 248.)

This brings us to notice the only remaining mode to which death by submersion is attributed; and which, if not—as we have seen—the only one adopted by authors, is the one which all agree in considering the most frequent, viz.:—

4. *Death by asphyxia.* The following graphic sketch, which I borrow from Devergie, is perhaps as correct an account as can be given of what takes place in most cases of death by drowning:—

The individual sinks in the water, to a depth greater or less according to the height of his fall; then rises again to its surface, under the influence of his specific gravity—rendered less considerable by the air retained in his clothes, and by the position which the body assumes by the effect of his instinctive actions, which have for their object the presentation of a greater surface to the fluid. Then one of two things happens—either the individual can swim, and in this case he instinctively pushes along the surface of the water till he is fatigued, when he comes to the same position as the person who cannot swim: or he finds himself from the outset in this latter predicament, and then he executes irregular movements of the arms and legs, seizes everything within his reach, clutches at the bottom, lays hold on bodies in motion as motionless ones; but inasmuch as his motions are irregular, he appears and disappears successively from the surface of the water. It has been observed that at the moment that the head comes to the surface, air and water are inspired; the latter is partly swallowed, partly rejected by an involuntary fit of coughing, arising from the contact of the water with the larynx, the liquid reaching this organ at the same time with the air. These efforts, however, have caused the expulsion of the inspired air, and the desire to breathe makes itself imperatively felt. If the individual has been able to reach the surface of the water, he profits by his contact with the air to satisfy this desire for breath; but as the head is but partly above or out of the water, he draws in a fresh quantity of air and water, and the cough returns. In a short time the person only floats beneath the surface; he again feels the desire to breathe; he opens his mouth, and water alone enters; it is expelled from the trachea, mingled with air, and perhaps swallowed; a quantity of which—between one and two pounds—may thus reach the stomach. A little water always enters the trachea, to form the foam which is found when the body is examined early enough. During the whole of these attempts to keep up the respiration, an afflux of blood is taking place towards the brain, which explains the bloody points, and even the gorged state which is sometimes discovered in that organ, and which is never found in mere asphyxia. Finally, the voluntary movements cease, the asphyxia is complete; the individual sinks to the bottom of the water, while at the same time there escape from the breast bubbles of air, on account of the collapse of the walls of the chest and of the diaphragm, under the influence of their elasticity.—(Devergie, vol. ii. page 317.)

The morbid appearances after death by drowning are such as naturally follow the closing scenes of life in the way we have described, viz.: (1) those common to this and other forms of asphyxia—or, in rare instances, comato-asphyxia; and (2) in addition to these, certain appearances more or less characteristic of this mode of sudden death.

Before proceeding, however, to the formal discussion of the usual signs of death by drowning, it is essential to keep the fact in view that, in some instances, even under favourable circumstances, some of the most characteristic of these may fail to present themselves. In order to their production in a marked form, it is essential, first, that the body *had been wholly submerged in the water;* secondly, that the person so submerged had not at once *sunk to the bottom of the water without having come to the surface again before death;* and, thirdly, that the body had been recovered and examined without loss of time.

Now, *in practice* this will not be found generally to hold good. In the first place, to cause death in this way it is only requisite in some instances that the lips and nostrils should have been under water. In 1851 I recorded a case of this sort in a person who had, during an epileptic seizure, fallen with his face downwards into a shallow pool of dirty water, and perished from the occlusion of his mouth and nostrils.—(*Medical Gazette*, vol. xlvii. page 763). I have since met with a parallel instance in a man, who, while intoxicated, and proceeding to cross the channel of the Durburn (Aberdeen), believed at that time to be almost dry, was seen to fall on his face, and remain in that recumbent posture. No further notice of the man was taken at the time, and it was not till some hours after that he was found dead, his face in a narrow strip of water at the bottom of the channel.

Caspar has referred to similar occurrences as not unfrequent in the case of new-born infants drowned in shallow vessels containing small quantities of blood, urine, or liquor amnii; as well as instances of intoxicated or epileptic persons drowned in shallow brooks and gutters.—("Forensic Medicine," vol. ii. page 229.) Such cases, however, can present no difficulties to the medical jurist, as in these all the internal appearances will be encountered by the inspector.

The position of the medical jurist will be more unfavourable in the second class of cases to which we have referred—where weights, for instance, had been attached to the body, either by a determined suicide or by a murderer, to secure the speedy destruction of his victim. Here, as the buoyancy of the body, which would otherwise have brought it to the surface, is counteracted, so many of the indications of death from this cause will necessarily be wanting at the inspection.

It is but proper, however, to add that Caspar and Taylor both combat this opinion, as far at least as the froth in the trachea and water in the lungs are concerned—a point to which I shall have to return by-and-by.

Again, it frequently happens that the sinking of the body, which takes place at death, prevents it from being recovered until some time after death, the body not coming to the surface until the occurrence of putrefaction has restored its buoyancy. This period will vary, of course, with the seasons—a few days being sufficient in the summer or in warm weather; while it may be deferred in winter for from three to six weeks, or even longer. In these circumstances, the examination of the body, with the view of deciding as to the cause of death, will be conducted under considerable disadvantages, for not only will it be found that time has been afforded for the disappearance of some of the signs on which most reliance is usually placed, but it will also be the fact that putrefaction has obliterated others of them, or rendered it uncertain whether they are to be referred to the asphyxia of which the party may have perished, or to the process of decomposition which has commenced after the immersion.

Taking into account these peculiarities liable to be encountered in the examination of the bodies of persons who have perished by drowning, it will be seen at once that room is given for differences of opinion—which at one time prevailed to a considerable extent—as to the value and requisite frequency of the individual signs of death by this mode; differences of opinion which, since the subject has been more closely studied, have now mostly disappeared. Your attention, however, has been directed to these *peculiarities* in the examination of the drowned, not so much on this account, as from the circumstance that their existence renders it imperative on the part of the medical jurist engaging in such examinations that he has previously made himself familiar with the signs of death here, not only in the mass, but also with them individually; with their relative values; with the fallacies attaching to their individual application and estimation; with the periods which may be properly assigned to each; and with those appearances in the body, after the commencement in it of decomposition, which are liable to obliterate, mask, or simulate this form of death.

Some of the points thus indicated were disposed of under *putrefaction*, both as a general process and as modified by the stay of the body in water: most of the others will come in here while discussing, as I now proceed to do, in some detail, the *individual signs*, or *groups of these*—first singly, and secondly as they are to be encountered, in greater or less number, *in* combination. Taking for my guidance my notes of the *external appearances* in nearly 300 (272) bodies viewed on removal from

the water, and of the *internal appearances* in 116 of these, in which post-mortem inspection followed, I begin with—

1. *The appearances on the exterior*, taking first—

(*a.*) The *face* and *general surface* of the body. *The pallor of the countenance* and *of the surface generally*, whatever their aspect previously, follows the extinction of life in drowning as in other forms of death, as insisted on previously, and persists in this case for from five to twenty-five hours. It must not be assumed, then—as is done by Desgranges and Watson—that such a state of the surface points to a rapid asphyxia, and an opposite state of it to a severe dying struggle and slow asphyxia.

A similar state of the surface is usually encountered also in bodies which have remained submerged for considerable periods, where putrefaction has been delayed.

At from sixteen hours to four days after death, a uniform blush of redness, of a more or less dusky hue, is commonly seen on the face, if not on the other parts of the surface, from the action of the oxygen of the atmosphere or of the water. This redness, if it have not taken place previously, will be seen to occur on the exposure of the corpse for a short time to the air.

(*b.*) The redness in the drowned is different from the reddening or lividity of the upper part of the body from mere congestion about the head, which, when present to any marked extent, usually shows itself somewhat earlier—that is, not later than from sixteen to twenty-four hours after death.

(*c.*) Of the green discoloration, marking the commencement of putrefaction, I would only remind you that—as previously noticed—in *drowning*, it usually *first makes its appearance over the front of the chest.*

Besides the changes of colour on the surface of the body in drowning, the attention of the medical jurist has been called to the *roughening* of it usually observable, from the *prominent state of the papillæ*, known as the

(*d.*) *Cutis anserina.* This state of the surface becomes most perceptible when the fingers are passed over it. The appearance in question is usually best marked on the anterior surfaces of the extremities, and has been generally attributed to the sudden immersion of the warm body in the cold medium of the water; though Caspar, with considerable show of probability, ascribed it rather to *the nervous shock* experienced at the moment of the immersion; referring, in confirmation of this opinion, to the fact that "it is found in the bodies of those drowned in the heat of summer, when the water is of a very high temperature, precisely the same as in the greatest cold of winter" ("For. Med.," vol. ii. page 235, New Syd. Soc. ed.). I cannot, however, concur in this last statement, as my experience is the reverse of this, having found the cutis anserina most pronounced in bodies in the winter months, though it is usually encountered at all seasons in fresh bodies.

The circumstance should not be overlooked, that, though rarely absent in the bodies of the drowned, this appearance of the skin may likewise be met with after sudden deaths in other forms, such as hanging, gunshot wounds, etc.—a fact which I have repeatedly verified, and which is testified to by Caspar (*id.*).

More conspicuous still is an appearance on drowned bodies after a stay of a few hours in water, viz.:—

(*e.*) *The blanching and corrugation* of parts of the surface. This unnatural *whitening* and *corrugation* of the skin first makes its appearance on *the palms of the hands* and *the soles of the feet*, whence, when the body has remained for a few days in water, it is found to have spread as far as the wrists and ankles, and subsequently is seen on *the prominences of the elbows* and *fronts of the knee-joints.* It must be kept in mind, however, that this phenomenon, like the last, is *a mere physical effect of the stay of the dead body in water*, and has no peculiar connexion with this mode of death; while it is sometimes met with in bodies disinterred from the earth, and even in the living, as in the hands of washerwomen.

Some stress has been laid, especially in Germany, on the state of the palms and fingers in the drowned, known as—

(*f.*) *The cholera hand*, well represented in Caspar's "Atlas," where the whitening of the surface is modified by the lividity appearing through it. This peculiar aspect of the hand—met with also, as the name implies, in cases of Asiatic cholera—Caspar asserts may be produced by immersing a dead hand, livid from any cause, in water for a certain time, or even by keeping it surrounded by wet cloths. Caspar, however, has pointed out one inference of some value, which may be drawn from the presence of the cholera hand when observed in *a body out of water*, and *which had not been interred*, viz., that the body in that case must have previously *lain for some time in that medium.*—("For. Med.," vol. ii. page 236, New Syd. Soc. ed.) In illustration he refers to the not improbable case of thieves removing a body from the water for the sake of plunder, and leaving it on the banks.

Some other appearances in the interior of the body after death by submersion have been looked on as characteristic by some writers on this subject; such as—

(*g.*) *Excoriations about the knuckles or points of the fingers, dirt or sand under the nails*, and *foreign bodies grasped in the hands.* The finding of such appearances will, of course, depend on the character of the death-struggle, the vicinity of hard bodies struck against by the hands, and the presence of sand or mud below the water or on its banks, or of foreign bodies floating in it. Substances grasped in the hands would, of course, indicate that the party had been alive at the time, and so far conscious. The same inference might possibly, but not certainly, be built on the discovery of dirt or sand under the nails, and excoriations about the knuckles or points of the fingers. With the exception of this last circumstance, I have never encountered the two others, probably from the persons I have examined having been, with few exceptions, drowned in deep water. Such excoriations about the fingers and knuckles I have only once noticed; and these abrasions of the cuticle, as also the slight contusions on the bodies of the drowned, are perhaps rather properly to be attributed to the corpse being carried by currents against hard bodies in the water, than to the struggle before death. This at least explains the circumstance that traces of such slight injuries are encountered with nearly equal frequency on various of the more prominent parts of the surface, such as the nose, forehead, face, knees, etc.

(*h.*) Caspar very properly gives no value to the *state of the tongue* in the drowned. In thirty-six cases I have noticed it pressed against the front teeth, and in a few of these the teeth had left their impressions on it. In only one instance did I find the tongue retracted.

(*i.*) In his "Gerichtlichen Leichenöfnungen," Caspar first drew attention to the *contraction of the penis*, or shortening of this organ, which he states that he has almost never failed to find in recently drowned bodies, while, on the other hand, he did not observe anything similar after any other kind of death.—("For. Med.," vol. ii. pages 236-7.) In six males I have met with this appearance pretty well marked, one of these being an infant. On the other hand, I have noted a very different state of the penis, viz., in two cases that of *erection*, and in twenty-two that of *semi-erection.* The only other appearance on the *exterior* of the body in the drowned is that of—

(*k.*) *Froth about the lips and nostrils.* But as this sign is connected with the presence of froth in the throat and air-passages, I shall reserve it for notice in connexion with—

The post-mortem appearances observable in *the interior* of the bodies of the drowned, which next fall to be considered.

These, however, must be reserved for next lecture.

DR. BUCKNILL'S ADDRESS

AT THE

MEDICO-PSYCHOLOGICAL ASSOCIATION.

Psychological Medicine in America.

Mr. President,—I am sure we are very much obliged to you for your able and practical address. It deals with subjects which at the present time press for a solution, and it will, I am sure, aid us very much in our judgment as to how those important matters should be dealt with. I have rarely had the pleasure of hearing a more able and practical address, and I am sure that, in the name of my colleagues and associates, I may say that we are all exceedingly pleased and obliged to you for it. I am personally most gratified to see you in that chair; I do not know that anyone has a greater right to be gratified than I have after the intimate knowledge I have had of you for thirty years as a friend and fellow-officer, and during that long period I have become more and more deeply impressed with your moral worth and intellectual force. I hope the production of this able paper will lead you to change in some respects that which has been the habit of your life,

and that we may hope for some further literary efforts from your pen, which, while we all knew you were so capable of using, from your having devoted your life to the practical cares of the treatment of the insane, we have not had the benefit of until the present time. There is one point in your address in which I take more interest than any other, and I am happy to be allowed to refer to it as an opportunity for asking this Association to follow your advice in their hearts and minds, and to reserve their judgments as to the accusations which have been made in this country against our psychological brethren in the United States. Some of those accusations have been quite recent, and of those I will speak first. They are contained in the *Lancet* of the 8th of this month, and they are of a peculiar nature, to which I wish to draw your attention. They are mere copies from American newspapers of accusations which have not been proved in evidence; one especially is copied from the *World* newspaper of New York, and professes to be the charges made against Dr. Nichols, of the Washington Asylum, before a Committee of Congress. Now, I should like to read to you part of a letter which I have from a gentlemen, whose name is never mentioned among alienists without respect, on that very subject. It is from Dr. Thomas Kirkbride, the venerable and venerated head of the Pennsylvania Hospital for the Insane, Philadelphia. He says: "Dr. Nichols is just now going through a most infamous persecution by what is called an 'investigating committee,' started by the Democratic majority in Congress, with the determination to blacken, if possible, the character of everybody connected with the Government. One would have thought that such a man, and such an institution, would have escaped; but where the testimony of discharged *employés*, uncured patients, and personal enemies is eagerly sought after, in a secret investigation, there is little probability of even an approach to justice being done." Now, I dwell upon the word "secret" there, not because I think such an investigation might not very properly be secret, but because it will show to you that the charges which the *Lancet* has published have been obtained either on information which has been stolen or which has been betrayed. And I ask you to put it to your own minds, if such charges made against any of the superintendents of the English asylums were liable to be published in the medical press as if they had been proved, whether any superintendent could ever feel that his character was safe? Dr. Nichols is the President, and has been for many years, of the American Association of Superintendents of Asylums, and he is a man who, until these accusations were made, was held in high and good repute. I am far from wishing to defend Dr. Nichols from any charges of wrongdoing which can be proved against him, but I do think that this is a pointed example of the necessity of your wise counsel, that we should hold our judgment suspended. I remember a short time ago a pamphlet being published in this country, purporting to have come from a society of supposed lunatics, in which charges were made against many of us. They were not taken up, because we all of us had sense enough to see that a clique of crazy women and their imbecile supporters were not worth powder and shot. But if the *Lancet* had transferred these charges to its pages, I think that journal would very quickly have had to pay heavy damages for libel. Dr. Nichols, I suppose, stands, as a foreigner, in a different position from that we should have occupied, and, as he cannot defend himself, such attacks are the more inexcusable. I hope I shall not be wasting the time of the Association if I refer to the commencement of this discussion, and very briefly tell you what was said by the *Lancet* in its leading article on November 13 last. It is a very consistent tissue of indiscriminate accusations against the "*mad doctors*," as it calls them, of America. There is no mistake, it is all wool, there is no cotton in it; it is an accusation against them from the first to the last line—against these American "mad doctors." It commences by dividing the treatment of insanity into three stages: the first is the barbaric, the second is the humane, the third the remedial; and it declares that the "mad doctors" of the United States have not made much progress out of the barbaric into the humane stage, but have remained for the most part in "that stage in which the lunatic is simply regarded as a wild and dangerous animal, from which society needed protection, and which might be kept in chains, tamed or destroyed, as convenience should dictate." That is the charge against the "alienists" of America. It then proceeds to make special accusations against them—namely, that they "resort to contrivances of compulsion, they adhere to the old terrorism tempered by petty tyranny; that they use at least the hideous torture of the shower-bath as a punishment in their asylums, although it has been eliminated from the discipline of their gaols; and worse than all, if the reports that reach us may be trusted, their medical superintendents leave the care of the patients practically to mere attendants, while devoting their own energies principally to the beautifying of their colossal establishments." These are definite charges, and it gives the reason why they should do all these things on the broad principle that "there can be no question, that the custom of slave-holding, and the brutalising *régime* from which it is inseparable, have blinded and blunted the sensibilities of the people." I do think the *Lancet* might have asked some little boy in the street about the brutalising *régime*, and the probability is that it would have been told that the *régime* of slave-holding only extended to a portion of the States, and that it was detested in the remainder. But with great consistency the *Lancet* applies that principle to the whole of the people, as it applies its other accusations to the whole of the "mad doctors." Now, on reading this, I felt that I should be ashamed to see the names of such men as Edward Jarvis, Thomas Kirkbride, John Gray, Isaac Ray, Pliny Earl, and many others, even in print, if it was left unanswered. I therefore did answer it, in a letter in which I claimed justice for those who were innocent, admitting at the same time that there were asylums in the States, and that I had seen them, which were disgraceful. In this matter I was not consistent, at least according to the opinions of the *Lancet*, whose consistency seemed like that of King David, who said in his haste, "all men are liars,"—as the consistency of the *Lancet* consisted in saying that all the people, and therefore all the "mad doctors" of America, were under brutalising influences. However, the *Lancet* invited me to make known what I had seen in America, saying that "no information could be more important and trustworthy." I accepted this invitation, and wrote my Notes. Now, I was under the apprehension that in writing those notes I had very unreservedly expressed my sense of the evils which I saw, and that I might, perhaps, have offended those whom I most earnestly wished to convert; and I think that those of my associates who have done me the honour of reading these notes will agree with me that I did run a very considerable risk of doing so. But I attempted in those notes to distinguish the good from the evil, to discriminate between those who were justly accused, and those who were not. Now, the *Lancet*—and I hope I am not going into a matter which may be thought personal, for the manner in which I have been treated did not greatly surprise me, knowing, as I did, that those who play at bowls must put up with rubbers, and those who contradict editors must take the consequences; but I do think it a matter of extreme importance to our speciality to know how we may expect to be dealt with by a journal which takes upon itself the censorship of the treatment of the insane in this country and abroad. I was proceeding to say that the *Lancet*, on the 8th of this very hot month, having "nursed its wrath to keep it warm" ever since last November, "sums up" on the subject. It accuses me of having confounded the good with the evil. That is exactly what the *Lancet* itself had done in the first instance: it confounded the good with the evil; it made indiscriminate and sweeping charges and accusations, which it has not substantiated; it says I have written in defence of restraint, and leaves it to be inferred that I have tried to prop up the tottering system of restraint. I can only appeal to you to know whether that is a fair inference to be drawn from what I have written. I don't myself think it is, but the very opposite. Then it censures me because, with reference to the Washington Asylum, where I saw restraint in use, I used these words: "It must have been imposed because it was thought the best mode of treatment." Now, gentlemen, did or could any of you think that, by my saying that, I meant to express my opinion that it was the best mode of treatment? Why, if I were to say that the *Lancet* perverts everything that an opponent writes, and that the *Lancet* thinks this a fair and candid way of conducting a discussion, none of you would believe that I thought myself it was an honest way of conducting a discussion. Yet that is an exact parallel. I must beg, however, to tell you why I did not ask for any explanation why this restraint was used. I had been expressly told that any discussion on the subject would be unwelcome and disagreeable, and I think that after that warning it would have been bad manners and discourtesy on my part to have demanded such an explanation. The *Lancet* also censures me severely

because I did not ask to be permitted to inspect the register of injuries and accidents. Now, may I ask if any one of you, in going unofficially round an asylum, have ever asked for the register of injuries and accidents? I should like to know if anybody has done so? If he has, I should like to hear him say so. I pause for a reply. I suppose, then, no one has done so. Perhaps the *Lancet* Commissioner might have done so, for his knowledge of lunacy appears to consist of the crusts and crumbs of information which he has picked up in his raid upon us by unreserved questioning. But I venture to think that, as a stranger in a far country, it was right not to return impertinence for courtesy; and that to do so is not the right way to obtain or impart information under such circumstances. The indiscriminate accusations of the *Lancet* have produced in America nothing but angry opposition, but I am happy to know that the descriptions which I have given in a more discriminating and tempered vein have done some good. I have recently had a letter from Dr. Edward Jarvis, saying that my descriptions of American asylums are, he believes, quite true. That is something from such an authority. Then I have had letters from Dr. Landor, the Superintendent of the Ontario Asylum, who has made a tour of American asylums since I left, and he tells me that my notes have induced some of the superintendents to make a trial of non-restraint. And further, I have had other letters from America, assuring me that my notes have awakened a desire among superintendents to visit this country and examine our system, after the bustle of this Centenary year has passed. If books and pamphlets could have converted the Americans, they would have been abreast of us long ago, but in a matter of this kind, seeing is believing; and I have faith that, when the American superintendents do come to this country, and carefully and conscientiously examine for themselves into our system of treatment, they will very generally adopt it. And when they do come, gentlemen, allow me to say that you will find them most friendly, kindly, and agreeable men, whom you will be happy to welcome into professional and domestic circles. In their own country they are most hospitable. In this country I am sure they will be welcomed as they deserve to be. I should wish that this great Association should, under these circumstances, say a kindly word to them; and while I entirely concur in the wisdom of that reserve which our President has recommended, I shall ask of you to adopt a resolution which I have framed, and which I will put before you for discussion. I am not sure it is such as you will approve, therefore I submit it for alteration if you think fit. It is—"That this Association, while reserving its opinion on the general question of the treatment of the insane in America, and on matters which are under inquiry, desires to express its sympathy with the medical men engaged in the treatment of the insane in the United States, who have been made the subjects of unfounded accusations or imputations either in the United States or in this country." I have now only to thank you for your indulgent attention.

LECTURES ON OPHTHALMOLOGY.

DELIVERED AT GUY'S HOSPITAL.

By CHARLES HIGGENS, F.R.C.S.E.,
Assistant Ophthalmic Surgeon to the Hospital, and Lecturer on Ophthalmology in the Medical School.

LECTURE II.

IN the examination of the eyeball and parts around we have to employ our unaided sight—sight aided by certain instruments—and our sense of touch. Our methods of examination may be divided as follows:—

1. Examination by the unaided eye.
2. Examination by lateral illumination.
3. Examination by the ophthalmoscope: a direct and indirect method of examination.
4. Examination by manipulation.

We have also to examine the acuteness of vision, the extent of the visual field, the refractive condition of the globe, and its movements.

First, I shall endeavour to point out how the examination should be conducted, and what we should learn by each method. Also, what are the normal appearances and conditions of the various structures with which we have to deal.

1. EXAMINATION BY THE UNAIDED EYE.

In order to examine the outer surface of the eyelids, ocular conjunctiva, cornea, anterior portion of sclerotic, aqueous chamber, and lachrymal apparatus, we place our patient in a good light (as before a window), and direct him at first to close the eyes, then open them widely, and look by turns in different directions.

To examine the palpebral conjunctiva it is necessary to evert the upper lid, and to draw the lower one downwards. We can evert the upper lid thus: standing in front of the patient, we direct him to look downwards and close the eyes; then place the forefinger of one hand upon the lid at the attached border of the tarsal cartilage, and make gentle pressure downwards and backwards, so as to cause the free edge of the lid to stand away from the eyeball; next place the thumb beneath the margin of the lid, and make a slight upward movement, at the same time continuing the pressure with the finger: by this means the lid will be made to turn upon itself and become everted. The lid may also be everted by pressing a probe horizontally upon its outer surface, and drawing it upwards by means of the lashes, at the same time making pressure downwards with the probe; but when you have had much practice you will take very naturally to using your fingers without the probe.

To examine the conjunctiva covering the lower lid, all that is necessary is to place the finger upon the margin of the lid and draw it strongly downwards, when its conjunctival surface will be exposed.

Normal Appearances.

The outer surface of the eyelids is covered by soft, delicate skin, which is thrown into folds on every action of the orbicularis; their free margins are of some thickness. From the outer edge of this free margin project the lashes in two or three rows; those of the upper lid being thicker and longer than those of the lower. The lashes extend along the whole outer edge of each lid, but are much fewer and more delicate in that portion extending from the tear punctum to the inner canthus.

The inner edge of each margin is occupied by the orifices of the Meibomian glands, which are seen as a close set of yellowish points. *The ocular conjunctiva* is smooth, moist, shining, and transparent, allowing the white sclerotic to show plainly through it; a few vessels are generally seen running from the outer and inner canthi towards the cornea, but these are perfectly consistent with a healthy condition of the membrane. The caruncle and semilunar fold occupy the space immediately external to the inner canthus, the former appearing as a small reddish-grey projection, the latter as a well-defined pinkish fold.

The palpebral conjunctiva is also smooth, moist, shining, and transparent, and appears to have somewhat of a yellowish colour from the tarsal cartilage—to which it is closely and evenly united—showing through it. The portion of membrane reflected from the lids to the globe (fornix) appears somewhat thickened and wrinkled, and is slightly more vascular than the ocular and palpebral portions.

Certain parts of the conjunctiva require to be specially examined. We find that next the thickened margin of the lid, in the fornix and about the caruncle are the most likely situations for the lodgment of a foreign body. We should also look carefully at the portion covering the attached border of the tarsal cartilage, as it is here that granular ophthalmia manifests itself most plainly.

The cornea is smooth, shining, and perfectly transparent throughout, except in the case of old people, in whom a bluish-white crescent or circle (arcus senilis) is often seen occupying more or less of the cornea, somewhat within its margin.

The anterior portion of the sclerotic is pearly-white, or of a pale bluish tint, and shining. It is plainly visible through the transparent conjunctiva covering it; some fine vascular twigs may occasionally be seen traversing it in front of its equatorial region. The aqueous chamber is filled by the aqueous humour, which is transparent, colourless, and of such a quantity as to preserve the proper curvature of the cornea without causing tension or allowing of laxity, and to keep it separated from the iris by a considerable interval.

The iris varies in colour in different individuals. It is bright and smooth, presenting in health no appearance of blood-vessels. Its plane is exactly vertical. The pupil, situated somewhat to the inner side of the centre of the iris, is perfectly circular, and dilates and contracts quickly with variations of light.

The examination of *the lachrymal apparatus* gives chiefly negative results. We should notice the position of the tear puncta closely in contact with the ocular conjunctiva. Pressure with the finger over the lachrymal sac should cause no escape of fluid through the puncta. The lachrymal gland can be neither felt nor seen in a normal condition of the parts.

2. Examination by Lateral Illumination.

All the parts mentioned above are seen more clearly. Minute foreign bodies, slight opacities of the cornea, etc., which might be overlooked in examining with the unaided eye, are discovered; and, in addition, we can ascertain the condition of the lens and the anterior portion of the vitreous.

We conduct the examination thus:—The patient being seated in a dark room, we place a lamp at about two feet distance on the left, and rather in front of his face; stand nearly in front, or rather to the patient's right side, and facing him; then take in the right hand a bi-convex lens of about two and a half inches focal length, and with it concentrate the light on the surface of the cornea. We find that, with a little manœuvring, we can throw the light through the pupil to a considerable depth into the eye. The patient should be told to look in various directions, so that all parts of the anterior portion of the eye may be examined. In order to make a satisfactory examination by oblique illumination, the pupil should be well dilated.

The results obtained by lateral illumination are chiefly negative. The lens in health is perfectly transparent, and in youth is nearly colourless; but some bluish lines, showing its division into different segments, can be recognised by careful examination. As age advances, these lines become more marked, and the whole lens appears of a bluish-grey or yellowish colour, though its transparency is still but little affected. We must remember this, and not mistake ordinary senile change for a morbid process. Behind the lens all appears dark; but should there be any tumour, hæmorrhage, etc., occupying the anterior part of the vitreous, we at once see a reflection from its surface, and can with care make out its details. We should notice in the examination by lateral illumination that opacities of the cornea, etc., always appear with greatest distinctness on the side which is farthest from the light. If it is deemed necessary to make an extra-careful examination, the patient should be turned round, or the light placed on the other side, and the examination gone over again in the same manner as before, with the exception that the light is thrown upon the eyeball from the other side. A second lens may also be used to magnify the parts illuminated by means of the first.

3. Examination by the Ophthalmoscope.

Description of the Instrument.

The ophthalmoscope as used at the present day consists essentially of a mirror of silvered glass or polished metal, having a central opening, with certain accessory portions, in the shape of convex lenses of different foci, used as objective lenses, clips and other contrivances for holding ocular lenses behind the sight-hole of the ophthalmoscope, together with the ocular lenses themselves. Here are a variety of ophthalmoscopes, but this is the one I recommend you to use; it is known as Liebreich's ophthalmoscope. It consists of a concave mirror of silvered glass of about eight inches focal length, having a central opening in the silvering of a line and a half diameter. The mirror is fixed in a metal back having a central perforation, the edge of which is bevelled off, and is about double the diameter of the opening in the silvering. Upon the metal back is fixed this clip, for the purpose of holding an ocular lens; the back is screwed to a handle about two inches and a quarter long. The accessory portions consist of two object-lenses of two and a half and three inches focal length respectively; and five ocular lenses—two convex, of six and twelve inches positive foci; three concave, of eight, twelve, and twenty-four inches negative foci. All are made to fit into the clip at the back of the instrument; the whole are contained in this case, which might with advantage be made smaller. The instrument may be obtained from Weiss in the Strand, or from Hills in King-street.

The convex ocular lenses are used as magnifiers of the inverted image; the concave are employed when it is deemed advisable to examine the erect image in a myopic eye. We have here an ophthalmoscope, designed by an old student of Guy's (Mr. C. J. Oldham), which I recommend any of you to use who wish to work out anomalies of refraction by the ophthalmoscope. I shall show you presently how this may be done.

Oldham's ophthalmoscope consists of a plain, or nearly plain, silvered glass mirror, fixed in a metal back. You see that the metal back of the mirror has been cut away, and a disc, containing a number of lenses of different focal lengths, revolves on a short central pin fixed in the back of the mirror; and thus the correcting lenses are brought into close apposition with the central aperture. This small ratchet springing from the side of the handle gives the proper check as each lens comes before the eye. The means adopted for changing the discs is very simple: the long arm of a lever of the first order, firmly pressed down on the central pin by a spring placed below its short arm, keeps the disc in place; by depressing the short arm, the long arm is raised, and allows the disc to be changed at pleasure. The discs are three in number, each containing nine lenses of different focal lengths; in all three a plain aperture is retained. The instrument is made by Hawksley, of Oxford-street.

There are two methods of using the ophthalmoscope. The first, which requires much practice, is called the direct method of examination, or examination of *the erect image*, with the ophthalmoscope alone, without the aid of a bi-convex object-lens.

The second, which is much the easier of the two, is called the indirect method, or examination of *the inverted image*: in it both the ophthalmoscope and a bi-convex lens are used.

Direct Ophthalmoscopic Examination.

In this direct examination we see an erect and considerably magnified image of the parts occupying the fundus oculi. The examination should be thus conducted: We seat our patient in a dark room; place a lamp at the side corresponding to the examined eye, on a level with it, but so situated as to leave the cornea in shade. Then direct the patient to look forwards, and a little upwards, at some distant object, and to keep the eyes as steady as possible.

Now, suppose we wish to examine the right eye: we place the lamp at the patient's right side, and stand in front of him at a distance of eighteen inches or two feet. Take the ophthalmoscope in the right hand, look through the sight-hole with the right eye, and reflect the light from the lamp through the pupil of the patient's right eye; if the examination be conducted properly, the pupil will appear of a bright-red colour. We now look for the optic disc, which is situated rather to the inner side of the axis of the eyeball; and we know when the disc is in view, from the alteration in colour of the pupil, which will turn from red to white or pinkish-white. Having obtained the peculiar reflection of the optic disc, we approach the eye, until an interval of only two inches or less separates our cornea from that of the examined eye. We experience some difficulty in keeping the eye illuminated, especially as the distance between our own and the observed eye becomes less; this, however, will be overcome by practice. When we have approached so near that a distance rather less than two inches separates our own from the examined eye, we see a distinct, erect, and considerably magnified image of the parts occupying the fundus of the latter.

This, however, is only the case in the emmetropic eye. If ametropia be present, the distance at which the parts become distinctly visible, and also the position of the image, are altered. I shall allude to this again when I come to speak of anomalies of refraction.

In order to see a distinct erect image in emmetropia it is necessary that both the accommodation of examined and examining eye be relaxed. The former of these necessities can usually be provided for by directing the patient to look at a distant object; but if this have not the desired effect, paralysis of the ciliary muscle must be insured by the instillation of atropine. Relaxation of our own accommodation we find one of the great difficulties of the direct ophthalmoscopic examination, and a perfect command over it can only be attained by practice.

We find that the mere fact of looking at a near object forces us to put our accommodation on the stretch quite unwittingly. Some of you may not understand why it is that accommodation must be relaxed to see an object situated at only a few inches from your eye, but you must remember that the object is situated behind the system of lenses (the refractive media of the eye), which render the rays of light proceeding from it parallel, and so place it in the same condition as an object situated at infinite distance.

If you are myopic you cannot see an erect image without first neutralising your myopia. You can do this by wearing

the ordinary glasses that you use for distance, or by placing a correcting lens in the clip behind the sight-hole of the ophthalmoscope.

Those of you who are emmetropic will find that you obtain a much sharper image by using a weak concave lens behind the sight-hole, but you should learn to do without it. The fact that it sharpens the image only shows that you have not got your accommodation under control.

The examination of the erect image, although requiring much more practice than that of the inverted, should never be neglected, as it gives much more satisfactory evidence of minute changes in the fundus oculi, all the parts being seen highly magnified (about fourteen times and a half). It gives, however, a less extensive field of vision, on account of the size of the objects, which only allows small portions of them to be seen through the pupil at one time.

The optic disc, retinal vessels, and other parts occupying the fundus, should be examined by looking in different directions through the pupil, the observed eye being kept steadily fixed during the examination upon some distant and suitably situated object.

The right eye having been examined, the lamp should be placed on the patient's left side, and the manœuvre repeated; but we use the left hand and left eye instead of the right hand and right eye.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

AN EASY, PRACTICAL METHOD OF DETECTING

FLAWS OR LEAKS IN DRAINS AND DRAIN-FITTINGS WITHIN DWELLING-HOUSES.

By ED. SLADE-KING, M.D., M.R.C.P.L., L.St.M. Edin.,
Medical Officer of Health for Ilfracombe.

Gas is constantly generated in sewers—stagnating where their gradients are slight; and by pressure from within, or suction from without, always tending to escape from them, more particularly along their higher levels.

The smell of sewer-gas is the popular test of its presence. Unfortunately the smell is in many cases not recognised, or is so slight as to be all but absent, and its intensity forms no index of the quantity or of the danger of the gases; those of foul smell not necessarily proving the most dangerous, but resulting from the accidental presence or admixture of certain decomposing substances.

An escape of coal-gas generally tells its own tale, and the nostrils are supposed to be quite enough to put us on our guard, and warn us of our danger. Decided as is the information given by the smell of escaping coal-gas, American engineers use a regular system of inspection for leakage from pipes and at joints. They employ a force-pump, containing a few drops of sulphuric ether, and a gauge to indicate the pressure which the work will stand before the connexion with the gas-main is permitted (for a detailed account of the process, see Blyth's "Dictionary of Public Health"), and from time to time inspect the gas-service of hotels and large blocks of dwellings in a similar way.

It has been proposed, in the case of suspected water-pollution, to pour lithium salts into drains, and then examine the well-residue by the spectroscope—an excellent idea, but one which could not be said to be of general application.

The entrance of sewer-gas into dwelling-houses is such an undisputed evil, that I have every excuse for noting a method of detecting it which is easy to be used even by inexperienced hands. The smell of carbolic acid is easily recognised, and, when used as a disinfectant, may become also a detector of defects in traps and other fittings connected with drains. With this purpose in view, I am in the habit of directing a branch sewer, serving, say, a terrace or a group of cottages, to be well flushed overnight; then early the next morning the local ventilators to be closed, and common impure carbolic acid to be poured into the sewer, followed by a few gallons of boiling water. In the course of the day the inspector of nuisances calls at all the houses in the particular section, and inquires if the inmates have lately smelt anything of a peculiar odour. If they answer "Yes"—and in every group of houses there will be some affirmative replies—the chances are ten to one that they refer to the vapour from the carbolic acid, which has attracted attention by escaping from the drains. If in these suspected houses an effective search be made, some defect will come to light which has allowed the leakage of sewer-gas from the drain into the house. There are many other methods of detecting flaws in house-drains and sewers; but as a ready and practical way, I believe carbolic acid volatilised by steam to be the most generally applicable. And it must also be remembered that if the process were carried out methodically, and at regular intervals, it would insure a periodical disinfection of the sewer-channels, as well as a detection of their structural imperfections.

A CASE OF CHOREA ASSOCIATED WITH MANIA, TERMINATING FATALLY BY CEREBELLAR APOPLEXY.

By BEVAN LEWIS, L.R.C.P. Lond., F.R.M.S.,
Pathologist and Assistant Medical Officer to the West Riding Asylum.

The complex pathological conditions embraced under the generic term "chorea" render it incumbent that every effort should be made towards unravelling the details of each individual case presented to our notice; to assign, as far as possible, to each symptom a pathological significance; to eliminate the non-essential from the essential features, and differentiate these groupings of morbid phenomena into their specific pathological entities. This end can only be attained by careful clinical records, and with this object I offer the following abstract as a brief contribution towards the pathology of choreic affections.

W. A., aged fifty-six, a married man, was admitted into the Asylum suffering from an attack of mania of about a month's duration. Nine years ago he had a "stroke," since which period he has had constant twichings affecting the whole of his body, and which were never influenced by the medical treatment adopted. For the past five years he has had to give up his usual employment. He can only put a spoon to his mouth with extreme difficulty, and his twitchings are as severe in bed as when he is up. He has never suffered from rheumatism or rheumatic fever. At times his memory is perfect, but if irritated he becomes very forgetful. A mental change was first observed about five or six months ago, when he became unusually irritable, threatening injury to all persons in his house, and declaring he would kill himself. He has shown no evidence of delusions of suspicion. Previous to these symptoms manifesting themselves, he was of a quiet, even temper. He has suffered greatly from pains in the back and legs, but not in the head. It appears that he has been more irritable than was natural to him since the onset of the choreic twitchings.

Since admission he has been quiet so far as his mental state was concerned, but has had constant choreic movements, which have been partially subdued at night by chloral.

Present Mental Condition.—When questioned he understands what is said, and his answers are clear and coherent. He is garrulous, and talks freely and intelligently upon the subject of his illness, and shows an accurate memory for remote and recent events. He calculates time and figures well, but any trivial problem greatly increases the twitchings. He is decidedly emotional. When questioned about his violent conduct, he says it was due to annoyances imposed on him by his wife, who was inclined to vex him because he was unable to work. He says he has never had any suicidal tendencies, and affords no evidence of delusions or hallucinations.

Physical Condition.—Eyes grey; pupils dilated, but equal; considerable nystagmus. Facial muscles comparatively quiescent; tongue protruded straight, but retracted in jerks. The movements are principally confined to the head and neck, but the latissimus dorsi, intercostals, and abdominal rectus are also involved. The movements are not rhythmical. There is apparently no marked cutaneous anæsthesia, but reflex action is impaired in the feet. No pain caused by percussion of head or spine. Locomotion is very greatly impaired, his legs being only partially under his control, and progression being almost impossible on this account. He supplements his own history by the following statement:—He had a "stroke" affecting his arms only eight to nine years ago. The arms were *equally* affected, but he retained full power over his legs. His speech was unaffected, and the weakness in his arms lasted for about six months, when he was able to resume his work. No twitchings occurred after this first seizure. Six years ago he had a

second "stroke," which affected only the legs. Both legs were paralysed as to motion, but not to sensation, and in six weeks he was able to walk. Immediately succeeding to this attack the choreic movements at present observed began. He pronounces with fair clearness all the letters of the alphabet, but on employing words of any difficulty he breaks down by reason of the ataxic action of the speech muscles. Respiratory system normal. Circulatory System: Heart's sounds normal, but weak; arteries tortuous generally. Alimentary system normal.

Diagnosis.—Simple mania, resulting from the irritation of chorea.

Treatment.—Hyoscyamine in doses of one-eighth of a grain.

Progress of Case.—May 1.—The hyoscyamine has caused dilatation of the pupil, and there is slight arrest of the involuntary movements. He has a little difficulty in protruding the tongue. His appetite is good.

5th.—Patient has now taken altogether half a grain of the drug. The choreic twitchings have almost completely ceased. His appetite is good, and the tongue moist. He sleeps better at night.

6th.—The medicine being omitted for a day, the symptoms again manifested themselves, and he was ordered to have one-sixteenth of a grain nightly. From this date out complete control was obtained over the choreic movements, but they quickly returned on suspending the medicine.

10th.—This evening, during the night visit, he was found to be in a state of great agitation, tossing about in bed, and he vomited a small quantity of dark brown fluid, of pasty consistence, resembling coffee-grounds. The pupils were only partially dilated, and no other trace of the action of hyoscyamine was present. He had passed a very favourable day, but had become restless during the early part of the evening, and subject to a troublesome cough. As he had during the day eaten a quantity of peppermint lozenges, it was at first supposed that this partly accounted for his sickness. There was, however, every evidence of much cerebral disturbance, and a close watch was put upon him, the attendant being instructed to call the medical officer unless he soon settled down to sleep. At this time his pulse was 120, face flushed, but temperature normal, and the pupils equal. At 11.30 p.m., the medical officer being called, found the patient quite unconscious and free from all movements. The pupils were smaller than when seen at the 10 p.m. visit, measuring one eighth of an inch and being equal. Both arms and legs were perfectly relaxed and flaccid, and not the slightest reflex movement could be excited in the soles of the feet. The night attendant reported that the patient had got up feeling sick, and whilst retching had fallen back unconscious, all movements ceased, and his breathing became slow and heavy. The respirations were ten per minute, heavy and sighing in character; the pulse 120. Extravasation pressing on the medulla was diagnosed. There was no strabismus or nystagmus. In spite of all measures adopted he died at 12.50 a.m.

Necropsy, forty-four hours and a half after Death.—Thorax: No fluid in the pericardium. The heart weighed 405 grammes; the valves were competent. The right side contained dark blood and clots; the left side was firmly contracted, and empty. The walls of the left ventricle were considerably hypertrophied. There was no atheroma at the base of the aorta, nor fibrinous adhesions to the valves. The right lung weighed 685 grammes; there were no pleuritic adhesions. Patches of emphysema were scattered over anterior surface and borders of the lobes. There were great congestion and œdema of the whole lung, some portions being non-crepitant. The left lung weighed 530 grammes; in the same condition as the right. The lung was adherent by old fibrous bands throughout its whole extent. The bronchi were congested, and contained a little frothy mucus. The abdominal viscera were healthy. Head: Skull-cap slightly more capacious on the left side; bones of average density and thickness, and pale in colour. There was no adhesion of dura mater, and the sinuses contained dark fluid blood. The arteries at the base were decidedly atheromatous, especially with respect to the carotids and posterior cerebrals. Externally, the hemispheres of the cerebrum presented nothing unusual, but the membranes around the cerebellum were greatly engorged, and the left lobe was the seat of extensive extravasation, the clot appearing through the upper and under surface of the lobe; clots also appeared in the fourth ventricle, and in the infundibulum. There was decided congestion of the membranes of the brain on the upper surface of both hemispheres, which had proceeded to interstitial extravasation over a considerable area of the lower parietal regions on both sides, giving rise to a reddish cloud in those parts. The membranes presented a similar aspect at the genu of the corpus callosum. There was a slight general wasting of the hemispheres, and about three ounces of bloody fluid escaped on removal of the brain, and from the ventricles. On making a vertical incision into the left hemisphere of the cerebellum it was found to be almost completely filled by a black recent clot; so large was the clot, that this hemisphere appeared to be converted into a sac. The right cerebellar hemisphere presented no unusual appearance; the membranes over both cerebral hemispheres stripped freely. The arrangement of the convolutions appeared normal. On cutting across the pons Varolii a clot was found (exteuding from the lateral into the fourth ventricle) filling up the iter. There were a few small clots and bloody serum in the lateral ventricles, and it was very evident that their presence there was due to extension from the cerebellum, and not to a fresh extravasation from the ganglia. The grey matter was very pale, and the brain substance generally soft. The ganglia at the base were very pale and soft, but there was no recent or old clot discoverable in either thalami or corpora striata. The pia mater of the spinal cord was greatly congested; but, on section, the structure of the cord was pale, and presented no abnormal appearance to the naked eye.

Microscopic Examination.—This was done by a process adopted at West Riding Asylum for the immediate examination of fresh brain. Nothing abnormal was discoverable in the nerve-cells of the cerebral cortex in the frontal, temporo-sphenoidal, or parietal lobes. The pyramidal cells took the staining readily, showed a clear, unclouded protoplasm; the nuclei and nucleoli were distinct, and the branching processes apparently as numerous as usual. The connective element of the neuroglia was unaltered, nor was the condition of the minute bloodvessels in any respect affected. Sections were also made through the cortex of the right hemisphere of the cerebellum, the left side being so ploughed up by the extravasated blood as to leave little unaffected by the direct mechanical pressure of the clot. It was found that, as regards the pure grey layer and the innermost granule layer, no degeneration was traceable, nor did the intermediate layer of Purkinje cells present any abnormal appearance. Having so far excluded the cerebral and cerebellar cortex from any appreciable morbid change, attention was directed to the grey substance of the spinal tract, and here most undoubted evidence was afforded of morbid action. The motor cells of the anterior cornua exhibited a most striking form of granular degeneration, which was most extensively distributed, scarcely a single cell examined being intact. The change alluded to consisted in the close aggregation of numerous minute granules of a bright yellow tint at certain points in the protoplasm of the cell. Each multipolar cell exhibited one, and occasionally two of these granular masses, which varied in size from a little above the diameter of the nucleus up to one-half the area of the cell itself. A few cells were seen entirely filled with this granular protoplasm, but in no case did it involve the nucleus and nucleolus, which were always distinct and clearly defined. The most common appearance was that of a little heap of bright yellow granules aggregated together at the wider portion of the cell remote from the nucleus, the remainder of the protoplasm being clear or faintly stained by the carmine or aniline dye. This protoplasmic degeneration appeared strictly limited in extent to the cell itself; in no case was it observed to affect the branches of these cells. The granules remained wholly unaffected by methylated spirit, alcohol, ether, and chloroform. Acetic acid ruptured the cells, and the granular masses became swollen to three or four times their former bulk, but remained insoluble. The ganglia at the base were similarly affected.

Remarks.—The consideration of this case lends strength to the opinion (which is evidently gaining ground) that no definite portion of the cerebro-spinal system can at present be chosen as the site of lesions peculiar to chorea. Numerous cases of this affection have been reported, where the lesions were either not detected after the most diligent search, or where they were restricted in their sites to the intracranial or to the intra-spinous nervous system. Softenings of various portions of the grey matter or of the conducting strands of the medullary portions of the cerebro-spinal systems, together with opacities and adhesions of the membranes, and, as a frequent accompaniment, congestion of the pia mater, both cerebral and rachidian, have been noticed by Romberg, Hughes, and Ogle.

The latter observer also inferred, from an analysis of numerous cases, that the fibrinous deposition in the cardiac valves, with or without rheumatism, is the more frequent accompaniment of cases of chorea; and thus supported Dr. Kirke in his theory of the origin of this affection. There are, however, many reasons for hesitating ere we give this theory too extensive a significance; and, amongst others, the undisputed fact of the *limitation* of morbid lesions in many cases to the spinal tract, and the absence in others of embolic conditions of the capillaries of the middle cerebral. The case at present under consideration was not one of hemichorea, and we should therefore have expected to find emboli in the corpus striatum or thalamus opticus of both sides; but this was not the case. The left side of the heart was much hypertrophied, and this, combined with the very atheromatous condition of the cerebral vessels, had evidently most to do with the late fatal seizure; but no fibrinous deposits were observed on the valves, and no history of rheumatism could be obtained. Again, it will be remembered that the history of his earlier attacks indicated a spinal rather than a cerebral origin; they were distinctly paraplegic, and presented nothing characteristic of cerebral lesions. It certainly is a very significant fact that the whole series of motor cells of the cord should be so extensively affected. Whether this change was one of long standing I cannot presume to say; yet it is undeniable that such appearances may be produced very rapidly under certain morbid conditions of the sensori-motor tract of the medulla. In confirmation of this opinion I may state that I have in my possession slides which represent an identical appearance of these multipolar cells of the anterior cornua in cases of hydrophobia occurring in an adult and in a young man of seventeen. In both cases death occurred after three or four days, and in both the spinal cells exhibit the same granular degeneration. At first sight, it may appear plausible to suggest a senile origin for these degenerative changes. Granular degeneration of the cells of the cerebral cortex has been constantly pointed out by Dr. Major as a constant accompaniment of senile atrophy. The objections to this view are, however, obvious. Our patient's age was not great; there was no evidence afforded in the patient's history of dementia; no failure in memory or general mental powers was ever detected, except such slight hesitation as was clearly attributable to emotional causes. His mental condition was from the first one of simple excitement. Then, again, the chemical reactions of this degenerated protoplasm obviously do not point to the usual fatty degeneration of cases of senile atrophy. In the latter case it is well known that the products of morbid action are purely fatty in character, and are readily dissolved by ether, the cells being extremely fragile and readily ruptured by endosmose of fluids. Fat globules of minute size but characteristic form are also to be observed frequently around the ruptured cells. In this case of chorea the histo-chemistry revealed a very different state of things which have been already alluded to. The peculiar congested state of the vessels, both of the cerebral and rachidian membranes, was most marked in this case, but no serous effusion had occurred in the spinal meninges, and no adhesions were present. The consideration of this case appears to me to afford strong confirmatory evidence of its spinal origin and later implication of the higher nervous centres; and it thus illustrates, taken in conjunction with other cases of chorea of undisputed cerebral origin, how extensive an area may be involved by the choreic lesions, and the multiplicity and variety of the phenomena consequent thereupon. A great authority on nervous diseases states his belief with regard to chorea as follows:—"There are at least two distinct diseases—one due to spinal, and the other to cerebral lesion—the latter probably consisting of several forms; but that it is advisable to consider them as but one disease of various types until further investigation enables us to speak with certainty on the subject, and to classify them according to the morbid anatomical condition of each."(a) To these views, I believe, pathological inquiry, aided by the strictest histological investigations, will shortly enable us to subscribe. It would be impossible to include a case such as the one now alluded to under those neuroses to which the term "choreic insanity" has been applied, and which are stated to be intimately connected with the rheumatic poison. The character of the mental disturbance was entirely distinct from that described as characteristic of this affection by Dr. Clouston in the *Journal of Mental Science* for 1870, and quoted by Drs. Bucknill and Tuke,(b)—the only feature of agreement being the diminution of reflex action in the feet; and this was explicable by the spinal lesion found post-mortem. If, therefore, we assume any relationship between the chorea and the mental disturbance existing in this case, we must infer the development of cerebral symptoms of an entirely different type as being occasionally dependent upon the progress of choreic lesions. In what manner chorea eventually developes these forms of mental alienation we can but guess; yet it is well to bear in mind the statement made by Griesinger in his chapter on "The Etiology of Insanity":—"Formerly existing *spinal neuroses*, whether manifested in states of developed hysteria, or merely in limited convulsive or neuralgic affections, may become important causes of insanity. Here it seems that mental disorders may originate as well from a gradual extension over more considerable portions of the nerve centres . . . as from a rapid transition from one part of the nervous system to another. In the latter case the insanity may frequently, and even periodically, alternate with other nervous affections."(c)

(a) Hammond, "Diseases of the Nervous System," third edition, article "Chorea."

(b) "Psychological Medicine," third edition, page 379.

(c) "Griesinger on Mental Diseases," New Syd. Soc., 1867, page 179.

THE USE OF BISMUTH IN CORYZA.

By J. HANCOCKE WATHEN, L.R.C.P., M.R.C.S.

Bismuth as a remedy for coryza has already become popularised through the recommendation of Dr. Ferrier. We feel sure that Dr. Ferrier's deduction of the probable value of bismuth in an inflamed Schneiderian membrane from its known efficacy in other inflammatory affections of mucous membranes, notably that of the urethra, was original; still we trust he will forgive us for drawing attention to the fact that bismuth has long ago been used in the treatment of coryza.

In looking over some old volumes of this journal with another object, we came across the following paragraph in *The Medical Times and Gazette* for April 2, 1859, page 354:—

"Bismuth Snuff in Coryza.—M. Monneret (we are told by the *Révue de Thérap.*) has established the services of subnitrate of bismuth in acute coryza, and Dr. Sobrier has lately shown that by the addition of iodide of sulphur to it a cure for chronic coryza is obtained. The following is his formula:—Subnitrate of bismuth four parts, liquorice powder eight parts, iodide of sulphur thirty parts. Of this compound the patient is to take ten or twelve pinches in the day, according to their effect."

Fishguard.

ON THE CAUSATION OF TYPHOID FEVER.

By "MUCOR."

How long will etiologists continue to resist the conclusion that the infective agent of typhoid is derived from a specific mildew occurring on fæcal matter? Must this truth, which may be arrived at inferentially, lie unheeded and unproductive until it shall be demonstrated experimentally? Is it an absolute requirement that every step in the inquiry into typhoid causation should be slowly dragged through the whole field of positive proof? Is there no possibility of determining from available data the nature of the typhoid poison—at all events, with an approximation sufficiently near to serve all practical purposes in the matter of prevention?

These questions have been before me for years, but they press themselves with greater force now that the world has been supplied with further definite and important knowledge in the paper of Dr. Klein, "On Enteric 'or Typhoid Fever" in Mr. Simon's Report to the Privy Council (New Series, No. 6). The substance of Dr. Klein's observations had been foreshadowed by Mr. Simon. The results of his researches have been before etiologists for these twelve months. Ample time therefore has been given to scientific men to form their views as to the general nature, scope, and bearing of his paper. From the first announcement of the discovery of the fungus in the parts concerned in typhoid up to the present date, I have gone through the comments of the principal English medical journals

upon it with a curious and lively interest. In all quarters I have perceived that the most implicit trust is reposed in Dr. Klein. Not the least doubt appears to exist anywhere either as to his perfect fitness for the work, or as to the thorough faithfulness of his performance. Even his drawings are acknowledged to be *veræ effigies* of the things seen. In short, Dr. Klein's facts are universally accepted as truths.

All things considered, this accord is marvellous. The unanimity is so wonderful that it is to be feared it cannot last. When, indeed, it is borne in mind that the fundamental doctrines of certain schools must be hopelessly upset by the confirmation of Dr. Klein's observations, it is incomprehensible how those attached to these schools should have remained quiescent for so long. Is it possible that the speakers who took a particular line in the discussion on the germ theory should have failed to perceive the full significance of this fungus described by Dr. Klein? Have they not yet realised the fact that, if it be established as the specific cause of typhoid, their views, of necessity, fall to the ground? Let it be determined that a specific vegetable organism is the efficient agent, and it follows that the etiological views of Dr. Murchison will be destroyed as utterly as will those of Dr. Budd, and that the argument of Dr. Bastian will be as untenable as will that of Dr. Beale. In fine, all schools in which it is taught that the cause of typhoid is, or may be, other than a living reproductive vegetable germ, must inevitably perish. But the end of inquiry is truth. It is doubtless this consideration which has brought all sections of etiologists to receive Dr. Klein's paper with such philosophical serenity.

It may be fairly assumed that Dr. Klein has demonstrated the existence of low vegetable forms in the tissues, vessels, glands, follicles, lymphatics, and other parts of the organs implicated in typhoid fever. This being granted, the following questions suggest themselves:—1. Are these vegetable forms accidental or incidental? 2. If incidental, is the vegetation the cause of the disintegration? 3. Are these organisms infective agents or "carriers of infection"? Or will they induce typhoid when transplanted into the healthy human body? 4. What is the precise nature of these low vegetable organisms? 5. What is their habitat, or the soil on which these parasites last occur before their reception by man?

1. *Are these vegetable forms accidental or incidental?* This question Dr. Klein has answered—whether conclusively or not, I will leave. Of course, there is the obvious objection that his observations are too few in number for safe generalisation. Whatever weight this consideration may have with some inquirers, I would observe that any doubt I might have had upon the point is overcome by evidence extrinsic to Dr. Klein's paper. This collateral evidence is open to those who search, and I shall merely say that I conceive it to be sufficient to affirm the proposition that vegetation is a constant factor in the characteristic necrosis of typhoid.

2. *If incidental, is the vegetation the cause of the disintegration?* That the masses of micrococci found by Dr. Klein in the mucosa, the bloodvessels, and elsewhere, cause the retrograde changes of the tissues ending in sloughing and ulceration, is shown, nearly to demonstration, in the text (pp. 99 to 102) of his paper, and by the plates. That is to say, "the deposition, probably by exudation from the vessels, of a peculiar dark-coloured material" (micrococci), "in connexion with and around which the tissue undergoes necrotic changes," is almost to a certainty the potential cause of the changes. For all rough purposes it is a certainty that the necrosis is the effect of the deposition of the micrococci; but the subtle distinctions drawn by controversialists in dealing with infection may be brought in here to show that the vegetation in question does not play the important part assigned to it by Dr. Klein. It is admitted that microzymes exist in vaccine lymph and in the fluids from certain infective inflammations. It is further admitted that those portions—and those portions only—of the fluids containing the microzymes have specificity. From this (and from other data) it was inferred that the microzymes are the infective agents. The opponents of the view, however, met it with the argument that, granting the facts, yet the microzymes may be merely the "carriers of infection," and not the infection itself. And this kind of argument undoubtedly admits of extension to the fungus found by Dr. Klein. Though its mycelium, gonidia, and micrococci apparently destroy the tissues, yet they may in reality be the coarse, visible sub-agents of unknown, intangible agents behind. If discussion should enter these or parallel grooves, it may run on endlessly, with exceeding gratification to men of a certain order of mind, and possibly with ultimate benefit to science. Those on a lower plane will probably content themselves with looking at what is more immediately before them. Taking this contracted view, I conceive that, so far as many present purposes are concerned, it comes very nearly to the same thing whether the vegetation described by Dr. Klein is the prime mover of the typhoid changes, or the subsidiary factor—the "base second means." For if *ubi fungus ibi disintegratio* be conceded—if the true agent in the necrosis invariably select the same vegetation as its sub-agent, and if the sub-agent be never found apart from the agent—if the two be inseparable—it would seem a tolerably fair conclusion that if you can destroy or preclude the one, you will infallibly get rid of the other. This is admittedly rule of thumb, but it may serve perhaps until the occult powers that employ these ancillary microzymes and micrococci shall be revealed. I submit that (subject to the point reserved) it is shown by Dr. Klein that the vegetable forms he found caused the disintegration of the tissues.

3. *Are these organisms infective agents, or "carriers of infection"? Or will they induce typhoid when transplanted into the healthy human body?* The experiments made by Dr. Klein in this direction were of a negative character. He failed to induce typhoid in certain animals by the introduction of the fungus into their systems. The experiments which have been made on man himself by means of the stools of patients, which are shown by Dr. Klein to contain the fungus, are, however, sufficiently numerous to enable us to correct the negative results with animals. I apprehend that the facts connected with water pollution leave very little room for doubt that the poison in the water is particulate, insoluble, indiffusible, living, and reproductive. The inference that it is identical with the fungus in the bowel-tissues of the typhoid patient, or that the two are *ejusdem generis*, is easily reached.

4. *What is the precise nature of these low vegetable organisms?* Without intending to be ungracious, I confess to some disappointment at finding that Dr. Klein had done so little on this head. He tells us "that we have to do here with a fungus which possesses mycelium threads of very unequal joints"; "that in some parts of these threads, probably the terminal parts, their contents split into macrogonidia," "or microgonidia"; "that the gonidia become discharged, the thread having become broken"; and that these gonidia end in micrococci, etc. He adds that this vegetation corresponds closely with the *Crenothrix polyspora* found by Cohn in some well-water at Breslau, famous for typhoid. The interesting question as to the identity of these two forms must here be set aside. With regard to that found by Dr. Klein, it is to be regretted this observer had not time to learn something more of the life-history of the plant. This break in the continuity of his investigation reduces the value of his paper incalculably. It occurs to me, as a possibility, that as Professor Cohn seemingly did not cultivate the *Crenothrix*, so Dr. Klein may have thought it unproductive to endeavour to develope the fungus he discovered into higher forms. If this be so, I venture to suggest he was in error; for in order to substantiate the claim of the fungus to be the specific cause of typhoid, it is an imperative necessity to connect it with aërial typhoid poison. There are not, probably, any two specific causes for any one specific disease, and if there were there is no room for the assumption in the case of typhoid, because it is well established that patients who catch the disease by way of the air may communicate it through the medium of water. The converse, too, of this phenomenon has frequently been observed. It follows that the typhoid poison, whatever it is, is, under certain conditions, convertible or reconvertible from an air-poison to a water-poison. As a sequence, Dr. Klein is called upon to show that the aquatic plants he has described may under some circumstances enter the air in such numbers as to create an efficient air-poison. If this were impossible it would weaken the claim of the fungus to the title of the typhoid fungus most considerably. But not only do I suspect it to be possible, but to be even feasible.

Most phytologists would, I think, infer from the description and from the drawings of the vegetation figured by Dr. Klein, that it is the water phase of the plant, and that by proper cultivation on the surface of a fit substrate it would revert to to its original or mildew form. It is highly probable that the gonidia and their descendants are the modified representatives of the sporules of some mould. Nothing is clearer than that most of these low terrestrial organisms will not only sustain themselves when they are accidentally immersed in fluids

containing nitrogenous matters, but will multiply rapidly under the abnormal conditions, owing to the facility with which their organs of fructification will accommodate themselves to the new medium. It is, then, a warrantable scientific inference that the vegetation in the typhoid tissues is in a casual and degenerate stage of its existence, and that its true, or highest, or original form is that of a mildew growing on a free substrate. If this inference be verified experimentally, the key to the whole position will be obtained. With it the inquirer may see at once how the transition from an air-poison to a water-poison, or the converse, is effected; and with it Dr. Klein would have advanced the fungus he has made out a long way towards taking rank as the typhoid plant. Although other sets of observations must be undertaken to determine the issue raised, as well as to clear up other points too numerous to refer to, yet I confidently anticipate the verdict of the etiological world, and accept Dr. Klein's fungus as the specific cause of typhoid. I may say I am led to this conviction principally because the outcome of Dr. Klein's inquiry squares with purely hypothetical views I published a few years ago. Those views, unsupported by original experiment, and depending solely upon work done by others, or upon the well-known facts in the history of typhoid, were, naturally perhaps, looked upon as too speculative to have any value. Nevertheless they are, I perceive, slowly shown to be correct. I submitted, and I submit now with firmer reliance on the soundness of the proposition, that there is no natural or artificial thing, or condition of a thing or things, capable of poisoning both air and water precisely as the typhoid poison does—except vegetation; and that nothing that can be presumed or conceived possesses this double property or qualification of the poison but a mildew.

5. *What is their habitat, or the soil on which these parasites last occur before their reception by man?* The reply is not far to seek. Granted the (at present hypothetical) mildew, and the conclusion that fæcal matter is the principal substrate on which it flourishes immediately before its reception into the organism is well-nigh forced. The elimination of all other substances is so simple and easy that I need not detain the reader by details. Regard being had to the phenomena connected with "sewer-gas," and with the atmosphere surrounding privies, middens, and other collections of excrement, there is hardly any room for doubt as to the substrate from which these parasites are given off to pass into the human substrate. When once the mildew nature of the typhoid poison is ascertained, its source is a certainty. Of course, other animal and vegetable matters may occasionally be overrun by this specific mildew of typhoid, and may thus cause the surrounding atmosphere to be charged with particles of the mildew. The toxical properties of these particles may be modified by the qualities of the substrate; but it is probable they will, if imbibed, cause some one or more of the typical symptoms and lesions of typhoid. Hence, possibly, febriculæ, and bastard or obscure forms of typhoid. The one great substrate, however, which has supplied the typhoid mildew in all ages and in all countries is fæcal matter.

Let me add, briefly, that the supposition of a mildew grown on fæcal matter is, as I submit, the only possible exegesis of typhoid causation. No other explanation has been, or can be, sufficient. By this hypothesis every phenomenon which has been observed in every epidemic, and in all isolated cases of the disease, may be clearly interpreted. For instance, the celebrated Munich problem, which has exercised Professor von Pettenkofer so many years, admits of the readiest solution by this mildew or fæcal matter. Granted that the rise and fall of the ground-water governs the Munich epidemics, and that typhoid rages most when the water is lowest, I submit that, as the water falls in the privy-shafts, the excrement surface for the mildew increases, and, as a consequence, the air is poisoned to a greater extent. When the water rises, the substrate adhering to the sides of the excavations is covered, and the mildew swamped. The thing is in a nutshell. Every question raised by every author upon the subject of causation may be resolved by a mildew. If, indeed, any one fact can be shown to be utterly irreconcilable with mildew causation, the mildew hypothesis is unsound. I should be glad to see it submitted to this test.

Melbourne, Victoria.

A Fever Hospital for the Isle of Thanet.—A site has been purchased by the Town Council of Margate on which to erect a fever hospital for the Isle of Thanet.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NOTTINGHAM AND MIDLAND EYE INFIRMARY.

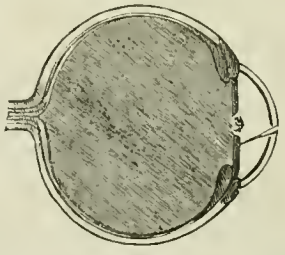
TWO CASES OF FOREIGN BODIES LONG RETAINED IN THE ANTERIOR CHAMBER OF THE EYEBALL, WITH CLINICAL REMARKS UPON THE BEST METHOD OF REMOVING FOREIGN BODIES FROM THE SURFACE OF THE CORNEA.

(Under the care of Dr. CHARLES BELL TAYLOR.)

Case 1.—James S., aged fourteen, from Strelley, in this neighbourhood, was admitted on March 14, complaining of dimness of vision and intolerance of light affecting both eyes, with pain and lachrymation, specially noticed on the right side. On examination, the left eye was found dull and oppressed, with a sluggish pupil, evidently from sympathy; and in the anterior chamber of the right eye there was plainly perceptible a bright-red speck, fixed, and in contact with the lower surface of the iris. On inquiry it was ascertained that three years ago the boy had been struck by a chip while watching some building operations; that he was then seen by a surgeon, and treated for three weeks, ultimately recovering without any marked bad symptoms. From that day to the date of admission he had continued well and pursued his school studies without interruption. An incision was made in the lower surface of the cornea, through which a piece of brick weighing one grain was extracted without difficulty. It was necessary to apply leeches to the temple after the operation, and the boy was treated with mercurials for three weeks. He has since continued quite well, and vision is perfect in both eyes.

Case 2.—Charles L., from a neighbouring town, was admitted on January 1. This boy had been struck a month previously by a chip of iron, and it was supposed that the foreign body had been extracted; as he, however, continued to suffer, a clergyman, who took an interest in the case, sent him over to the Infirmary. On examination, a small black speck was noticed in the centre of the cornea, continuous with the anterior surface of the iris by what at first sight looked like a long tag of adhesion, but which proved on careful examination to be metal, covered with rust, and resembling the iris in colour. (See Fig. 1.)

Fig. 1.



The boy was placed under the influence of ether, and a piece of steel a quarter of an inch in length extracted with forceps from the anterior chamber, through an incision in the corneo-sclerotic junction. The piece weighed one grain and a half, and was sharp-pointed. The previous efforts at removal must have forced it further into the chamber, until its disappearance led to the conclusion that it had been extracted. Although the sharp point of this formidable foreign body impinged upon, and was entangled in, the anterior surface of the iris, while its opposite extremity was buried in the cornea for upwards of a month, the lens was not wounded, and the patient recovered excellent vision without a bad symptom.

Remarks.—Youth has its disabilities, but it is a grand thing to have it on your side when injured or attacked by disease. We could not have expected such tolerance of serious lesions, or such perfect recoveries, either in ordinary adults, or in persons past the meridian of life. In Case 1, after the presence of a foreign body had been endured for three years without symptoms, active reaction was commencing, and the sound eye exhibited a dangerous amount of sympathy with its fellow. Had this patient been neglected, there is no doubt

that sight would have been lost in both eyes. Case 2 is, so far as I know, unique. The head of the small pin which was driven into the cornea was at first evidently palpable, but was forced further inwards by efforts at extraction until the operator had persuaded himself and the patient's friends that it had been successfully removed. In the meantime the bright metal became rapidly covered with rust, exactly resembling the patient's iris in colour, so that the delusion was maintained until the rector of the parish, annoyed at the boy's prolonged absence from school, sent him to the Eye Infirmary. That the lens should escape injury under such circumstances is astonishing, and the subsequent recovery of excellent vision a matter of congratulation to all concerned. When a foreign body strikes the eye, the branches of the fifth nerve, that supply the lachrymal gland, become irritated, and we have a copious flow of tears; the patient suffers from a gritty, grating sensation when the lids are moved, and is unable to raise them; the eye speedily reddens; and there is great intolerance of light. The least sensitive part of the eye is the conjunctiva, and particles of foreign matter, as may be seen in the colliers of this neighbourhood, are frequently embedded in conjunctival tissue for years without causing any irritation whatever. The next least sensitive portion is the oculo-palpebral fold. Foreign bodies, such as bits of straw, seeds, chips, beads, pieces of coal and metal, are sometimes overlooked, and allowed to remain in this situation for months without causing much irritation. When the interior of the eye is invaded, the anterior chamber (as illustrated by the preceding cases) is the least prone to set up excessive reaction. When the symptoms above described come on suddenly, we may be pretty sure that they are caused by the impact of a

Fig. 2.

foreign body. If this is loose, or but loosely attached, it may be frequently got rid of by seizing a fold of the upper lid and lifting it from the eye; or inverting the lid, so as to cause the lashes to sweep over the globe. If these manœuvres fail, the lower lid should be pulled down and its inner surface examined; the upper lid inverted, and its lower edge—a constant site for foreign bodies—especially scrutinised; after which the cornea must be scanned with oblique illumination, and inspected through a magnifying glass. If there is a history of a small foreign body having struck the eye, and we find a direct, clean-cut wound, the presumption is that it has penetrated; if the wound is oblique, with a tail, that it has glanced off. If a foreign body has penetrated so deeply that it is not to be seen, or is concealed by blood or inflammatory exudations, its presence may be diagnosed by the pricking sensation which the patient experiences on pressure, and which is occasioned by its being thus forced into contact with the inner surface of the sensitive coats of the eyeball. Small bodies, such as grains of steel, emery, coal, or sand, embedded in the surface of the cornea, are most easily detected, and most readily removed, by using a lens of two or three inches focus, in the manner illustrated by Fig. 2. The eye is fixed, and the lids separated by the ring and middle fingers of the left hand, while the glass is held by the index finger and thumb of the same hand. The right hand, holding the instrument for extraction, rests upon the brow of the patient, while the operator looks through the glass. In this way the minutest speck may be at once detected, and removed without disturbing any of the neighbouring parts. Small dark bodies embedded in the cornea opposite a black pupil are often difficult of detection, and, in order to see them perfectly, it is necessary to secure a background of iris, either by looking sideways or by contracting the pupil with a solution of eserine. If the foreign body is deeply embedded, or has nearly penetrated the cornea, injudicious efforts at removal may force it into the anterior chamber, and so cause considerable aggravation of the existing mischief. In such a case some means must be taken in order to prevent penetration before we commence manipulations; this end is best attained by inserting a broad needle or Beer's cataract-knife under the object before attempting its removal, either through the corneal tissue, or, if necessary, by penetrating the chamber itself. In all cases of doubt as to the penetration of a foreign body the iris should be carefully examined by the magnifying lens and oblique illumination, the pupil dilated with atropine, and the lens carefully scrutinised with the ophthalmoscope. The lodgment of a foreign body within the eye is one of the most serious accidents that can happen; and the importance of ascertaining the actual condition of parts cannot be overestimated, not only because one eye is injured, and perhaps lost, but also because destructive, and ofttimes uncontrollable, inflammation is very frequently set up in its fellow—a contingency specially apt to arise when the ciliary region is wounded. In such cases it is often necessary to remove the injured eye in order to save its fellow. After the removal of a foreign body it is well to apply a little atropine dissolved in castor oil, enjoin rest for a day or two, and direct the patient to use hot fomentations. Should there be much or persistent pain, it is also well to abstract blood from the temple either by cupping or leeches.

Insusceptibility of Dogs to Narcotics.—Prof. Halford, during a discussion at the Medical Society of Victoria, in illustration of this, stated (*Australian Med. Jour.*, April) that he had given a dog in the course of a few hours an ounce of the tincture of belladonna, half a drachm of the extract, and (injected) half a drachm of atropine, without any effect whatever having been produced. In like manner he had given to dogs large quantities of morphia without any effect showing itself. One would think that the natural conclusion from his observations would be that we cannot infer from experiments upon animals what will be the effects of potent drugs on man. Yet, at the same meeting of the Society, Prof. Halford advocated the intravenous injection of remedial agents in the human subject, on the ground that his experiments, in which he had injected sulphurous acid, ozonic ether, bromide of ammonium, and carbolic acid into the jugular and femoral veins of dogs, had been unattended with any injurious consequences!

Composition and Quality of the Metropolitan Waters in August.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	19·80	0·046	0·110	0·000	0·007	13·2	2·0
West Middlesex .	17·50	0·050	0·090	0·000	0·008	13·2	2·4
Southwark and Vauxhall . .	17·60	0·039	0·108	0·001	0·006	13·2	2·0
Chelsea . .	18·70	0·043	0·102	0·000	0·008	13·2	2·0
Lambeth . .	18·90	0·044	0·102	0·000	0·007	13·2	2·4
Other Companies.							
Kent . . .	27·70	0·007	0·180	0·000	0·002	20·0	4·2
New River . .	17·70	0·028	0·102	0·000	0·004	13·2	2·4
East London .	19·00	0·039	0·090	0·000	0·004	13·2	2·0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the West Middlesex.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, SEPTEMBER 9, 1876.

DRUNKARDS' ASYLUMS.

Dr. Bucknill has been speaking at a temperance meeting at Rugby, and has had a friendly controversy with Dr. Clouston on the subject of his speech.(a) So far as we can isolate it in the midst of some rather conflicting statements, Dr. Bucknill's main position is this: Drunkenness is a vice, not a disease. Medical men, he thought, were taking a wrong view of it, and were considering drunkenness not as a cause of disease, but as a disease in itself—which was a very great mistake. The plan of establishing hospitals for the "unfortunate drunkard" was an unfortunate attempt "to coddle drunkenness and patch up a wide and fruitful social mischief." And the picture which he gives of certain "inebriate asylums" in America somewhat justifies his words. "He visited many of the American inebriate asylums, and came to the conclusion that the gentlemen confined in them were generally rather proud of their position, and felt themselves interesting subjects of inquiry. As far as he could observe, they were there under a very lazy and shameful pretence of curing a disease which did not exist by remedies which were not applied. They had only to walk outside the walls of the institution to the nearest liquor-shop, and get as much liquor as they chose to buy, and they could take liquor into the asylum with them. A friend told him that he went into the Inebriate Asylum on Ward Island, for New York, and visited the rooms of four of these unfortunate inebriates, every one of whom was enabled to offer him a choice of spirits."

"Nor does it seem," says Dr. Bucknill, further on, "absurd for me to state that when I visited the Washington Union for Inebriates, at Boston, I was told by Mr. Lawrence, the resident superintendent, that his chief reliance, as a curative measure, was placed in earnest religious exercises, accompanied by temperance songs, supplemented occasionally with pills of cayenne pepper; that his patients had the run of the city, and that he had no means of preventing them from getting drunk out of doors beyond their faithfulness to their word of honour. Nor was I surprised when I met with a man at Binghampton who told me that he had been under treatment at this Washingtonian Home, and that, notwithstanding the religious exercises and the word of honour, he and most of the other patients were in the constant habit of getting whisky at a snug spirit-store close to the asylum. Nor does it seem absurd to me to declare that at the great model Inebriate Asylum at Binghampton, belonging to the State of New York, I was assured, not by one patient, but by many, that they habitually got as much whisky as they liked by simply walking down to the outskirts of the town, just beyond their own grounds; and that the institution was good for nothing, except as 'a place to pick up in'—that is, to recover after a debauch."

Now, so far as these statements go, they are very damaging to the American "inebriate asylums," and to the dogma that "intemperance is a disease." But, so far as we know, there are few or no medical practitioners in this country who uphold the doctrine that "intemperance is a disease" absolutely and without qualification.

The doctrine that we hold ourselves, and that we believe is generally held, is that habits of drunkenness may arise—first, from vice, bad company, immoral habits, and dissipation. Secondly, it may arise from conditions of suffering, moral and physical; amongst the moral conditions, grief, loss of character, remorse, and other depressing states; or perhaps unusual and unexpected prosperity—for many a man has "gone off his head" from being unable to stand the excitement of good luck. Amongst the physical causes are exhaustion, hæmorrhages (especially of women), insufficient food, and the like. A latent tendency to insanity is a great precursor of drunkenness; so that, although it is true that drunkards may become insane, it is more true to say that insane people become drunkards. Drink gets more than its due share of blame for crime and insanity. A knowledge of human nature will teach that madness and crime may flourish where drink is unknown. Dr. Bucknill describes an American mob as quite sober, but very disorderly, so that the police had to "keep themselves scarce." What the advocates of asylums for drunkards desire is such a set of institutions as Dr. Bucknill describes as the Franklin Home for the Reform of Inebriates at Philadelphia, under Dr. Harris. "He has a set of three single rooms built apart, and which somehow have got the *soubriquet* of 'The Barque.' When a drunkard—not a patient, mind, but a drunkard—is admitted, generally very drunk, often, indeed, very ill from the effects of a long debauch, Dr. Harris places him in the Barque, and keeps him there in bed and in strict seclusion for three days—more, if need be, but three days are usually found to be enough. While there he is at once cut off absolutely from strong drink—not 'tapered off,' but cut off short. He is also placed upon a limited allowance of water, namely, a pint a day (this is done to prevent vomiting—a frequent ailment with American whisky-drinkers); and his strength is carefully built up with strong soups and other nutritious diet. At the end of the three days of solitary confinement in bed he is admitted into the residential part of the institution, to the influences of association with the other inmates, and to earnest exhortations to reform given him by the lay superintendent, and by members of the two committees—one of good men, the other of good women. At the end of a week, if he has picked up pretty well, he is urged to go to work again—not in the institution, but in the city; to face his enemy again, in fact, returning to the institution to sleep. . . . I should like to see institutions on Dr. Harris's principles established at Glasgow, Liverpool, or some other *foci* of spirit drunkenness in our country. They would need no change in the law, for Dr. Harris takes a written consent and indemnity from his drunkards on admission; and if so utterly drunk that

(a) *Journal of Mental Science*, July, 1876.

they cannot give it, an action for false imprisonment would scarcely lie for their three days' voyage in the Barque. It is a reasonable and earnest effort at reformation, made without any false pretences, and when it does little good can scarcely do any harm. The drunkards are not coddled in luxurious indolence nor impressed with the pernicious idea that they are interesting but helpless objects of social and psychological science. They are told the bare truth, and treated, indeed, with the severity due to sinful men, by men whom circumstance has only made less sinful; but they are not pampered with false sentiment."

We will add that most English practitioners heartily second Dr. Buckill's wish. They want to be able to save people from themselves, and to have, besides, the power of sending to such an asylum the middle-aged woman who takes brandy for the relief of "morning sinkings," or the man who has begun to drink because he cannot square his accounts; and, whether the condition be one of vice, or disease, or a mixture of each, and no matter which is the foremost, to treat drunkards as persons who want a little help and treatment to enable them to walk straight by themselves.

"CANCER-CURERS."

Of all the diseases which the surgeon or physician is called upon to treat, there is none, perhaps, that is regarded with greater dread generally than cancer. Nor is the dread with which this disease is viewed to be wondered at, when it is remembered that it is uniformly fatal unless proper treatment be very early adopted, and that its progress is usually attended with agonising pain which often defies all efforts at relief until death puts an end to the sufferings of the victim.

As might have been expected, a disease so terrible in its effects, and, withal, so common—for those who die of cancer in England alone may be numbered by thousands every year—has in all ages engaged the best attention of those who have devoted their lives to the study of diseases and their treatment, and many specifics, or pretended specifics, in the shape of powder, paint, ointment, or paste, which were to have robbed the disease of its terrors, and death of its prey, have at various times been puffed into notoriety. But the specifics and their inventors have lived out their short day of glory, and would have been forgotten, were it not that some new cancer-cure appears upon the scene every now and then, and dangles one of the old specifics before the eyes of those who may be, or fear they may be, suffering from cancer. It may be alleged that the treatment adopted by some of these cancer-curers *appears* to be attended with extraordinary success. This is due, however, not to any merit in the agent employed, but to the fact that the cases of "cancer," so-called, which have been subjected to the treatment were not examples of the disease. As a rule, the cancer-curer is superior to pathology, and finds it convenient to ignore its teachings. To him every swelling or "lump" which appears in any part of the surface of the body, whether an enlarged lymphatic gland, an adenoid growth, a fatty tumour, a simple cyst, or a wart, is alike raised to the dignity of a cancer, and the cure is claimed as a marvellous triumph of art over nature.

But to turn to the reason why we refer to this subject. For some time past advertisements have appeared in the daily newspapers, stating that a new Hospital, by name St. Saviour's, has been opened for the treatment of cancer and external tumours by the Michel and other processes, and that a pamphlet explanatory of the Michel process might be obtained free of cost on application to the secretary. A copy of the pamphlet referred to in this advertisement has recently been placed in our hands, and we have read it with a great deal of interest, even if we have profited nothing by it. The title-page announces that it is edited by Henry Robinson, B.A., L.R.C.S., the surgeon to the new Hospital, and that it treats of the successful "dispersion" of cancer and external tumours by the Michel and other processes, *without the knife*. If Mr. Robinson meant to produce a professional work of even the slightest merit, we cannot congratulate him on the result; but if we may suppose that the main object of his pamphlet was to appeal to the fears, prejudices, and ignorance of the public, he may be complimented on a melancholy success. Of course there is a preface to the pamphlet, in which the author explains how he became a cancer-curer,—of which more anon. Then follow twenty-two pages of highly descriptive matter relating to the Michel process, to which is added an appendix of about twenty pages, giving extracts from letters, chiefly of French origin, from patients who have been cured or relieved.

As most of our readers already know, the Michel process consists in the application to the tumour it is desired to remove of an escharotic paste, consisting of a mixture of finely powdered asbestos and pure sulphuric acid. This acts in a somewhat similar manner to other escharotics which are occasionally used in suitable cases by English surgeons. We have nothing to say against the process itself. There are some cases where it might be used with most satisfactory results—for instance, when the knife is strongly objected to by the patient; but the experience of the best surgeons shows that in the majority of cases of cancer, treatment by the knife gives, at least in the first instance, better results than those obtained by the use of any form of escharotic. Not long ago we saw a patient with a large tumour in the back. He was led to suppose that the growth was a cancer, and, being assured that it could be removed without cutting, he consented to have it destroyed by the Michel process. Being of large size, it could not well be destroyed by one application of the paste, and he was told that he would require a repetition. However, he found the subsequent pain so acute that he determined to present himself at one of the general hospitals, and brave even the terrible knife of the surgeon rather than submit to another application of the caustic paste. When admitted, he had a deep ulcer, several inches in diameter, on the back. The skin and subcutaneous tissue had been destroyed over the tumour, which still remained intact. The patient was put under the influence of chloroform, and the growth, which proved to be a simple fatty tumour, dissected out. The attempt to destroy a large tumour of this kind by means of caustics, however potent, showed that the operator was ignorant of the first lines of surgery, as well as of his duty to his patient. Such surgery would have disgraced a prehistoric age.

The Michel process was invented by Dr. Michel, of Paris, a retired army surgeon, who, although he would allow any medical man to see him operate, kept the agents he employed a secret. He, however, offered to instruct in his process any Englishman not practising in Paris, for the sum of £1000. A few months before his decease, a Dr. Bell, of London (now deceased) went to Paris, paid the required sum, and learnt the details of the process. Dr. Bell, on his return, published Michel's process in full, and practised it for some years with a certain amount of success. When Dr. Bell's health began to fail he took Mr. Henry Robinson, already referred to, into partnership with him. Shortly after, Dr. Bell was unable to continue his cancer operations, and at this juncture, Mr. Robinson tells us, he was "fortunate enough to be able to purchase his interest in the entire matter, and eventually to succeed him in practice."

Having invested his money in this manner, the next step was to endeavour to get some return for the outlay. Publicity is generally the accepted plan for gaining this desirable object. Accordingly we find that Mr. Robinson published a second edition of the pamphlet (originally written by Dr. Bell) already mentioned; and a little later a special hospital was started for the treatment of patients unable to command the treatment hitherto reserved, as Mr. Robinson tells us in

his preface, for the "higher and wealthier classes." Among the means employed to obtain patronage and support for the St. Saviour's Hospital, the first place in importance should be accorded to Mr. Robinson's pamphlet. It carries conviction at once to the minds of those who know nothing whatever of the subject, and are prepared to receive an *ipse dixit* as expressed in the work in question. The writer says:—"When I was first permitted to see an operation for the dispersion of a tumour in the breast, and before I had any knowledge whatever of the nature and composition of the agents employed in Michel's process, I could not help regarding it as one of the most ingenious and effective things I had ever seen. But now that I am conversant with the remedy and its component parts, I cannot speak too highly of the simplicity of the process; and I have no hesitation in saying that, in point of perfection of cure, no other treatment that I know of can at all approach it in efficacy." So simple, indeed, is the process, that in another part of the preface he states that he has endeavoured to indicate its mechanical details in the very fewest words, "from a fear that any fuller or more lengthened account would only tend to embarrass instead of help the operator." This reason for withholding details is ingenious, although not complimentary to other surgeons; but, unfortunately, it is fatal to the simplicity of the process. If Mr. Robinson were really sincere in desiring to instruct the profession in an improved mode of treating cancer, he might have done so through the ordinary and recognised channels, and there is no doubt that he would have received a respectful hearing, and the process have been given a full and fair trial.

It has already been stated that, according to Mr. Robinson, until he had established his new Hospital the Michel process was a luxury for the rich. We have tried to discover why this should be, but without arriving at a satisfactory conclusion. Certainly it is not due to the cost of the agents employed, for a few pence would cover this item; but perhaps the solution resides in the fact that it is found convenient in practice to weight the mass of paste after it has been spread over the tumour "with sovereigns or other coins," of course made of the same metal. "The sovereigns," Mr. Robinson states, "are placed exactly over the parts where it is necessary to penetrate most deeply; they exert that steady, continuous pressure which is required, and are easily applied and removed with the forceps." With respect to the safety of the process Mr. Robinson is very emphatic: "the patient is free from the dangers of a cutting operation, such as exhaustion and hæmorrhage." Nevertheless, he recommends that the operator should always sleep at the house on the first night after the operation,—for what reason is not at all clear, except it be to arrange the disposition of the sovereigns should it be necessary to resort to this adjunct to a satisfactory result.

Before concluding, we must protest against the use that Mr. Robinson makes of the word "dispersion." To speak of "dispersing" tumours, when burning them out with strong caustics is meant, is most misleading. He must know, and no one better, that there is no agent, either for external or internal use, which has the power of "dispersing" a cancer when once formed.

Here, meanwhile, we shall let Mr. Robinson rest. Let us hope he will think better of it and mend his ways. The only proper route to success is by an appeal to the profession—not to the ignorant.

HOME FOR INCURABLES IN GLASGOW AND THE WEST OF SCOTLAND.

More than a year ago we had occasion to refer to a movement originating in Edinburgh and Glasgow, and directed towards the erection of a Hospital for Incurables in the South of Scotland. It is gratifying now to be able to comment on the partial realisation of the scheme, and to look back on the means which have been employed in its furtherance. Last week there was formally opened at Broomhill, Kirkintilloch, a Home for Incurables, into which it is at present proposed to admit forty-nine adults and twelve children, and gradually to increase the numbers, if possible, to 100 of each sex. The inhabitants of Glasgow and the West of Scotland—chiefly, it seems, at the instigation of a most charitable and energetic lady friend of the poor—have been successful in promoting the pecuniary interests of the scheme, and by bazaars, donations, bequests, and even by work done for the new Home, have been able to make provision for the wants of the incurable patients who are to be admitted on the 13th inst. to the new hospital. At the same time, while the Home for the Incurables of Glasgow and the West of Scotland was being prepared for them, the Association for their Relief has not neglected their current wants, and has spent as much as £100 a month in the outdoor relief of a class amongst whom the terror of want and suffering are too frequently combined. The spirit which animated those present at the opening of the Home affords proof that an interest in incurables has been awakened among the people of Glasgow and the West, which will not die out till sympathy and assistance have been extended to every hopeless victim of disease in that populous region. It is gratifying also to notice the healthy tone adopted by the speakers at the opening ceremony, and to observe how readily the subsequent speakers took up the cue suggested by Dr. Cameron, M.P., that people should not be absolutely discouraged by the use of the term "incurable,"—that "medicine was progressing every day, and what was an incurable disease to-day might become a curable one to-morrow." Dr. Cameron also did good service in pointing out that not only pecuniary relief but medical attendance should be provided for those incurables whose circumstances detained at their homes. One of the main arguments adduced in ignorance against hospitals for incurables is that the congregation of hopeless beings would have a most depressing effect, and we are glad to see that that fallacy was met by a statement of the personal observation at the Putney Institution of one of the speakers, who had heard from patients bedridden for twenty or thirty years expressions of heartfelt thankfulness, and witnessed the greatest cheerfulness of disposition under prolonged suffering. Anyone who has made the observation so frequently open to medical men, and accepted and acted upon alike by painter, poet, and novelist, can always remember with pleasure the expression of patient resignation and beaming thankfulness which becomes almost fixed on the faces of many victims of incurable disease. There are few people who cannot call to mind the powerful influence of even a cursory association with a patient of this class: how forcibly it has brought to their minds the impression that their gratitude for health, strength, and prosperity has been exceeded by a sufferer's gratitude for suffering. To such as have experience in the mellowness of character brought about by chronic disease—

> "How soft the touches are which strike
> Sweet music from the chords of love,"

no notion about the depressing tendency of associating incurables would suggest itself. He would be much more likely to feel that the serenity of spirit, so ably represented by many of our best writers and painters as distinctive of incurable disease, would have a favourable effect on such of their companions as may have been rendered querulous by previous association with people whose enjoyment of perfect health may have elicited the envy of the sufferer, and whose want of sympathy may have turned envy into bitterness. The inhabitants of Glasgow and the West of Scotland deserve great credit for the energy and humanity they have shown in providing for the relief of incurables. We feel certain that a

rich reward of gratitude, and an inward sense of satisfaction resulting from the performance of a great and good work, will encourage them to persevere till every supposed incurable under their jurisdiction has been provided with the means of living comfortably, and experienced the good effects of kindness, cheerful society, and medical treatment.

THE WEEK.

TOPICS OF THE DAY.

Dr. John Liddle, Medical Officer of Health for the Whitechapel District, in his report presented to the local authorities, draws attention to the overcrowded condition of several of the registered common lodging-houses in Whitechapel. The sanitary inspectors have recently visited all these places; and a letter has been addressed to Captain Harris, the Commissioner of Police, under whose authority these houses are placed, reporting that during the preceding three months 100 registered common lodging-houses have been visited in Whitechapel, and that the inspectors have measured all the rooms containing beds for nightly lodgers. As the result of this inspection it has been found that, out of 100 houses containing 355 rooms, 238 rooms were overcrowded—that is to say, a less space than 300 cubic feet was allotted to each lodger. Serious sanitary defects were found to exist in a great many instances. As the Whitechapel district is, for the most part, a very old portion of London, it will probably be found that, proportionately, there are more houses unfit for habitation within its area than in any other district in the metropolis. The "Torrens Act" may be looked upon as a failure; for, although the district boards may compel landlords to take down houses which cannot be made fit for human habitation, yet they have no power to purchase the land which would then be rendered vacant; and, even if they were empowered to purchase it, it would be found in some instances to be insufficiently wide to allow of the construction of a thoroughfare, or for the erection of proper houses.

The construction of the "City of Health" in Sussex, after the ideas of Dr. B. W. Richardson, is exercising the public mind to such an extent that Mr. Frank E. Thicke (who, it is stated, will be answerable for the architectural details) has written to the *Times* to state that the letters he is daily receiving as to this matter are so numerous that he finds it impossible to reply to all his correspondents, or even to acknowledge many valuable suggestions and much good advice. He therefore begs to make it generally known that the plans are being prepared and arrangements being made for the proposed "City of Health," and they will be submitted to the public in the course of a few weeks.

The Local Government Board Commission for Ireland, at the head of which Mr. Uvedale Corbett, one of the English Local Government Board inspectors, is placed, along with two Irish barristers, Messrs. Exham and Lawless, Queen's Counsel, will have 110 municipalities to inquire into between the present time and next session, when their report will have to be presented to the Lord Lieutenant. They are to begin with Dublin, and are to confine their investigations to administrative and financial matters, including the expenditure of rates for sanitary purposes.

The new reservoir to supply the University and city of Oxford with water has been commenced by Mr. Dickinson, the contractor. A large number of men will at once be employed on the works, which are situated at Headington; and that great desideratum—a good supply of pure water—will be attained for Oxford without much delay. The drainage works of the town are nearly completed, save the outfall, which has not yet been begun. The work of the contractors (Messrs. Dickinson and Acock) is said to be of a superior character.

The outbreak of small-pox in Blackburn is steadily increasing, in spite of the efforts of the authorities to stamp it out. The Rev. Father Berry, of St. Alban's, is reported to have succumbed to the disease, contracted while visiting patients suffering from it in the town. Although it was stated that a searching inquiry had elicited the fact that the outbreak originated in Blackburn, the sanitary inspector now asserts that the disorder has been imported from other towns. Meanwhile fresh cases are daily occurring, and much alarm and anxiety are felt in the district.

Inter-parochial difficulties are dreadful things to deal with and, unless of importance from a sanitary point of view, are much best left alone; but, in the present instance, public attention has been called to the disgraceful condition in which the disused burial-ground of the parish of St. James's, Piccadilly (situate in the parish of St. Pancras), has been left, and the medical officer of health for the St. Pancras district and the sanitary authorities of the parish are moving in the matter. During the last century it was the practice of the local authorities of some of the metropolitan parishes without the City to provide what, in those days, were extra-mural burial-grounds for their deceased parishioners, and in this way the parish of St. James's obtained a site in the Hampstead-road. At a recent meeting of the Sanitary Board of St. Pancras, the medical officer of health presented his report as to the sanitary condition of this ground, but, on the matter being introduced, the chairman expressed an opinion that the authorities of St. Pancras had no jurisdiction, as the ground belonged to St. James's. It was, however, resolved to hear the report, and it was read by Dr. Eastes, the acting medical officer of health:—"On August 23 I carefully inspected St. James's Burial-ground, and found it to be in a very neglected condition, being overgrown with rank weeds of all descriptions, whilst the tombstones and monuments which had been erected in different parts of the ground were rapidly passing to decay, without any attempt to save them being apparently made. Close to the edge of the ground, where it is bounded by houses for a distance of about twenty or thirty feet within the borders, the inhabitants of those houses had thrown refuse of all descriptions over the walls. At this part of the grounds I found a heterogeneous assemblage of articles, including old hats, boots, bottles, tins, oyster-shells, and decomposing materials, such as bread, bones, skins, the carcases of cats—eight of which I counted—two fowls and a rabbit, and some bedding material also rapidly decaying. There should not be much difficulty in showing that this condition of things is a nuisance in the eye of the law, at the spot where it exists, which, however, is outside this parish." The report terminated with a suggestion that the ground in question should be made into a public garden, and eventually it was decided to communicate with the Rev. Mr. Kempe, the rector of St. James's, on the subject, and to refer the whole matter to the Vestry of St. Pancras for their opinion and support.

The Epsom Board of Guardians have found themselves placed in an awkward predicament through a most remarkable pauper. At their last weekly meeting a communication from the Medical Officer of Great Brookham was considered, calling attention to the case of one Eliza Tanner, who was suffering from an internal complaint, and, being an enormously fat and unwieldly person, the nurse in attendance was utterly powerless to move her patient, who, in consequence, had not been shifted from her bed for several days. The letter strongly recommended her removal to the workhouse infirmary, where there would be sufficient strength to lift the poor woman when required. The chairman said he had ascertained there were no paupers at the workhouse sufficiently able-bodied to be of much assistance to the nurse. The relieving officer being applied to, expressed his opinion that no two of the guardians

would be able to lift Mrs. Tanner. It would be useless to engage a fly for her removal, as she could not be passed through the doorway; her weight, as nearly as could be ascertained, was about twenty-four stone, with every prospect of greatly increasing. Ultimately the relieving officer was empowered to engage such a number of persons as would be able to transfer Mrs. Tanner from one position to another, the chairman observing that it was obvious that if the woman was brought to the workhouse they would have to increase their staff.

The selection of a site for the proposed College for Naval Cadets, which is intended to supersede the old *Britannia* at Dartmouth, continues a source of contention with local authorities and other interested persons. Although an eminence on the banks of the Dart had been chosen by the Admiralty on the report of Sir Alexander Armstrong, the Director-General of the Medical Department of the Navy, and others, yet the claims of Plymouth, Portsmouth, and Portland were so persistently agitated in and out of Parliament by the local members that Mr. Ward Hunt referred the matter of reporting on the merits of the different proposed sites to a Committee, of whom Admiral Wellesley is chairman. The Committee have visited Portsmouth during the past week, and have been sedulously prosecuting their inquiries.

The total number of persons recorded at the Board of Trade as having been killed on all the railways in Great Britain during the year 1875 was 1290, and the number of injuries was 5755. Of these, 134 persons killed and 1806 injured were passengers. Of the remainder, 765 killed and 3618 injured were officers or servants of the railway companies or the contractors; and 391 killed and 331 injured were trespassers, or suicides, or others who met with accidents at level crossings, or from miscellaneous causes. Of the passengers, 17 were killed and 1212 were injured from causes beyond their own control. It is worthy of remark that this appalling list of casualties does not diminish from year to year.

On Saturday last the collection for the metropolitan hospitals was made. About 160 ladies had volunteered to take charge of collecting boxes at the corners of the principal London thoroughfares. The total sum collected in this manner is stated to be about £775. The organisers of the movement are sanguine in their expectations that the amount realised this year will double that obtained last year. The next three weeks will show whether these anticipations are correct.

DR. MARION SIMS ON THE SUPPRESSION OF SYPHILIS.

In an address before the American Medical Association, at its twenty-seventh annual meeting in Philadelphia, June 6, 1876, Dr. Marion Sims propounds a plan for the limitation of venereal disease, which has the features of simplicity and directness. "We want," he says, "no legislation that looks to licensing prostitution as in France, and we want no such partial legislation as we find in the 'Contagious Diseases Acts' of England. We would not outrage religious sentiment by adopting a system of fostering vice; nor should we subject the hardy soldier, even for his own good, to invidious restrictions not imposed upon others in the community. . . . Class legislation in any shape, and for any purpose, is distasteful to the people of any country, and especially of ours. . . . We must ask for such laws as will confer upon us the power of dealing with this disease as we already possess with regard to cholera and small-pox. The carriers of trade between nations, and between great commercial centres in the same nation, are the carriers of syphilis. Syphilis is carried from city to city by men, and women scatter it far and wide in communities. One man may inoculate half a dozen women during the few days his ship lies in port; and these half-dozen degraded women may transmit the disease not only to scores of men, but hundreds and thousands may trace their ruined health, directly or indirectly, back to the half-dozen women who were infected by one man. . . . What I propose in regard to syphilis, is simply to give to the already existing boards of health in the various cities the same power over syphilis that they now possess over cholera, small-pox, and yellow fever. They now have the power of ferreting out small-pox, and of sending it to hospitals for treatment; and they should have the same power of searching out the abodes of syphilis, and of sending its victims to hospitals for treatment. On all steamers or sailing-vessels, whether foreign or coastwise, entering port, the surgeon of the vessel should be required to make affidavit that he had examined personally every seaman, and every male steerage passenger, on the day preceding their arrival in port, and that there was no case of cholera, small-pox, yellow fever, syphilis, scarlatina, or other infectious disease aboard. If there should be syphilis, then the subjects of it should be taken in charge by the board of health, and sent to hospital for treatment, to be retained there till cured, or to be returned to the vessel from which they were taken, whenever said vessel should be ready to sail from port again. If said vessel had no surgeon aboard, then it should devolve upon the quarantine officer to examine every sailor and every steerage passenger, before landing, and to send any and every case of syphilis to hospital for treatment. On all vessels, foreign and coastwise, the quarantine officer should possess the same power of personal inspection and detention. For stamping out the disease in towns and cities, their boards of health must have plenary powers of an absolute character over syphilis; not more so, however, than they now possess over small-pox. Thus you see that I would simply include syphilis in the great family of contagious or communicable diseases, and make it subject to the same laws and regulations that we already possess for their management. Do this, and we cannot be accused of licensing vice, or of fostering adulterous intercourse." Dr. Marion Sims bestows high praise upon the Board of Health of New York, for the summary and effective powers it possesses, and the excellent organisation and working in the suppression of cholera and small-pox. "*Contagious diseases can be controled by isolation of the sick and the destruction of contagia*"; and he desires to give the Board of Health "the same arbitrary power over syphilis that it has over other contagious diseases."

PEMPHIGUS ACUTUS NEONATORUM.

Dr. Bohn, in a recent number of the *Jahrbuch für Kinderheilkunde* (No. 9, page 304), contributes a paper on this subject, in which he combats the usually accepted view of the contagious nature of this disease, and expresses his belief that it is connected with the physiological cutaneous desquamation peculiar to early infant life, and which, as the result of certain irritants, assumes the condition known as pemphigus acutus neonatorum. He says, "Among the manifold external sources of irritation to which the skin of new-born infants are subjected, I would lay especial stress, as a cause of this disease, on warm baths." He believes that an ordinary warm bath would not produce it, but thinks that nurses, either from being hurried, or in the vain belief that their great experience renders a thermometer unnecessary, frequently make use of baths which are much too hot for infants, although to their own skin the temperature does not feel high.

In support of his views, Dr. Bohn criticises the accounts of the epidemics which have been reported. From these it would appear that this disease, which had scarcely been previously observed, or only sporadically, was contagious and capable of causing epidemics. The first of these occurred in private establishments, the lying-in hospitals in Paris, Leipzig, Danzig, and elsewhere; then it was found that they occurred too in general practice, and that then generally in the practice of some one or other midwife. In this way the disease showed itself

directly contagious, and proved that it could also be carried by a third person; and yet it is not inoculable, for all attempts hitherto have failed to inoculate with the bleb-contents. Next, it occurs almost constantly in the latter half of the first week of life, whether in its sporadic or in its epidemic form—just at a time of life, in fact, when the "exfoliation of the epidermis" is taking place. This desquamation has been conclusively shown to begin earliest, and to proceed most completely at places which are subject to irritation, as, for instance, beneath the navel bandage. The author thus proceeds to argue that a more constsnt and universal source of irritation is the hot bath as before mentioned, and he gives some special cases in support of this view of the cause and origin of the disease. He explains the occurrence of a series of cases in the practice of one midwife as the result of a personal peculiarity, or rather failing, in the manner of bathing her chargelings, which strongly supports his theory. He quotes the well-known epidemic of trismus in Elbing. In the practice of the midwife who was most sought after, trismus was almost endemic, and it was a long time before it was found out that this nurse had no perception of the heat of water—she was unable to distinguish between water at 28° and at 33°. For the future she used a thermometer, and the "epidemic" ceased.

Here is an important fact; but does it bear on Dr. Bohn's theory? We should like to know whether these infants with trismus, resulting from over-hot baths, were also the subjects of acute pemphigus; for if Dr. Bohn's theory is correct, then surely there ought to have been some cases of pemphigus so produced during the time—many months—which this "epidemic" lasted.

This communication is no doubt interesting, but it leaves the subject where it was before. We have generally considered pemphigus in early infancy as syphilitic; and if that be the case, no doubt too hot baths might act as a determining cause, while the contagiousness of the disease would still be a means of propagation. It is known that the fluid from the vaccine vesicle may or may not cause syphilis in another child vaccinated from it; but in the latter case, certain definite symptoms follow. The disease here referred to, however, scarcely seems to have been syphilitic, for the latter is extremely fatal, and the antecedents of the child are generally so unmistakable as not to be overlooked. That this disease, however, is infectious is proved by Dr. Abegg, who asserts that the disease first broke out in the Danzig Hospital in a ward in which a child had been born who bore unmistakable evidence of having had a severe intra-uterine attack. He adds, also, that thermometers are always used for the baths, and that separate baths are used for diseased children. Dr. Faloy (Thesis, 1875), of Paris, concluded that this disease is identical with the acute pemphigus of early life and of the adult, and that it is not always syphilitic.

In this country it is exceedingly rare in its epidemic form; our chief text-books barely refer to the benign form, and there is little in the general literature of children's diseases which bears on the subject.

THE ANTI-VACCINATIONISTS AT IPSWICH.

Thanks to the zeal of anti-vaccination agitators, Ipswich has been treated to the excitement of a coroner's inquiry into the circumstances attending the death of an illegitimate child, whose death was said to be caused through blood-poisoning in consequence of vaccination. About three months and a half ago the child was successfully vaccinated by Dr. Elliston, the public vaccinator, and shortly afterwards an eruption broke out over the child's body, which the mother thought was the result of vaccination. The child was taken to Dr. Ellistou who said that the eruption was due to teething, and ordered zinc ointment to be applied to the sores. The child got better of the sores, but about three weeks ago it was seized with diarrhœa and symptoms of brain disease, and in a few days it died. The child was attended throughout its illness by the unqualified assistant of the parochial medical officer, Mr. Adams, who gave a certificate to the effect that death was caused by diarrhœa and hydrocephalus. It appears that, before the child died, the news of its illness reached the ears of the local agent of the Anti-Vaccination Society, who saw at once that he had a splendid case of the evil results of vaccination. He visited the child during its illness, and held mysterious conversations with the substitute for a medical attendant as to its being a case of blood-poisoning, etc., and when the child died he induced the friends to show him the certificate of death before registering the death. As the alleged cause of death given on the certificate did not agree with his views of the case, the agent of the Anti-Vaccination Society took the certificate back to Mr. Adams, and asked whether a mistake had not been made in filling up the cause of death. Mr. Adams then withdrew the certificate, as his unqualified assistant could not legally certify, and these facts coming to the knowledge of the coroner, he ordered an inquiry. A post-mortem examination was made by Dr. Moore, and his evidence was to the effect that death resulted from tubercular meningitis, and had nothing whatever to do with vaccination. The legal representative of the Anti-Vaccination Society endeavoured to show that death was the result of vaccination, but the case broke down completely, and the jury returned a verdict in accordance with Dr. Moore's evidence. At a subsequent meeting of the local board of guardians, Dr. Elliston showed that the deceased was vaccinated from a perfectly healthy child. It appears to us that the inquiry would never have been necessary had the child been attended by a qualified medical man; and it is certainly indiscreet, to say the least, on the part of Mr. Adams to allow his unqualified assistant to have the sole charge of grave cases of illness.

THE HEALTH OF IRELAND.

The Registrar-General's return on the health of Ireland for the second quarter of the year 1876 has just been published. The deaths registered in the quarter, though above the average, are but at the (annual) rate of 19·2 per 1000 of the estimated population, and the deaths from the principal zymotic diseases at the (annual) rate of 1·6 per 1000. The returns show a further considerable decline in the mortality from scarlet fever, which, however, caused 485 deaths; and the Registrar of Moville district, Innishowen Union, mentions that, though the disease there was not very prevalent, it was of so virulent a type as to cause death in most cases within three days. The deaths from diphtheria declined to seventy-six. Only two deaths from small-pox were registered in all Ireland. The mortality from fever was below that of the corresponding quarter in the last two years. The Registrar of Achill, Newport Union, says: "Typhus is prevalent in this district, being perpetuated by filth, bad drainage and ventilation, and the impossibility of procuring isolation for those infected. The inhabitants for the most part live in large villages, a great number of persons dwelling in each hovel, in which they also keep their cattle and pigs. It is impossible to keep these places clean, lime being very difficult to procure, as none exists in the district; it has to be brought from a great distance, and is very expensive. The Union Fever Hospital is thirty-two miles distant, part of which distance has to be performed in boats; it is therefore impossible to send fever cases to the Hospital." Still, the Registrar-General is able to report that, though many districts remain in a wretched condition, and many of the cottages or cabins of the poor are unfit for human habitation, the improvement in the sanitary condition of the country has been material. As many as thirteen of the 25,602 persons whose deaths were registered in the quarter are described as having attained the

age of 100 years or upwards, but it appears to be merely the statement of the friends of these persons; no confirmation of these representations is given in the return. A Belfast Registrar states that "the action of the burial societies makes the return of the ages of the old untrustworthy to a very serious extent; in order to obtain insurance at a low rate the age of the party insured is in many cases grossly misrepresented." The births registered in the quarter were only at the (annual) rate of 28·1 per 1000 of the population, but the registration is still imperfect. The excess of registered births over registered deaths was 11,796, but the emigration of 13,842 persons from Irish ports turned this natural increase into a small decrease. Assuming the annual excess of births over deaths to equal 1 per cent. of the population, and deducting emigrants, the Registrar-General estimates the population of Ireland at 5,321,618 in the middle of the present year.

SUCCESSFUL PROSECUTION OF AN UNLICENSED APOTHECARY.

In prosecuting an unqualified practitioner, last week, at the Thames Police-court, the East London Branch of the Medical Defence Association brought to light some curious facts, which show that, with all the care which is exercised in keeping the Medical Register, it cannot be depended upon as absolutely correct. The defendant in the case is, it transpired at the trial, named John William Foster, and for some twelve years past he has practised at Bromley, and at various times has taken and used the titles of "doctor," "surgeon," and "apothecary." During the last two years he has called himself "John Foster, L.S.A.," and, under this designation, signed certificates of death for registration purposes. On several occasions he has given evidence in the coroner's court, and once, at least, he has received the fee of two guineas for making a post-mortem examination and giving evidence. In Churchill's "Medical Directory" for the present year his name appears as follows:—"Foster, John, Bruce-road, Bromley, E.; L.S.A.; 1846." There is no person of that name on the Medical Register whose residence is in London; but there is a John Foster on this year's Register, whose only qualification is the L.S.A. Lond., which was granted in 1846, and whose residence is stated to be Farnsfield, Southwell, Notts. Until recently it was thought that the John Foster of Bromley was identical with he of Farnsfield; but a few months ago information was given to one of the officials of the East London Defence Association which caused inquiries to be made, with a view to clearing up his identity. Representations were made to the Registrar of the General Medical Council, who sent a registered letter to the John Foster of Farnsfield, when it was for the first time discovered that he had been dead for two years, but his name had not been removed from the Register in consequence of the registrar of the deaths of the district failing to send notice of the death to the Medical Council Office. The non-identity of the two having been thus made apparent, John Foster of Bromley was summoned by the Defence Association for assuming the title of, and pretending to be an apothecary. Mr. Pridham conducted the case on behalf of the Association. There was really no defence, and the magistrate inflicted the full penalty of £20 and costs.

FATAL JAUNDICE FROM CONOENITAL DEFECT OF THE GALL-DUCTS.

Dr. Konrad Lotze records a case (*Berliner Klinische Wochenschrift*, No. 30) of this kind. The infant, during the first three weeks of its life, manifested a slight yellow tint of the skin. Diarrhœa set in, which was relieved by alteration of diet. As the jaundice gradually increased, Dr. Lotze was consulted about it. The child was now three months and a half old; it was very atrophic; the skin and sclerotics intensely green; the urine was thick, highly pigmented, and left grease-stains behind; fæces light grey; the liver was enlarged, extended a hand-breadth below the costal arch, was indurated and hard to the touch, and its margin sharp. A general treatment was continued for weeks without any result; hence the diagnosis of congenital malformation. It was found that the father had had some ulcer suggestive of syphilis, and so an anti-syphilitic treatment was adopted towards the child, which, however, was of no avail: it died at the commencement of the eighth month. At the autopsy, the liver (which alone was examined) was found much enlarged, and almost cartilaginous to the touch, and of a dark serpentine green colour; its upper surface, to which the peritoneum was firmly adherent, was covered with a number of small, greenish, prominent granulations. On section the parenchyma was everywhere beset with cicatrix-like strands, the branches of the efferent and afferent hepatic vessels; bile everywhere welled up in small quantities. The ductus choledochus was viable, but very narrow; the right hepatic duct could be followed only for a very short distance into the liver; the left one quickly terminated, but could be traced onwards as bands of connective tissue. The cystic duct was entirely absent. The gall-bladder was intimately adherent to the liver; it contained a quantity of thin, acid mucus. The vascular system was normal. Under the microscope, the liver substance (cells) was degenerated and fatty, the connective tissue everywhere hyperplastic. The author regarded this as a case of congenital defect, with secondary hyperplasia and degeneration, rather than as one of syphilitic or inflammatory changes leading on to degeneracy and complete closure of the ducts; and his chief ground for this opinion lay in the complete integrity of the vascular system. It seems to him to have been some arrest in the hollowing-out of the primitively solid cylinders from which the ducts are developed.

THE HEALTH OF BIRMINGHAM.

The report of Dr. Alfred Hill, the Medical Officer of Health for the borough of Birmingham, for the quarter ending July 1 last shows a very satisfactory improvement in the sanitary condition of the district. The total number of deaths registered during the quarter was 1968, giving an annual death-rate of 21·17 per 1000 persons; this is smaller than that of any corresponding quarter of the three preceding years. The death-rate in the second quarter of 1873 was 21·73; during the same period of 1874, 23·04; and in that of 1875, 24·30. This great reduction is principally attributed to the total absence of mortality from small-pox, and the existence to a much smaller extent of other zymotic diseases. The disappearance of fatal small-pox from the town after its continuance in an epidemic form for four years is, Dr. Hill observes, a highly gratifying circumstance, and it cannot be doubted that it is the gradually induced result of a more active system of vaccination, and the employment of other minor measures, not forgetting the dangerous and costly protection obtained by the susceptible portion of the inhabitants having taken the disease, and so ceased to be either dangerous to themselves or others. Dr. Hill expresses a hope that no indifference on the subject of vaccination and revaccination may be allowed to display itself now that the disease appears to have been overcome in the district. The danger, he adds, still exists, and it only requires a return of the favouring conditions, more especially non-vaccination, to bring about in the course of a few years another epidemic visitation as severe as the one just past.

HYDROPHOBIA FROM THE SCRATCH OF A CAT.

A singular case of hydrophobia is reported from Leeds, the cause of the disease having been the scratch of a cat. About the middle of last month, a young man, twenty-two years of age, was admitted to the Leeds Infirmary, suffering from well-marked symptoms of hydrophobia. The patient stated that about eight weeks previously he took a strange cat into his house, and in doing so it scratched his hand. The wound

healed well, and nothing appeared to be wrong until the day before admission, when he felt a peculiar pain in the hand which had been scratched. It is said that everything was done for him that was likely to afford relief, but he died in great agony on the following day.

THE WOUNDED IN SERVIA.

(*From a Correspondent.*)

The Hospital Schabaz, Servia, August 19.

Having left London on the 3rd inst., I arrived at Belgrade on the evening of the 9th. The authorities having been notified from England of my probable advent, an officer was waiting for me on the landing-stage, who facilitated the clearance of my luggage, which consisted largely of medicines, and calico for bandages. Entering, at night, a town in a state of siege, the first experiences are interesting. Passports had to be minutely examined, and baggage overhauled. In my case, the authorities were too courteous to permit this; so, without even showing my papers or opening a box, my goods were shouldered by porters told off for the purpose, and, with the officer for my guide, I was marshalled through the town to the Hôtel-Paris. At short distances sentinels challenged us, and would not permit us to pass until my companion advanced, and gave the password in a whisper. To me the scene was unique—the night somewhat dark, the streets tortuous and imperfectly lighted with petroleum, the clanking of sabres, and the continual challenging of sentries, with a certain air of mystery about the place, made an impression upon me which I shall not readily forget. No one is permitted to be out of doors after ten o'clock at night, and this regulation is pretty strictly enforced.

The hospitals at Belgrade are by no means so well organised as could be desired. Dr. Steiner, a pupil of Billroth of Vienna, and apparently a very able man, is in complete despair. He is the chief physician there, and he complains bitterly that he can get nothing done. The sanitary condition of the Military Hospital is deplorable, the effluvia from foul drains literally poisoning the atmosphere of the wards. There is an arbitrary law in operation throughout Servia which works very badly. All women, down to young girls of fifteen, are obliged to give one day's service in the hospitals, or procure a substitute. The result is that the nurses of the day, who have heard the instructions given respecting the treatment of the patients, not being the nurses in charge on the morrow, nothing is systematically carried out. Thus the Servian ladies are worse than useless: they come and go, and do next to nothing; and many patients die who might otherwise recover.

The people here have no idea of using chloride of lime or carbolic acid for sanitary purposes. There is another hospital, managed by the Red Cross Society, which is much better; but Dr. Steiner appears to have very inexperienced dressers, and, what is worse, men who appear to be quite satisfied with their own unsatisfactory performances.

As an illustration of the condition of the Military Hospital, Dr. Steiner showed me a patient with a gangrenous stump. The arm had been amputated by him at the Red Cross Hospital, and was doing well; the man was up. Unfortunately, he was sent back to the Military Hospital, and, not being properly attended to, the wound sloughed; and although Dr. Steiner had him back to the Red Cross Hospital, and cauterised it, he by no means expected to save him when I left Belgrade. Many of the wounds are slight, and heal by first intention with simple water-dressing. There are not more than 200 or 300 wounded men at Belgrade.

Colonel McIvor, the only English military officer in the service of Servia, has formed a cavalry brigade for guerilla purposes. He was busy enlisting men during the first week subsequently to receiving his commission, which dates from August 6. At the termination of that period he had enrolled ninety men; but although quarters had been promised by the Minister of War, he could not get his men housed. The War Minister, who is an energetic and courteous gentleman, had issued the necessary orders, but they had not been carried into effect. The colonel was furious; his men were scattered about the town, and many had no shelter at night, and were without rations. English determination and energy carried the day in a very unexpected manner. The colonel determined to march his men through the town to the War Minister's, and demand quarters and equipments for them. This was accordingly carried into effect. He assembled his men on the Rialto and, in spite of official expostulation, the men were marched up to the Minister's, four abreast—and they marched fairly well, making a good show. The dresses of the men were sufficiently incongruous, some in the Greek costume, others in the dresses of various German nationalities. The War Minister was taken by storm; he thought his orders had been carried out. The colonel pointed to his men, saying, "I received my commission six days ago, with orders to raise a cavalry brigade. I have executed them—here are the men—I want tents, horses, uniforms, and rations." The Minister granted everything at once, and Colonel McIvor triumphantly marched his men off to some capital tents which were allotted to him. He was then taken to the stables to select the horses, and proper rations were issued. It has raised the English colonel's popularity to fever-heat with his men, who have now donned their uniforms.

August 22.

At the desire of Baron Mundy, Inspector-General of Hospitals, Madame le Baroness Rosen, of Vienna, who speaks excellent English, has been associated with Dr. Gruder and Mr. T. R. Thomas at the hospital at Schabaz, and has taken the general direction of the hospital. They arrived at Schabaz on the 16th inst., and were immediately installed in residence by Dr. Gruder, who is a local physician of great experience and learning. The sanitary condition of the hospital was frightful, the water-closets and drains being very foul. The dirty linen from the wounds was thrown into large bowls placed in the hall, and left there to poison the atmosphere until it occurred to some one or other to empty them. Dr. Gruder had been almost unaided until the arrival of Mr. Thomas and Madame Rosen; and the system of continually changing the nurses, which worked so perniciously at Belgrade, prevailed here. There were about forty-eight patients in the hospital, and 300 out-patients, whose habit it is to come every day or two to have their wounds dressed. In addition to these, eighteen new patients were brought in from the Army of the Drina on the 18th inst., several of them suffering from gangrene.

On the 19th, pyæmia broke out, and five badly wounded men were seized with rigors and fever. In addition to this, three were attacked with erysipelas. Stretchers of canvas were slung from the trees in the garden, and all the worst cases were brought out, and had their wounds dressed in the open air. Large doses of quinine, with opium, proved successful in checking pyæmia. The erysipelas cases were treated with fomentations of poppy-heads, nitrate of silver, and collodion. All the patients are now turned out into the garden (the worst cases lying on stretchers well off the ground) at seven o'clock in the morning, and taken in at six in the evening, after their wounds have been redressed. The gangrenous wounds were dressed with nitric acid, and also with carbolic acid crystals. The result was satisfactory, and now there is not a gangrenous wound in the hospital. Madame Rosen, who is indefatigable in her zeal, has superintended the purifying of the building. The straw of the beds of the erysipelas and pyæmic cases is regularly burnt, windows are thrown open all day, the floors are regularly washed, and chloride of lime has been freely used, to check the offensive effluvia from the water-closets, which are now kept clean.

Incineration on the Field of Battle.—Dr. Kuborn, of the Belgian Academy of Medicine, in conjunction with M. Jacques, a gas engineer, has produced an incinerating apparatus, which, while effecting a rapid incineration, without any disengagement of gases, is so portable that it can be drawn after an ambulance by one horse, and can be got ready in twenty-five minutes. The 17,000 or 18,000 combatants who fell at Gravelotte and other battle-fields in the late war might by his machines all have been consumed in a week. Among all the elegant and well-arranged cremators at the Belgian Exposition, there is none that would realise the objects Dr. Kuborn has had in view.—*Presse Méd. Belge.*

FROM ABROAD.

Inhalation after Tracheotomy.

In a paper read before the Hufeland Society (*Deutsche Klinik*, July 8), Dr. Böeker, of Berlin, observed that such good results had attended this practice in his hands, that he was desirous of calling for its investigation by the profession.

Inhalation of sprayed fluids prior to tracheotomy had long been tried, the object being to bring the remedial agents in immediate contact with the diseased tissues. The idea of dissolving pseudo-membranes in this way gained great support from an observation by Kuchenmeister that croupal membranes are soluble in lime-water; and Biermer published a case in which he attributed recovery to its inhalation. Gottstein also related a case in which he several times dissolved membranes which he had seen by the laryngoscope, by direct injection of lime-water; and Weber, of Darmstadt, reported that he had met with most surprising success by the employment of diluted lactic acid. It is very doubtful, however, whether he had to do with cases of true croup. Dr. Böeker has himself tried these inhalations of lactic acid every hour or half-hour, or even oftener, but has not found them supersede tracheotomy, as stated by Weber. One inconvenience attending the lactic acid is that it produces, after a few inhalations, excoriations of the mucous membranes, so that the lips, etc., have to be protected from its action by unctuous or other substances.

Future experience must finally decide whether inhalation of lactic acid will prevent the necessity of tracheotomy. At all events, after the operation has been performed. Dr. Böcker always resorts to the use of inhalations, which he has found exceed any expectations he had entertained of their influence. Whenever, a longer or shorter time after the operation, a difficulty of breathing recurs, which does not yield either to internal remedies or to external manipulations—such as passing a feather down the canula, etc.,—inhalations prove of the highest value, even when suffocation seems imminent. Dr. Burow has adopted the same practice, and with equally favourable results. In the present paper, notes are given of seventeen cases, ten of which recovered, six died a few days after the tracheotomy, and one some time after of some complicating disease; so that there were, in fact, as far as the operation is concerned, eleven recoveries, or 63 per cent., which must be regarded as a very favourable proportion. Dr. Burow has since adopting this practice lost only two patients out of eight operated upon; while of ten former tracheotomies seven were fatal.

According to the usual modes of procedure after the operation, expulsion of membrane is sought to be obtained through coughing excited by the passage of a feather or a few drops of water down the canula. But frequently the cough is of no avail, as the membrane firmly adheres to the tracheal wall in a dry condition. The child is excited and exhausted by the effort, while the current of air produced does not detach the membrane. The object to be sought is either the detachment of the false membranes, and the prevention of drying of the parts, or the obtaining a solution of the membranes. With regard to this last, lactic acid, so strongly recommended by Weber, would be required to be used in so concentrated a state that it would induce cauterisation of the parts; and it is probable that any benefit derived from this substance has been due much rather to its softening and loosening the membrane than to a solution of it. The effect of the inhalation is, in fact, to first convert the harsh, dry, noisy respiration into a moist, noiseless breathing; and in a short time considerable masses of membrane are discharged by means of gentle coughing. The child seems immensely relieved, and becomes quiet again, with a free breathing. When, however, the croupal process has occupied the finest bronchial ramifications, the inhalations only produce a slight alleviation of the dyspnœa, and the child gradually sinks under the progress of the disease. For these inhalations, liquor calcis, a solution of salt (a teaspoonful in a glass of water), a solution of chlorate of potash, or a dilution of lactic acid, was employed. According to circumstances, they were made either every hour or half-hour, or with pauses of five minutes or more. In some cases they had to be continued almost uninterruptedly. Further trials must be made before we can decide whether lactic acid possesses any especial advantage over the other substances, as also how much depends upon the medicinal agent employed, and how much on the method itself. At all events, the after-treatment of tracheotomy seems to have gained much by the adoption of methodical inhalation.

Acute Morphia and Chloral Poisoning.

In the *Berliner Klinische Wochenschrift*, July 3, Dr. Levinstein relates two interesting cases of poisoning:—

1. A lady injected by mistake three decigrammes of morphia, and, on seeing her twenty minutes after, he found her in a state of unconsciousness, with reddened face, strongly pulsating carotids, and pupils narrowed to a minimum. The pulse was 92, and the respirations 24. An atropine injection of one milligramme and a half was at once made, and repeated twice at short intervals. The pupils then began to dilate, but the inclination to sleep was increasing. Strong coffee was administered, ice applied to the head, and leeches to the mastoid process and schneiderian membrane. To remove the sleepiness a tepid bath with douches to the head was ordered, and the patient was kept walking about by two persons. As the respirations had sunk to 4, faradisation of the phrenic was performed. No stimulants would now arouse the patient, and four hours after the poisoning she sank on the bed in a deep sleep. Half an hour having elapsed, and the respirations being but 3, she was faradised again, and awoke smiling pleasantly. Her face was paler, and her pupils were wider, but she fell asleep again immediately. She vomited, however, nearly every half-hour, and this was followed each time by attacks of delirium, which only allowed her short intervals of rest. The respiration had now, however, risen to 6. It was only twelve hours after the accident that the symptoms abated, and the consciousness again became clear; and for fourteen days afterwards the patient remained weak and faint, and was incapable either of thinking or walking other than slowly. A dose of three decigrammes is usually considered as fatal, and as in this case more than that quantity was hypodermically injected, the danger of cerebral paralysis was increased. This was, it is highly probable, warded off by the atropine; and the antidotal power of this is further shown in the fact that no other internal stimulant was administered than a cup of coffee, and that the almost irresistible desire for sleep was relieved in four hours after the poisoning, the remaining sleep being short in duration, and interrupted by delirium.

2. A young woman, in order to poison herself, took, between eleven and twelve o'clock on October 10, from twenty to twenty-four grammes of chloral in capsules, and it was only about six hours afterwards, when it was found impossible to arouse her from what was supposed to be a deep sleep, that help was sought for. Her body and limbs were ice-cold and anæsthetic, the latter being in a state of contraction; and her pupils were in the extremest contraction. Her pulse was 80, and respirations 20. An injection of one milligramme and a half of atropine produced no change in them, and no stimulus applied to the skin aroused the patient, save a few sighing inspirations which followed cold douches. It was not until 5 a.m. on October 11 that, by dint of calling to her, and the use of peripheric stimuli, the patient could be awakened, replying half-consciously, and again falling asleep until the evening. On the second day after the poisoning, consciousness had returned, the patient complaining of headache and muscular pains, while she vomited and felt exhausted. On the 14th she only complained of weariness and pains in the legs.

When Dr. Levinstein was called to the case the patient had already taken the chloral for seven hours, and had been left to herself, no one suspecting what had happened. At first, seeing the excessive myosis present, poisoning by morphia was supposed to exist, and the atropine was injected; but when a slight alcoholic smell of the breath was perceived, the anæsthesia was found to be so complete that neither the thrusting in of needles nor the electrical brush called forth any reflex action, and there was an absence of the slowness of respiration observed in morphia-poisoning, it was concluded that chloral had been the poison employed. As there was no threatening symptom on the side of the respiration and circulation, therapeutical procedures were confined to the attempt to arouse the patient by stimuli applied to the surface. Cold affusions were tried without any good effect; and the collapse which ensued was so great as to threaten life. The case is of interest, as showing what "colossal" doses of chloral may be taken without necessarily endangering life. It afterwards appeared that the patient had bought twenty-four grammes of chloral and twenty-four capsules, which she filled herself, and

it is probable that in doing so she may have spilled some of the liquid. That no gastritis followed so large a dose may be attributed to the fact that the patient shortly before had partaken of an abundant meal.

Dr. Levinstein concludes his paper with some observations on the analysis of the urine after morphia and chloral poisoning, for which we have not space.

REVIEWS.

Chirurgie Antiseptique: Principes, Modes d'Application, et Résultats du Pansement de Lister. Par le Dr. JUST LUCAS-CHAMPIONNIÈRE, Chirurgien des Hôpitaux, Membre de la Société de Chirurgie, Redacteur-en-chef du *Journal de Médecine et de Chirurgie Pratiques.*

WE have very great pleasure in recommending to our readers this little work of 150 pages. It has been somewhat surprising to those who watch the extension of the antiseptic system, that while it has found much favour in Germany, and has been extensively tried in Great Britain, the French gave no signs of troubling themselves about it in one way or the other. Dr. Lucas-Championnière has followed the rational plan when opinions differ widely: he has gone direct to the fountain-head to investigate the nature of the stream; he has thoroughly mastered in Edinburgh, not only the theory, but the practical details which Lister lays down, and he has produced, as a result, a clear and trustworthy account of both. In the first five chapters he enters into a description of the methods employed, and gives a short summary of the hypothetical basis upon which they are founded, about which we have nothing to say, except that it is intelligible, concise, and correct. In the following four chapters he enters into a discussion of the comparative merits of this and other methods of treatment. Chapters vii. and ix. are especially worthy of attention; the former gives a number of statistics, and the latter a series of answers, remarkably to the point, and admirably expressed, to many of the more or less trivial objections which have from time to time been made. Dr. Lucas-Championnière does not speak on purely theoretical grounds; he gives an account of several cases treated by himself, and also by Prof. Verneuil and M. Guyon, in Paris: nor does he follow blindly the lead of Mr. Lister; he describes an operation for varicose veins, which, if not altogether new, does not appear to have come under his observation before, and elsewhere shows considerable original thought. His remarks on traumatic fever—a subject to which he has paid particular attention—are worthy of reflection, though we cannot agree with him that septicæmia can altogether and always be eliminated from the complex condition known under this name.

On the Pathology and Operative Treatment of Hip Disease. By THOMAS ANNANDALE, F.R.S.E., F.R.C.S.E., Surgeon to the Royal Infirmary, Edinburgh, and Lecturer on Clinical Surgery. 1876.

MR. ANNANDALE has reprinted the papers on hip disease which he contributed to the *Edinburgh Medical Journal*, and we would recommend those who have not already perused them to take the opportunity of doing so afforded by their publication in a collective form. The treatise is a valuable contribution to the surgery of this formidable disease, and is especially interesting as furnishing fresh information upon the value of the antiseptic method of treatment. The pathology of the affection is illustrated by some admirable woodcuts. We are glad to notice that at the outset Mr. Annandale discards the notion that hip disease depends upon constitutional causes, and that he looks upon it as due chiefly to local injury. Doubtless, in strumous or unhealthy persons, joint diseases of any kind are "not so amenable to treatment, and less satisfactory in their results, owing to constitutional and other complications"; but we agree with the author in placing injury as its principal cause.

With regard to the question as to the particular structure in which the disease originates, Mr. Annandale furnishes some very interesting evidence; for he has been able to ascertain the condition of the joint at an earlier stage than that at which incisions are usually practised, owing to the adoption of the antiseptic method. He has thus "come to the conclusion that, although the disease may originate at times in the synovial membrane or pelvic bones, it most frequently commences in the head of the femur." Examination of cases in the early stage of the disease has revealed "in the majority little implication of the acetabulum or its cartilage, but well-marked destruction of the cartilage covering the head of the femur, and other signs of pathological changes in this bone." Our experience is quite confirmatory of these observations, and we believe that pulpy change of the synovial membrane is far less common in the hip- than in the knee-joint.

Mr. Annandale justly remarks that, had the disease originated in the synovial membrane, we should expect to find more implication of the cartilage of the acetabulum; and he points out the similarity in this respect between the hip- and shoulder-joints.

The records of twenty-two cases in which Mr. Annandale has excised the head of the femur are given, in one of which the operation was performed as early as three weeks from the commencement of the disease. Of these, "fourteen recovered completely, with a useful limb and movable joint; three recovered from the operation, but died within eighteen months from visceral disease." Five died at periods varying from two to fifteen months from the combined results of the operation and visceral complications.

These very favourable results the author attributes to "the employment of antiseptic treatment, and the performance of the operation at an early stage of the disease."

With regard to the antiseptic treatment, it is remarkable that, of thirteen cases treated antiseptically, all recovered; but it must also be noted that these were also most of them in an early stage of the disease.

Mr. Annandale advocates an antiseptic exploratory incision in all cases of hip disease in which signs of suppuration are present, and the immediate excision of the head of the femur if found to be carious; by which, he believes, in the majority of cases the disease will be checked and a useful limb obtained.

The ordinary treatment of hip disease is so extremely unsatisfactory that we think Mr. Annandale's cases should be carefully studied, and an extended trial given of the treatment he has pursued with so much success.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

PHILADELPHIA, August 15.

THE CENTENNIAL EXPOSITION: BRITISH EXHIBITS OF MEDICAL, SURGICAL, AND OBSTETRICAL INSTRUMENTS AND APPLIANCES; DIETETIC PREPARATIONS, ETC.; CLINICAL, PATHOLOGICAL, ANATOMICAL, AND EDUCATIONAL EXHIBITS, ETC.—HEALTH-RESORTS OF AMERICA: GREAT IMPORTANCE OF DRYNESS OF ATMOSPHERE—MEDICAL EDUCATION IN AMERICA: CONVENTION OF DELEGATES FROM THE MEDICAL COLLEGES; RESOLUTION THAT NO MEDICAL DEGREE OUGHT, UNDER ANY CIRCUMSTANCES, TO BE CONFERRED WITHOUT PERSONAL EXAMINATION OF THE CANDIDATE—INTERNATIONAL CONGRESS OF OPHTHALMOLOGY, NEW YORK: LIST OF EXPECTED ENGLISH AND EUROPEAN VISITORS—INTERNATIONAL MEDICAL CONGRESS, PHILADELPHIA: LIST OF SUBJECTS FOR DISCUSSION.

THE medically interesting features of the Centennial Exposition are quite numerous. I have been repeatedly asked by non-professional visitors to that great treasury of science and art, What could possibly be there that would be of interest to medical men almost exclusively? At a glance one would think there were not many items in the catalogue that could be thus isolated; but there is hardly a country that does not contribute something to the instruction of the profession. The display of chemicals and drugs, surgical instruments and appliances, dietetic preparations, instruments for diagnosis, obstetrical instruments, etc., is very extensive, from the United States especially; and Great Britain, France, Italy, and other countries are excellently represented in these lines of exhibit. It will probably be a matter of interest to your readers to learn the nature of the contributions thus made by Great Britain. The whole exhibit of that kingdom is wonderfully interesting and greatly admired, its resources, whether domestic or colonial, offering a vast field for the thoughtful study of the curious inquirer. Looking at the department of medicine and surgery by itself, we find, as we pass along the

aisles, cases and tables occupied by the following British firms:—Allen and Hanbury, of London, exhibit cod-liver oil and gelatine impregnated with atropine and Calabar bean, jujubes, etc.; Gerrard, of London, mustard-plasters and pharmaceutical preparations; Evans, Sons, and Co., of Liverpool, and Evans, Lescher, and Evans, of London, vegetable, animal, and mineral drugs, pharmaceutical products and accessories; Rufus Usher, of Bodicott, Oxon, medicinal rhubarb, extract of henbane, dried henbane leaves, and photographs of henbane plants; John Mackey, of Edinburgh, articles of diet for invalid and table use; Pulvermacher, of London, electrical instruments for medical purposes; Gustav Mellin, of London, non-farinaceous food for infants and invalids; Goodall, Backhouse, and Co., Leeds, food for infants and invalids; Lynch and Co., London, druggists' sundries and surgical instruments, spinal apparatus, chest protectors, etc.; Jas. Joseph Hicks, London, meteorological and scientific instruments; Mayer and Meltzer, London, surgical instruments and galvanic batteries; Robert James Lee, London, steam draught inhaler and disinfector; Lang, Jonas, and Jules, London, surgical instruments, elastic stockings, etc.; F. C. Rein and Son and Mrs. Rein, London, acoustic, surgical, and veterinary instruments, magneto-electric machines, etc.; Liverpool Spun Oakum Company, antiseptic dressing for hospital use; Hugh William Patrick and Son, artificial palates. In the distinct class of Chemicals, Oils, etc., which should not be separated in the catalogue from the exhibits previously referred to, I find, in addition to a long list of exhibitors of chemical manufactures which are not of a medical character, quite a number who make a speciality of pharmaceutical and other articles of interest to the profession. Of these I notice particularly the names of Morson and Son, London, general chemicals and specialities, pepsin, creasote, etc.; Kiumond and Co., Leamington, fluid magnesia, etc.; F. Wyndham and Co., London, "Esprit des œufs"; Sigismund Cohné, London, chemical and medical soaps; F. C. Calvert and Co., Bradford, carbolic and cresylic acids; Tyne Vale Chemical Company, Newcastle-on-Tyne, ethers and chloroform. The perfumes are also represented by some of your most reliable houses, as Atkinson, Rimmel, etc.; James Swift, R. and J. Beck, John Henry Dollinger, Ross and Co., and Henry Crouch, all of London, exhibit microscopes; and Edmund Wheeler, specimens for the microscope. George Jennings, London, displays lavatories, urinals, latrines, etc. Some of these exhibits are well worthy of a more minute description, even at the risk of exciting the curiosity of your readers to an inordinate degree, and out of all proportion to their ability to cross the ocean and witness for themselves this extraordinary spectacle. For the benefit of those who cannot pay us a visit I will hereafter briefly refer to a few other prominent medical features of the Exposition. England's colonial contributions consist of aërated waters, cordials, arrowroot, wines, etc., in quite a respectable amount for New South Wales and South Australia; and we find also cod-liver oil from New Zealand, specimens of the bitter barks used by the Kafir doctors in fever cases, dress of the witch doctors at the Cape of Good Hope, wines and brandies from the same locality, barks and drugs from the Government botanical gardens at Kingston, Jamaica, with large invoices of rum from the same vicinity, pharmaceutical preparations of all kinds from Canada, etc. France is represented by numerous exhibits of the triumphs of pharmacy, hygienic nipples, rubber surgical instruments, capsules, gymnastic apparatus, perfumery, etc. The Anatomical and Pathological Museum of Florence, Italy, sends microscopic, normal, and pathological anatomical preparations. Axel Key, of Stockholm, sends a beautiful quarto volume, an anatomical treatise, handsomely illustrated. Hospital organisations in peace and war are explained and illustrated as they have been established in various countries. Documents of medical relief associations are shown as part of the written and recorded history of that high class of collective work which exhibits the fraternal relations of the profession, however much it may be otherwise divided by cliques or petty causes of dissension. In some countries, as Switzerland, systematised educational work is studied in the Exposition in the very full reports of institutions devoted to the care or relief of infirmities of the senses. Even as to the hygiene of the schoolhouse, so long overlooked in the most populous and civilised countries, useful lessons come to us, and to all interested in this greatly needed reform, from the same sources. The physical, social, and moral condition of man also invites the attention of the thoughtful physician from other points of view. Foundling hospitals, lying-in hospitals, institutions for the idiot and the insane, supply their published records for inspection. Modes of ventilation are also discussed; even doctors' gigs are made a speciality to attract the medical eye. Many of the printed papers and reports, however, are passed by the visitor without notice, as being insignificant compared with the rich and rare gems around. Few have the curiosity to investigate the merely substantial and useful, apart from the absolutely ornamental and beautiful with which they are surrounded.

At any season of the year, the invalid may choose, in the widespread regions of the United States, congenial localities for recuperation. These will ere long, as the season advances to the chills of winter, have special interest to the consumptive and the delicate, who find in the ever-varying climate of our northern cities intense discomfort and imminent peril. The winter hegira to Florida commences with the early frosts, and that part of our Southern country had last winter a transient population of more than 20,000—some of them, I regret to say, members of our own profession, broken down by overwork or disease. The extremes of temperature have their advocates, and many medical men earnestly advise their patients to seek the equable and dry cold latitudes of some portions of the north-west, believing that they are more beneficial than regions which possess a greater degree of warmth, sometimes accompanied with an undesirable amount of moisture. Not long since, before the Alabama Medical Association, a paper was read on this subject, which possessed some points of general interest. There seems to exist a compensatory distribution of disease, by which the death-rate is about evenly balanced in different localities. The deaths from consumption alone probably amount to 70,000 annually in the United States—a terrible aggregate, to which the different States contribute in very unequal proportions. It is contended by the author of the paper that extreme frigidity has much to do with this great mortality, the region to the northward of the thirty-eighth parallel of latitude being its main source of supply. The Southern States are said to have a greater amount of humidity, as indicated by the rainfall. The writer of this paper asserts, as a fact that will not admit of contradiction, that the only difference between one section of the Union and another, above the thirty-eighth parallel, as a habitat for phthisis, is its relative dryness, no degree of elevation above the sea-level being of any advantage unless it possesses at the same time this characteristic. So far as pneumonia is concerned, Arkansas is said to be the seat of its greatest proportionate mortality. It is possible that this may have some connexion with the fact that it is pre-eminently distinguished by the number of rivers and smaller streams traversing it. Under this view, there may be a malarious influence regulating the preponderance of pneumonia in certain localities, as in Alabama, where, according to the writer, malaria is recognised as the special bane of this fair and fruitful State by all thoughtful medical men within her borders. The amount of mortality from pneumonia in other States is also said to be in some sort an index of the extent to which malaria is evolved. Certainly, it is pretty generally established in the minds of many southern practitioners that the malarious element impresses a marked fatality on pneumonia in the South.

Earnest efforts are being made to improve the standard of medical education in the College, and it is to be hoped that success will attend them. The multiplication of schools, apparently for no other object than the filling up of the ranks of the profession in all parts of the country, or for more personal motives, has undoubtedly exerted an influence towards deterioration, rather than in an opposite and commendable direction. Small towns, without facilities for instruction, have established medical institutions, and annually contributed their quota to the list of professional tyros. No general law has governed them as to fees, length of the didactic course, or systems of instruction. There has been no organised medical body which could control, in the different States, their duties or the mode in which they were to be performed. The American Medical Association became tired and disgusted with the irritating questions which their delegates brought with them into the general sessions, and determined that colleges should no longer be allowed to send representatives to it. The national body had no power indeed to regulate the internal affairs of these schools: it could recommend but could not enforce; and under this condition of things it acted wisely in washing its hands of all direct associa-

tion with them. Now, however, that the delinquencies of one or two of these institutions have lately become so conspicuous, the general sense of propriety of the more reliable schools of the country has been thoroughly aroused, and culminated in a Convention of delegates from those institutions at Philadelphia a few weeks since. The object was to consider all matters relating to reform in medical college work. Those appointed were endowed with plenary powers to determine final action on every question, but the proceedings of the Convention were declared, by resolution, not to be binding on the colleges represented, unless endorsed by their respective faculties. From the wording of the resolution adopted, an inference may be drawn as to the nature of the evils which are felt to be obstacles in the path of medical education. It determined, for instance, that the beneficiary system, which in some of the colleges of lower tone is employed to swell the aggregate of the classes, had the objectionable feature of discriminating between students who might be equally deserving, and that anything like a wholesale system of such reduction or remission of established fees, or any open solicitation of recipients of such favours, was to be regarded as in the highest degree reprehensible. It also declared that no two consecutive sets of lecture-tickets should be regarded as fulfilling the usual prerequisites of instruction for graduation, where the time between the beginning of the first course and the end of the second is less than fifteen months. It also determined that, inasmuch as a knowledge of the elementary branches of medicine should precede a study of the practical branches, all medical colleges should offer to medical students the option of three courses of lectures, in the hope of inducing them to prolong and systematise their studies; students who have attended two full courses of lectures on anatomy, chemistry, materia medica, and physiology, to be examined on any of these subjects at the end of their second course. During their third course such students may devote themselves to the lectures upon the theory and practice of medicine, surgery, obstetrics, and diseases of women and children, upon which subjects only they shall be examined at the final examination for their degree, their standing, however, to be determined by the results of both examinations. The medical profession of Michigan is so greatly disturbed at the present time on the subject of the introduction of homœopathy into the University of that State, through legislative enactment, that we are not surprised to find this Convention also adopting a resolution that the medical colleges ought not to recognise or hold fellowship with any school or its *alumni* in which irregular medicine is taught as a part of the curriculum. The last, but not least, important suggestion was that no degree in medicine should be conferred, under any circumstances, except after an examination in person of the candidate upon all the branches of medicine. The action of this College Convention will have an excellent moral effect, even if it has no binding force; and if it does not make the other schools more conscious of their shortcomings, it will at least open the eyes of the profession to the necessity of withholding from them its support and countenance, without which they will lose their sustenance and enduring vitality.

In addition to the meeting of the International Medical Congress at Philadelphia, in September, there will be held during the same month an International Congress of Ophthalmology at Chickering Hall, in New York. So far as I can learn, the following foreign gentlemen are expected to be present:—Mr. Bader, Mr. Critchett, Mr. R. Brudenell Carter, of London; Dr. Faval, of Paris; Dr. Argyll Robertson, of Edinburgh; Dr. Henry Wilson, of Dublin; Dr. Wolfe, of Glasgow; Dr. Mageri, of Bologna; Dr. Warlomont, of Brussels; Dr. Dör, of Berne; Dr. Floriano, of Parma; Dr. Nagel, of Tübingen; Dr. Estlander, of Helsingfors; and Dr. Hausen, of Copenhagen. I understand that a paper will be read on "Glaucoma, Conical Cornea," by Mr. Bader; one on "The Metric System in the Use of Spectacles," by Dr. Nagel; on "Extraction of Cataract without Rupture of the Capsule," by Dr. Floriano. These will be in addition to the papers already promised by American and Canadian authorities. The ophthalmologists have done wisely in selecting New York as their place of meeting this year. They will accomplish much more satisfactory work than if they had combined a visit to the Centennial Exposition with the labours of the Congress. My opinion, based on experience of all the conventions that have met at Philadelphia this year, leans strongly to the conviction that even the International Medical Congress, with all its magnetic elements of attraction, will be hampered with the irresistible whirlpool of the inevitable Exposition. Many of the delegates, however, have already been here on other errands, and may possibly be able to steer clear of the vortex. The Committee of Arrangement has just published the outlines of the papers presented by the gentlemen selected as reporters on questions assigned for discussion in the sections, but it is too lengthy for me to copy. I therefore content myself with briefly summarising the subjects cited, without adhering to the exact classification adopted. There will be discussions on typho-malarial fever, the identity of diphtheritic and pseudo-membranous croup, the influence of modern life in causing nervous diseases, the influence of high altitudes on the progress of phthisis, the microscopy of the blood, the excretory function of the liver, the pathological histology of cancer, the mechanism of joints, antiseptic surgery, the medical and surgical treatment of aneurism, the treatment of coxalgia, the causes and geographical distribution of calculous diseases, the variations in type and in prevalence of diseases of the skin in different countries of equal civilisation, eczema and psoriasis as local or constitutional diseases, the unity or duality of the virus of venereal sores, the mode of employment, etc., of constitutional remedies in syphilis, non-puerperal hæmorrhage of the womb, the mechanism of natural and artificial labour in narrow pelves, the treatment of fibroid tumours of the uterus, puerperal fever, the comparative value of caustics and astringents in conjunctival diseases, tumours of the optic nerve, orbital aneurismal disease and pulsating exophthalmia, the influence of the ciliary muscle on progressive myopia and posterior staphyloma, the importance of treatment of aural diseases in their early stages, the best means of testing the hearing, the value of artificial drum-membranes, the instruction of partially deaf children in schools, the disposal and utilisation of sewage and refuse, hospital construction and ventilation, quarantine with particular reference to cholera and yellow fever, the present condition of the evidence concerning disease-germs, the microscopical study of the brain, the responsibility of the insane for criminal acts, the simulation of insanity, and the best provision for the chronic insane. Assuredly an *omnium gatherum* of variety and sufficiency to gratify a thousand tastes and fancies, contributed by some of the ablest thinkers and writers of the country, accomplished teachers and professors, authors and shining lights in every department of medical science, many of whom have a European reputation. All these papers, with the discussions thereon, together with volunteer papers from various parts of the world, and the general addresses delivered at the morning sessions in each prominent department of medicine and surgery, will be collected and published in a handsome volume, which will be preserved as a memento by actual visitors, and sold at a moderate price to all others who may be desirous of obtaining it. Already delegates from abroad are beginning to arrive, many of whom will have received a cordial welcome at our hands before these lines have reached their destination.

Not long since a private conference and reception was held at the hall of the Young Men's Christian Association in this city to consider the subject of licensed prostitution, and to welcome the Rev. J. P. Gledstone and Henry J. Wilson, of England, a deputation from the "British, Continental, and General Federation for the Abolition of Government Regulation of Prostitution"—a system which they state has done such injury in Europe, and which is now threatening America. The gratuitous assumption was made that it is expected that the International Medical Congress, to be held in Philadelphia in September, will promulgate a recommendation to boards of health of all American cities to favour the introduction of the European system of licensed prostitution. Whatever course may be adopted by the Congress, I do not think that phase of the settlement of the question has been agitated in the preliminary programme of that body, and it seems probable that the fear of what may be done has been the moving cause of this moral crusade on the part of the gentlemen in question, rather than the knowledge of any impending Congressional action on the subject. The "Society for the Protection of Animals liable to Vivisection," of London, has also been endeavouring to make its objects known in this country by the diffusion of a pamphlet by Frances Power Cobbe (reprinted from the London *New Quarterly Magazine*) on the "Moral Aspects of Vivisection." These wedges will at least open a path for discussion and reflection: time alone will show what permanent results they will accomplish.

GENERAL CORRESPONDENCE.

A NEW TRUSS.

LETTER FROM MESSRS. ARNOLD AND SONS.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your journal of to-day's date, under the heading of "New Inventions," appears what is there designated a "new truss." We beg to state that neither principle nor general construction of the truss referred to is new. The ball and socket principle, with screw adjustment to fix the pad at any angle, was patented on August 28, 1874 (No. 2947), and we purchased the patent-right of said inventor. At the Leeds Exhibition last year one of the trusses referred to was exhibited by us. We enclose patent-specification for your inspection, in which you will find the ball and socket principle, which can be fixed at any angle, is claimed by the inventor. We much regret trespassing on your valuable space, but can scarcely allow the truss to be called a "new truss," the same having been anticipated at least two years ago.

We are, &c., ARNOLD AND SONS.

35 and 36, West Smithfield, September 2.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 31:—

Bayley, Reginald, Kingston-hill, Surrey.
Newton, Richard Arthur, Birmiogham.
Thomas, Hugh William, Birmingham.
Keer, John Cordy, Wickham Market.
Williams, Alfred Glover, Carmarthen.

The following gentlemen also on the same day passed their primary professional examination:—

Blackmore, Alfred, Owens College, Birmingham.
Butler, Samuel, Owens College, Birmingham.
Dumbleton, Edgar Hunt, Queen's College, Birmingham.
Wells, Alfred George, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ARMINGSON, THIRKILL, L.R.C.P. Lond., M.R.C.S. Eng.—Honorary Surgeon to the Grimsby and District Hospital, Great Grimsby.

FINLAY, DAVID W., B.A., M.D. and C.M. Glasg., M.R.C.P. Lond.—Physician to the Royal Hospital for Diseases of the Chest, City-road.

WADE, ARTHUR BAERDEN, L.K. & Q.C.I.—House-Surgeon to the Royal South Hants Infirmary, *vice* Theodore Cassan, resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—William H. Crnice to be Fleet-Surgeon in her Majesty's Fleet, with seniority of August 8, 1876.

WAR OFFICE—MEDICAL DEPARTMENT.—Deputy Surgeon-General James McGrigor Graot, M.D., to be Surgeon-General, *vice* Richard Coffin Elliot, C.B., retired upon half-pay; Surgeon-Major Charles Dodgson Madden to be Deputy Surgeon-General, *vice* James McGrigor Grant, M.D.; Surgeon James Creed, from half-pay, to be Surgeon. The first Christian name of Deputy Surgeon-General N. H. Stewart is Neil, and not Niel, as stated in the *Gazette* of August 11.

BIRTHS.

COLLINS.—On August 26, at 12, Osborne-villas, Windsor, the wife of W. Maunsell Collins, M.D., Scots Fusilier Guards, of a daughter.

EDIS.—On September 3, at 22, Wimpole-street, Cavendish-square, W., the wife of Arthur W. Edis, M.D., of a daughter.

GIRAUD.—On July 25, at Belgaum, East Indies, the wife of Byng T. Giraud, M.D., Surgeon-Major Army Medical Department, of a daughter.

HAYNE.—On September 3, at 1, Manor-place, Northfleet, the wife of Frederick Greaves Hayne, M.R.C.S.E., of a daughter.

MARSHALL.—On August 30, at Oak Bank, Lamberhurst, Kent, the wife of John J. Marshall, L.R.C.S.I., of a son.

MUMFORD.—On August 29, the wife of William Lugar Mumford, M.D., of a daughter.

POLLARD.—On September 1, at 11, Lamb's Conduit-street, Foundling, W.C., the wife of Clement Pollard, L.R.C.P. Edin., L.R.C.S. Edin., of a son.

REILLY.—On September 2, at Ameshury House, 68, Victoria-park-road, Hackney, the wife of Frederick James Reilly, M.R.C.S., L.R.C.P., of a son.

SMITH.—On September 2, at Burgess-hill, Sussex, the wife of William J. Smith, M.B. Lond., of a son.

MARRIAGES.

CROOKENDEN—SINCLAIR.—On August 30, at St. Thomas's, Dublin, Salusbury Davenport Crookenden, 65th Regiment, to Annie Dunscombe Eliza, only daughter of Edward Burrows Sinclair, M.D., of 45, Upper Sackville-street, Dublin.

EDE—RENDLE.—On August 31, at St. Mary Magdalen's, Paddington, Edward Ede, Esq., J.P., of Plymouth, to Sophia, eldest daughter of the late Edmund Rendle, M.D., of Plymouth.

ELLIOT—NOYES.—On August 31, at St. Luke's Church, Torquay, Henry Francis Elliot, L.R.C.P. Edin., of Ruyton, Salop, to Amy, fourth surviving daughter of the late Henry Crine Noyes, Esq., of Thruxton, Hants.

ILOTT—RING.—On August 31, at the parish church, Streatham, Herbert James Ilott, M.B., M.R.C.S., of Bromley, Kent, to Theresa Georgiana, of Manor-park-terrace, Streatham, third surviving daughter of the late Charles Ring, Esq., of Upper Tooting and Doctors'-commons.

MATTHEWS—FLINDERS.—On September 5, at Aberdovey, Merionethshire, John Matthews, M.D., of 30, Colebrooke-row, Islington, N., to Mary, second daughter of the late Samuel Ward Flinders, Lieut. R.N.

SANDARS—BRUCE.—On August 29, at Castle Connell Church, T. C. Sandars, Esq., to Marian Katherine, widow of the late Captain A. N. Bruce, and daughter of John Murray, Surgeon-General.

WIMBLE—BAILEY.—On August 31, at St. John's, Brixton, Charles Wimble, Esq., of Oak Lodge, Wood-vale, Lordship-lane, second son of Frederick Wimble, M.R.C.S.E., East Malling, Kent, to Clara Jane, second daughter of the late Thomas Bailey, of Brixton and Mauritius.

DEATHS.

CALDWELL, TOWNLEY GRAHAM, infant son of W. T. D. Caldwell, M.D., at Kennington-park, on September 3.

EGEN, THOMAS EDWARD, M.R.C.S., at his residence, Auckland House, Lower Norwood, on August 24, in his 86th year.

HAINWORTH, CAROLINE MARIA, wife of John Hainworth, F.R.C.S., of 138, Camden-road, N.W., at Welwyn, Herts, on August 17, aged 63.

HANSON, NEWTON, M.D., M.R.C.S.L., at Crescent Villa, Brentwood, on September 1, aged 76.

POTTS, MAUD MARGARET, third daughter of Walter Jeffery Potts, M.R.C.S.E., of Amersham, Bucks, on August 27, aged 8½.

ROE, ELIZA, widow of George Roe, M.D., of Ballyconnell House, co. Cavan, at Adelaide-road, Dublin, on September 2.

WATSON, JOHN, L.R.C.S. Edin., Inspector-General of Hospitals and Fleets, at Cullen, Banffshire, N.B., on August 30, aged 73.

WHITEMAN, R. HARLAND, L.R.C.P.E., at Hotham House, Putney, on August 29, aged 60.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

COTON-HILL INSTITUTION FOR THE INSANE.—Assistant Medical Officer. Candidates must be fully qualified. Applications, stating age, to Dr. Hewson.

KENT COUNTY LUNATIC ASYLUM, AT CHARTHAM, NEAR CANTERBURY.—Assistant Medical Officer and Dispenser. Candidates must be duly registered and possess a medical and surgical qualification. Applications, with testimonials, to the Committee of Visitors, on or before September 26.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, E.—Assistant-Physician. Candidates must be Members of the Royal College of Physicians, or pledged to become such within twelve months if elected. Applications, with testimonials, addressed to the Committee, on or before September 18.

SALISBURY INFIRMARY.—House-Surgeon and Apothecary. Each candidate must produce a certificate of being either a Fellow or Member of one of the Colleges of Surgeons of Great Britain or Ireland, as well as of possessing a qualification to practise medicine from some recognised body in the United Kingdom of Great Britain and Ireland. No married person is eligible for the appointment. Applications, with testimonials, to the Secretary, on or before September 21. Every candidate must be present on the day of election, Saturday, September 23, at one o'clock in the afternoon.

TOWNSHIP OF TOXTETH-PARK.—Resident Assistant Medical Officer. Candidates must be registered and possess a double qualification. Applications, stating age, qualifications, and previous experience, to J. Moulding, 15, High Park-street, Liverpool, marked "Assistant Medical Officer," on or before September 13.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.—Assistant to the House-Surgeon. One qualification preferred. Applications to the Chairman of the Medical Committee, on or before September 18.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Cuckfield Union.—Mr. Marshall Monckton has resigned the Fourth District; area 15,330; population 4796; salary £120 per annum.

Frome Union.—Mr. Joseph H. Wybrants has resigned the Kilmersdon District; area 9024; population 3680; salary £70 per annum.

Toxteth-park Township.—Mr. Roger Edwards has resigned the office of Assistant Medical Officer at the Workhouse; salary £100 per annum and allowances.

APPOINTMENTS.

Abingdon Union.—Henry E. Dixon, M.R.C.S. Eng., L.R.C.P. Lond., to the Workhouse, and the Second and Fourth Districts.

Aston Union.—Walter W. B. Sparrow, L.R.C.P. Edin., M.R.C.S. Eng., to the Aahted District.

Bristol Incorporation.—Charles W. Belfield, M.R.C.S. Eng., L.R.C.P. Edin., to the Third District.

Burton-upon-Trent Union.—David Woods, L.R.C.P. Lond., L.R.C.S.I., to the Lullington District.
Festiniog Union.—David W. Thomas, L.K. & Q.C.P. Dub., L.S.A. Lond., M.R.C.S. Eng., to the Festiniog District.
Isle of Wight Union.—Wm. Phelps, M.R.C.S. Eng., L.S.A., to the Yarmouth District.
Luton Union.—Charles F. Buchan, B.M. and M.C. Aber., to the Barton-in-Clay District.
Mere Union.—Alfred H. Watson, M.B. and C.M. Edin., to the Second District and the Workhouse.
Newton Abbot Union.—John A. Watson, L.R.C.P. Edin., L.R.C.S. Edin., to the Chudleigh District.
North Witchford Union.—Edward B. Stephens, L.F.P. & S. Glasg., L.S.A., to the Workhouse and the First District.
Oswestry Incorporation.—Henry F. Elliot, L.R.C.P. Edin., L.R.C.S. Edin., to the Ruyton District.
St. Thomas Union.—Wm. Conner, L.R.C.P. Edin., L.R.C.S.I., to the Dunsford and Tedburn St. Mary Districts.
Thingoe Union.—John M'Creery, L.R.C.S.I., L.K. & Q.C.P.I., to the Eighth District.
Worksop Union.—Charles Gowan, M.D. and C.M. Edin., L.R.C.S. Edin., to the Auston District.

Dr. Balls-Headley has been appointed Honorary Physician to the Alfred Hospital, Melbourne.

Professor Gustav Simon, of Heidelberg, died suddenly on the night of August 28.

Cremation in the United States.—Cremation has crossed the Atlantic. The body of a cotton-planter in South Carolina has been publicly burnt. The deceased had threatened his sons with disinheritance if they failed to carry out his wishes, and had even selected the spot for the ceremony.

A Worthy Example.—We are glad to observe that, appreciating the general objection to holding inquests at public-houses, the Woolwich Local Board of Health last week resolved that—"So far as this district is concerned, the coroner be offered the gratuitous use of the Town Hall or Board-room for the purpose of holding his court."

A Home of Rest for Nurses.—Mr. Alfred Wright, surgeon, of The Hawthorns, Finchley, announces that a lady offers a home free of expense for the next two or three months to nurses who are in want of change and rest, and who have not the means of obtaining them for themselves. Those who desire to avail themselves of this offer should address "C. M. W.," Headston House, Harrow, N.W.

A New Examining Board.—We have just heard that an Act has been passed by the Legislature of Victoria, entitled "an Act to enable the Council of the University of Melbourne to confer Degrees in Surgery." Perhaps the surgical corporations of the United Kingdom will like to take some action in this important matter, of which at present they may be ignorant.

Paris, and the Adulteration of Red Bordeaux Wines.—The adulteration of the red wines of Bordeaux having caused considerable uneasiness, the Government has ordered that in future the officers of the *octroi*, in Paris, are to take samples of all wines coming into the capital, for the purpose of analysis. At Lyons several persons are reported to have been poisoned by the colouring-matter in the wine—fuchsine being the chief ingredient used.

Removal of the Entire Uterus with Both Ovaries.—In the *Boston Medical Journal* for July 13, Dr. Presbrey reports an operation performed by Dr. Kimball, under the supposition of the existence of ovarian disease. It proved to be a case of fibro-cystic disease of the uterus; and the whole mass having been removed, it was found to consist "of twenty pounds of straw-coloured fluid, and five pounds of solid material, the latter consisting of the cyst, the fibrous growth, both ovaries, parts of the suspensory ligaments, and the uterus itself." The specimen is preserved in the Medical Museum of Harvard University. The operation was performed January 5, and at the date when the report terminates (March 1) the patient was about her house, and considered herself entirely well.

Removal of the Ileo-Cæcal Valve.—Dr. Wilson, writing to the *Boston Medical Journal* (July 6) from Florence, mentions an extraordinary case which he witnessed at the hospital at that city. A man sixty years of age was the subject of a tumour which could be protruded from the anus and returned with difficulty. Opinions were divided as to whether it was a polypus or a cancroid growth. An operation being decided upon, the tumour was removed by the galvano-caustic wire, applied as high upon what was supposed to be the pedicle as possible. The operation was followed by all the symptoms of shock, from which, however, the patient rallied in a few hours. The operators were thrown into consternation on finding that what had been removed was "the whole of the ileo-cæcal valve, with a portion of the ileum in a considerably hypertrophied state, measuring, in its invaginated, telescopic condition, ten centimetres." In a few days the bowels acted regularly and naturally, which they had not done for several months; and in a fortnight the patient insisted on returning to his native hills, where he now remains in perfect health. The preparation may be seen in the pathological museum of the Florence Hospital.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

C. E. Floyd Watkins.—We believe there are already more than enough.

Inquirer.—Yes; it is on record that in the year 1471, when Louis XI. wished to borrow a book from the Medical Faculty of Paris, he was required to deposit plate in pledge, and to get one of his nobles to join him in a guarantee for the safe return of the book.

Senex.—Dr. Radcliffe lived and died unmarried. He died from gout, of which he had long been a sufferer, on November 1, 1714.

Hygienus.—To Mr. Henry Cavendish is due the merit of having first decomposed water in 1766. Oxygen gas was discovered by Dr. Priestley on August 1, 1774; but the great experiment which decided the truth of the statement that pure water consists of nothing but oxygen and hydrogen was performed at Paris in 1790, by Fourcroy, Vauquelin, and Seguin. They kept the process in constant activity for 185 hours successively, alternately taking a few hours' rest in the laboratory.

P. F., Wiltshire.—
"The rivers die into offensive pools,
And, charged with putrid verdure, breathe a gross
And mortal nuisance into all the air."

A Student.—Hippocrates compared the body to a circle, in which we can find neither the beginning nor the end, and then remarked that the same observation will hold good respecting its diseases.

Lex.—The study of what is now called "comparative anatomy" appears to have been anterior, in point of date, to that of human anatomy, and was much cultivated by the earlier professors of the science. It is only within our own times that it has attained any considerable degree of accuracy or perfection. Haller has gone so far as to affirm that physiology has been more illustrated by comparative anatomy than by the dissection of the human body.

Ergo.—Dr. Holland, in his "Medical Notes and Reflections," expresses an opinion that the action of different degrees of atmospheric pressure in disturbing the bodily functions and general health is rather derived from the frequency of fluctuation than from any state long continued, either above or below the average standard; that of the two conditions, suddenly incurred in any extreme degree, the human frame is better capable of withstanding a rarefied than a condensed atmosphere; and that, in every case, the previous health and proneness to disorder in particular organs are greatly concerned in determining the results on the body. He supports some of these views from the fact that there are inhabited places in America, such as the town of Potosi, at an elevation of more than 13,000 feet, the inhabitants of which seem to have tolerable health.

W. Gascoigne N.—Catlin, in his letters on the North American Indians, writes on the mode of swimming among the Mandans, as well as among most of the other tribes. He states that it is quite different from that practised in those parts of the civilised world which he had visited, and alleges that much of the fatigue and strain upon the breast and spine are avoided, and the strength and breath preserved much longer than by the usual mode of natation. He observes:—"The Indian, instead of parting his hands simultaneously under the chin, and making the stroke outward in a horizontal direction, causing thereby a serious strain upon the chest, throws his body alternately upon the left and the right side, raising one arm entirely above the water, and reaching as far forwards as he can, to dip it, whilst the whole weight and force are spent upon the one that is passing under him, and, like a paddle, propelling him along. Whilst this arm is making a half-circle, and is being raised out of the water behind him, the opposite arm is describing a similar arch in the air over his head, to be dipped in the water as far as he can reach before him, with the hand turned under, forming a sort of bucket, to act most effectively as it passes in its turn underneath him. By this bold and powerful mode of swimming, which may want the grace that many would wish to see, I am quite sure, from the experience I have had, that much of the fatigue and strain upon the breast and spine are avoided, and that a man will preserve his strength and his breath much longer in this alternate and rolling motion than he can in the usual mode of swimming in the polished world."

Anglicanus.—Yes; Dryden's body lay in state at the College of Physicians for ten days.

Nemo.—Dr. William Musgrove was Secretary to the Royal Society of London in 1684. In 1691 he fixed his residence at Exeter, where he practised as a physician, and where he died in 1721. He wrote several medical works. His grandson, Dr. Samuel Musgrove, also practised as a physician in Exeter, and died there in 1782.

A Croaker.—It was Sydney Smith who remarked—"There is not one single source of human happiness against which there have not been uttered the most lugubrious predictions. There are always a set of worthy and moderately-gifted men who bawl out death and ruin upon every valuable change which the varying aspect of human affairs absolutely and imperiously requires. It would be extremely useful to make a collection of the hatred and abuse that all those changes have experienced which are now admitted to be marked improvements in our condition. Such a history might make folly a little more modest and suspicious of its decisions."

COMMUNICATIONS have been received from—

Mr. A. T. Norton, London; Messrs. Arnold and Sons, West Smithfield; Dr. Hussey, Oxford: The Secretary of the Apothecaries' Hall, London; Dr. R. Lawson, Scarborough; The Librarian of the Charing-cross Hospital; Mr. J. W. Howard, London; Mr. F. Stevens, Loudon; Mr. Lewis Fairley, London; Mr. T. P. Smith, Reigate; Mr. Hancocke Wathen, Fishguard, Pembrokeshire; Dr. Edward Sladе-King, Ilfracombe; Mr. Bevan Lewis, Wakefield, Yorkshire; Mr. John Chatto, London; Mr. George Brown, London.

BOOKS AND PAMPHLETS RECEIVED—

E. A. Parkes, M.D., Public Health—A. Jacobi, M.D., on Masturbation and Hysteria in Young Children—Ninth Annual Report of the Belgrave Hospital for Children—Bentley and Trimen, Medicinal Plants, part 12—Tilbury Fox, M.D., F.R.C.P., Atlas of Skin Diseases, part 12—Walter Balls-Headley, M.A., M.D., On Internal Tumours, their Characteristic Distinctions and Diagnosis—A. W. Smyth, M.D., The Collateral Circulation in Aneurism—Prof. Filippo Pacini, Di alcuni Preguidizi in Medicina Legale; sopra il Caso particolare di Morte apparente dell' Ultima Stadio del Colera Asiatico—Dr. Paul Gueterbnck, Die neueren Methoden der Wundbehandlung auf Statistischer grundlage.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—East Anglian Daily News—Boston Medical and Surgical Journal—Nature—Hardwicke's Science Gossip—Monthly Microscopical Journal—Veterinarian—Transactions of the Medical Society of the District of Columbia—Toronto Sanitary Journal—Monthly Homœopathic Review—Edinburgh Medical Journal—Philadelphia Medical Times—Richmond and Louisville Medical Journal—Practitioner—Melbourne Argus—Indian Medical Gazette—American Supplement to the Obstetrical Journal of Great Britain and Ireland.

APPOINTMENTS FOR THE WEEK.

September 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

11. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

12. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

13. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

14. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

15. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 2, 1876.

BIRTHS.

Births of Boys, 1162; Girls, 1167; Total, 2329.
Average of 10 corresponding years 1866-75, 2119·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	668	620	1282
Average of the ten years 1866-75	705·2	665·6	1370·8
Average corrected to increased population ...	...	...	1467
Deaths of people aged 80 and upwards ...	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	7	1	4	...	4	1	14
North	751729	1	2	7	...	11	1	3	...	36
Central ...	334369	...	1	1	...	5	...	1	...	11
East	639111	...	5	9	...	4	...	1	2	30
South	967692	7	1	17	...	8	...	3	3	43
Total	3254260	8	11	41	1	32	1	12	6	134

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·501 in.
Mean temperature	56·7°
Highest point of thermometer	70·5°
Lowest point of thermometer	45·1°
Mean dew-point temperature	49·1°
General direction of wind	S.W., W.S.W., & W.N.W.
Whole amount of rain in the week...	0·74 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 2, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Sept. 2.	Deaths Registered during the week ending Sept. 2.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2329	1288	70·5	45·1	56·7	13·72	0·74	1·88
Brighton	100632	42·7	48	32	68·8	48·1	57·3	14·06	1·37	3·48
Portsmouth ...	124867	27·8	74	74	66·5	48·3	57·0	13·89	0·74	1·88
Norwich	83430	11·2	56	55	68·0	45·5	55·1	12·81	0·69	1·75
Plymouth	72230	51·8	31	29	68·5	50·0	57·5	14·17	1·42	3·61
Bristol	199539	41·8	140	88	68·6	48·6	57·3	14·06	1·42	3·61
Wolverhampton ...	72519	21·4	53	42	66·5	42·4	54·3	12·39	1·57	3·99
Birmingham ...	371839	41·3	283	208	67·0	41·2	54·9	12·72	1·94	4·93
Leicester	113581	35·5	88	74	...	...	...	...	...	...
Nottingham ...	93627	46·9	76	46	66·0	43·0	54·1	12·28	0·83	2·11
Liverpool	521514	100·1	381	274	65·1	42·0	53·9	12·17	1·83	4·65
Manchester ...	357917	83·4	277	185	...	...	...	...	...	...
Salford	138425	26·8	124	76	63·9	40·0	52·7	11·50	1·92	4·88
Oldham	88609	19·0	43	49	...	...	...	...	...	...
Bradford	173723	24·1	134	88	64·8	45·6	54·0	12·22	1·11	2·82
Leeds	291580	13·5	203	146	66·0	46·0	55·0	12·78	0·95	2·41
Sheffield	274914	14·0	204	137	66·9	44·4	54·7	12·61	0·92	2·34
Hull	136933	37·7	133	90	65·0	45·0	53·7	12·06	0·91	2·31
Sunderland ...	108343	32·8	83	67	66·0	46·0	54·1	12·28	1·14	2·90
Newcastle-on-Tyne	139929	26·1	97	64	...	...	...	...	1·09	2·77
Edinburgh	215146	51·3	135	72	...	...	...	...	...	...
Glasgow	545141	90·4	358	220	64·8	42·9	53·8	12·12	2.48	6·30
Dublin	314666	31·3	163	148	69·1	41·3	55·9	13·28	0·21	0·61
Total of 23 Towns in United Kingdm	8028595	37·7	5516	3552	70·5	40·0	55·1	12·84	1·23	3·12

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·50 in. The highest reading was 29·83 in. on Monday morning, and the lowest 28·96 in. on Thursday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

THE STUDENTS' NUMBER

OF THE

MEDICAL TIMES AND GAZETTE

FOR

1876-77.

IN the present number of the *Medical Times and Gazette*, which is specially intended for Students of Medicine and those about to become students, we have adopted the plan which seems most useful to students. To this end we begin with the period of preparatory education, passing thence to the selection of a school for the first year's studies, thence on to the second year and its appropriate studies, culminating in the first professional examination. With the third year's studies comes the second and in some instances final examination, which in the case of other examining bodies only comes at the end of the fourth year. In our remarks, we shall have in mind for the most part the English Examining Bodies, but those of Scotland and Ireland shall have due attention.

I.—PRELIMINARY EDUCATION.

By the rules and regulations of the General Medical Council, every Student of Medicine must be registered, and before being registered he must produce a certificate of having passed a competent examination in preliminary education. Certificates of many bodies are accepted by the Council, but the examining bodies which give the qualification to practise vary considerably in their requirements. Thus, the authorities of the University of Oxford simply say that each candidate for their degree must have graduated in Arts—that is, attained at least to the rank of B.A. The University of London insists on all men who want to enrol themselves as candidates for their degrees passing the somewhat stiff matriculation examination of the University. Though almost all the other examining bodies have preliminary examinations of their own, nevertheless the certificate of having passed one of them is in almost every case accepted as evidence of a due knowledge of the subjects of preliminary education, so that practically a student may pass when and where he chooses. Nevertheless, the great majority of students select the body whose final qualification they seek; hence it comes that in England the great bulk of students select the preliminary examination of the Royal College of Surgeons or of the Apothecaries' Society. The former is conducted by the College of Preceptors, the latter by selected examiners. As the preliminary examination of the Royal College of Surgeons of England is that most largely frequented, and is a very fair sample of the several requirements from gentlemen desiring to enter the profession, we give their programme, which is as follows:—

For the year 1876, and until further notice, the following are the compulsory subjects of examination—

1. Writing from dictation.
2. English Grammar.
3. Writing a short English Composition, such as a description of a place, an account of some useful or natural product, or the like.
4. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of vulgar fractions and of decimals.
5. Questions on the Geography of Europe, and particularly of the British Isles.
6. Questions on the outlines of English History; that is, the succession of the sovereigns, and the leading events of each reign.
7. Mathematics. Euclid, Books I. and II., or the subjects thereof. Algebra, to simple equations inclusive.
8. Translation of a passage from the second book of "Cæsar's Commentaries—De Bello Gallico."

PART II.—OPTIONAL SUBJECTS.

Papers will also be set on the following six subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—

1. Translation of a passage from the first book of the Anabasis of Xenophon.
2. Translation of a passage from X. B. Saintine's "Picciola."
3. Translation of a passage from Schiller's "Wilhelm Tell."

(Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional.)

4. Mechanics. The questions will be chiefly of an elementary character.
5. Chemistry. The questions will be on the elementary facts of Chemistry.
6. Botany and Zoology. The questions will be on the classification of plants and animals.

(The quality of the handwriting and the spelling will be taken into account.)

N.B.—Each candidate (who has not at a previous examination paid the amount) is required to pay a fee of £2 on the morning of the first day of the examination prior to his admission thereto. The exact dates of the examinations will be duly advertised, when fixed, in the journals. Candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of the examination.

Note.—A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I., to pass in Greek and in French or German, and in one, at his option, of the remaining subjects in Part II.

SYLLABUS OF SUBJECTS FOR EXAMINATION, 1877.

1. *The English Language.*—The leading features of its history; its structure and grammar; English composition.

[N.B.—The Examiners direct the attention of candidates and of their teachers to the large proportion of failures in the English examination. They recommend the study of one of the following grammars:—Angus's, Adams's, William Smith's, Mason's, and, in addition, Trench's "English Past and Present."]

2. *The Latin Language.*—January Examination: Cæsar, De Bello Gallico, Book V. April Examination: Cicero, De

Amicitiâ. September Examination: Horace, Odes, Book III. Re-translation of easy sentences. Grammatical questions will be introduced into the Latin paper, and each candidate will be expected to give satisfactory answers to these.

3. *Mathematics.*—The ordinary rules of Arithmetic; Vulgar and Decimal Fractions; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Simple Equations; the First Two Books of Euclid.

4. (*a.*) *Greek:* Xenophon, Anabasis, Books I. and II.; grammatical questions. (*b.*) *French:* Molière, L'Avare; translation from English into French; grammatical questions. (*c.*) *German:* Fouqué, Undine; translation from English into German; grammatical questions. (*d.*) *Natural Philosophy:* Mechanics; Hydrostatics and Pneumatics.

[N.B.—The books recommended for study in this subject are Smith's "Statics," and Smith's "Hydrostatics," or Newth's "Natural Philosophy."]

Certificates in Arts granted by any of the bodies whose certificate is recognised by the Medical Council will be accepted from candidates who present themselves at the professional examination at the Hall, as equivalent to their having passed the above examination.

The following is an outline of the subjects for the Matriculation Examination of the University of London:—

Candidates are examined in the following subjects:—

Mathematics.—Arithmetic: The ordinary rules of Arithmetic: Vulgar and Decimal Fractions; Extraction of the Square Root. Algebra: Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion; Arithmetical and Geometrical Progression; Simple Equations. Geometry: The First Four Books of Euclid, or the subjects thereof.

Natural Philosophy.(a)—Mechanics: Composition and Resolution of Statical Forces; Simple Machines (Mechanical Powers) —Ratio of the Power to the Weight in each; Centre of Gravity; General Laws of Motion, with the chief experiments by which they may be illustrated; Law of the Motion of Falling Bodies. Hydrostatics, Hydraulics, and Pneumatics: Pressure of Liquids and Gases, its equal diffusion and variation with the depth; Specific Gravity, and modes of determining it; the Barometer, the Syphon, the Common Pump and Forcing Pump, and the Air Pump. Optics: Laws of Reflection and Refraction; formation of Images by Simple Lenses Heat: its Sources; Expansion; Thermometers—relations between different Scales in common use; difference between Temperature and Quantity of Heat; Specific and Latent Heat—Calometers; Liquefaction; Ebullition; Evaporation; Conduction; Convection; Radiation.

Chemistry.—Chemistry of the Non-Metallic Elements, including their compounds as enumerated below, their chief physical and chemical characters, their preparation, and their characteristic tests. Oxygen, Hydrogen, Carbon, Nitrogen; Chlorine, Bromine, Iodine, Fluorine; Sulphur, Phosphorus, Silicon. Combining Proportions by weight and by volume; General Nature of Acids, Bases, and Salts; Symbols and Nomenclature. The Atmosphere—its constitution; effects of Animal and Vegetable Life upon its composition. Combustion; structure and properties of Flame; nature and composition of ordinary Fuel. Water; chemical peculiarities of Natural Waters, such as rain-water, river-water, spring-water, sea-water. Carbonic Acid; Carbonic Oxide; Oxides and Acids of Nitrogen; Ammonia; Olefiant Gas; Marsh Gas; Sulphurous and Sulphuric Acids, Sulphuretted Hydrogen. Hydrochloric Acid, Phosphoric Acid and Phosphuretted Hydrogen; Silica.

Classics.—The Greek and Latin Languages.(b) The Latin subjects for 1877 and 1878 are—For January, 1877—*Virgil:* Georgics, Book IV., and Æneid, Book IV. For June, 1877—*Horace:* Odes, Books III. and IV. For January, 1878—*Livy:* Book II. For June, 1878—*Ovid:* Epistolæ ex Ponto, Book II. The Greek subjects for 1877 and 1878 are—For January, 1877—*Xenophon:* Hellenics, Book I. For June, 1877—*Homer:* Odyssey, Book XII. For January, 1878—*Homer:* Iliad, Book X. For June, 1878—*Xenophon:* Hellenics, Book ii. The papers in Greek and Latin shall contain passages to be translated into English, with questions in grammar, and with questions in History and Geography arising out of the subjects of the books selected. Short and easy passages shall also be set for translation from other books not so selected. A separate paper shall be set containing questions in Latin Grammar, with simple and easy sentences of English to be translated into Latin. Special stress is laid on accuracy in the answers to the questions in Greek and Latin Grammar.

The English Language.—Orthography, Writing from Dictation, the Grammatical Structure of the Language.

Outlines of English History and Modern Geography.—History of England to the end of the seventeenth century, with questions in Modern Geography.

The French or the German Language, at the option of the candidate.

The papers in French and German shall contain passages for translation into English, and questions in grammar, limited (except when German is taken as an alternative for Greek) to the Accidence.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the following subjects, according to the details specified under the several heads:—1, Latin; 2, any two of the following languages:—Greek, French, and German; 3, the English Language, English History, and Modern Geography; 4, Mathematics; 5, Natural Philosophy; 6, Chemistry.

(a) The questions in Natural Philosophy will be of a strictly elementary character.

(b) Candidates may substitute German for Greek.

Thus far we have dealt with the mere rules and regulations of the various bodies, but it behoves us also to give the young candidates some advice on the subject. There can be no doubt of the exceeding great value of these examinations in the upholding of the dignity of our profession. Nothing has done so much good in raising the general status of medical men as the institution and general enforcement of these. It becomes everyone who desires to enter our profession, and to fight his way to its highest posts of honour, to do everything he can to maintain this status or to raise it even to a higher pitch.

To those who can by any possibility afford it, we should say, Take a degree in Arts before entering upon the study of Medicine. The training acquired at a University is simply invaluable, and the possession of a degree in Arts gives a man a start which can be obtained in no other way. It at once gives him the chances of those higher appointments so eagerly sought for, and gives him a stamp through life which is at once acknowledged and respected.

Should this be impracticable, we should recommend as the next best qualification the Matriculation Examination of the University of London. This, too, is of great value, and is acknowledged by students among themselves, to say nothing of the outer world, as the mark of superior educational acquirements. It is notorious, too, that the medical graduates of this University, who constitute its real glory, number among their ranks the greater part of the most distinguished men of the day. Moreover, the possession of such a professional qualification as is given by the University of London is looked upon as the stamp and seal of superior professional acquirements. For all these and other reasons which could be adduced, we would strongly urge intending students of Medicine to pass their preliminary examination here; for, should they do so, they have the option at any future time of going on to take their degree in the University; but, according to the rules of the University, no part of medical education counts prior to the passing of their Matriculation Examination. For this reason, therefore, a student must pass this examination at the very beginning of his medical career. He cannot turn back in the middle of his studies; his chance is gone.

By the note above it will be seen how little difference there is, as regards preliminary education, between the requirements demanded by the Royal College of Surgeons of those who look forward to the qualification of membership, and those who aspire to the fellowship. As the fellowship of this body is looked upon as giving the same stamp to a surgeon as the M.D. of London does to a physician, we would earnestly urge all who can attain to it to take up the additional preliminary subjects required for this qualification. For should they at any future time desire to become Fellows of the College

by examination, they will, in all probability, find that it is hard indeed to begin again the studies requisite for the passing of this preliminary examination.

APPRENTICESHIP.

In former days the mode of access to the profession was by apprenticeship to some regular practitioner, and this was till recently the rule at Apothecaries' Hall, but practically it has been almost completely departed from. Then the plan was for the young apprentice to enter his master's dispensary or surgery, where he would learn to compound medicines, make a pill, and spread a plaster; by-and-by coming in due course to see and prescribe for patients of various ranks, and suffering from various maladies. With a good master, no course of instruction could be better, and with it men were apt to make better practical practitioners than now, especially as regards the prescribing of medicines and their compounding. But with a careless master the system only tended to perpetuate routine practice, and to produce careless, ignorant, and self-conceited practitioners. Undoubtedly the plan rendered students, when they came to the hospital—which they did towards the close of their apprenticeship—much more at home and much more able to appreciate what they saw and heard around them. The system is not yet wholly forgotten, and, with the proviso above mentioned, we heartily commend it. In a modified form it may still be usefully intercalated into the modern system of medical education. The number of years prescribed for this education is four, whilst most hospital courses are so arranged as to be got over in three, leaving a year unoccupied by class work. This year may be spent with advantage, either before entering the medical school, or after having finished the course. Of the latter we shall speak hereafter, but the young student may spend it well, before joining a hospital, in working in the laboratory of a general practitioner, learning something of Chemistry and Pharmacy, and thus preparing himself to enter the school with advantage. This gives him a decided pull over those who come straight to the hospital from a public school. Moreover, this is to be said: it is a good thing for a young man to feel his own weight, his responsibilities and duties, before entering a medical school. The change is so sudden and so violent, from the strict discipline of a school, to the almost unrestricted liberty of the medical student, that sometimes young lads lose their heads for awhile; but the almost uniform good behaviour of the medical students of the present day has a decidedly beneficial effect upon the newly entered candidates for medical qualification.

At all events, we would strongly urge on all intending students to acquire, before entering a medical school, some knowledge of Chemistry and Physics, and, if possible, an acquaintance with Human Osteology, commonly known as "the bones."

REGISTRATION.

As soon as the student has passed his preliminary examination, he ought to register his certificate at the office of the General Medical Council, 315, Oxford-street, W., or at that of one of the Branch Registrars, which will save him all further trouble as regards preliminary education. This is necessary, if the student desires to spend the first year with a general practitioner or at a country hospital, so as to make the time thus spent count. But when the student comes to enter a medical school, he must register the actual commencement of his hospital studies. In London the plan is this: On entering a school the student receives certain class-tickets or other certificate of having joined the school; with these in his hands he goes to the College of Surgeons, and is there registered as a Student of the College. This is necessary for admission to the examinations of the College as far as metropolitan students are concerned. The same kind of thing is done at Apothecaries' Hall; but it is now common for the return required by the General Medical Council to be sent in by the school authorities. *All registration must be made within fifteen days of the beginning of the session or other mode of study or the year will be lost.*

II.—PRELIMINARY SCIENTIFIC EDUCATION.

Speaking of general education, we have incidentally referred to the importance of certain scientific acquirements. These, though not absolutely essential to some knowledge of Medicine, are so important as to be held in the first rank of subsidiary subjects. Thus, by the rules of the College of Surgeons, a student may be examined on the following subjects, but the examination is not compulsory: these are—Mechanics, Chemistry, Botany, and Zoology. Of these, the first three are of most importance to the student, and every effort ought to be made to acquire a knowledge of them sufficient at least to pass this examination. The University of London, however, has instituted an examination known as the Preliminary Scientific, dealing with these and allied subjects. This examination is a very powerful test of a man's acquirements, and many break down under it. We strongly counsel all to pass it, if possible, before entering on their purely medical studies. It is sad to see the loss of time implied by a man being forced to devote his attention to purely scientific subjects when he ought to be attending to others which belong to later periods of his career, and which he will have to work up under like unfavourable auspices. The following are the regulations relating to this examination in the University of London:—

MECHANICAL PHILOSOPHY.

[The subjects marked with an asterisk are to be treated independently of mathematical symbols, or only by simple geometrical methods.]

**Statics.*—Elementary statics, including the resolution of forces, the mechanical powers, and the centre of gravity.

**Dynamics.*—Elementary dynamics, including the laws of motion, and propositions required for determining the rectilinear motion of a body, whether free or along inclined planes.

**Hydrostatics, Hydraulics, and Pneumatics.*—Elementary propositions respecting the nature, transmission, and intensity of fluid pressure, and the conditions of equilibrium of floating bodies; specific gravity, and modes of determining it; the common pump and forcing-pump; the hydrostatic press; the barometer; the air-pump; the steam-engine.

**Optics.*—Laws of reflection and refraction; reflection at plain mirrors; reflexion at spherical mirrors, and refraction through lenses, the incident pencils being direct. Description of the eye. Simple instruments; camera obscura and simple telescope.

NATURAL PHILOSOPHY.

Heat.—Sources of heat; conduction—convection. Effects of heat; expansion generally—of water—of gases and vapours; liquefaction; vaporisation; latent heat; expansive force of steam; dew-point; gases and vapours compared. Specific heat. Thermometers; pyrometers. Heat in the radiant state.

Electricity.—Sources of electricity. Static electricity; dual character—insulation—induction—specific inductive capacity—equivalent antithetic states—disruptive discharge—convection; electroscopes—Leyden jar, etc. Dynamic electricity; conduction—the electric current—derived currents—induction of currents; voltaic pile and other voltaic arrangements. Thermo-electricity; electro-thermometer.

Magnetism.—Magnets, the earth, etc.; induction—communication—retention—magnetic relations of iron, steel, etc. Electro-magnetism—as in the spark—in conducting media—in soft iron; magneto-electricity; principle of electro-magnetic and magneto-electric machines. Terrestrial magnetism.

INORGANIC CHEMISTRY.

Matter; simple and compound. Elementary bodies classed; metallic and non-metallic bodies. Chemical combination and mechanical mixture; solution. Outlines of crystallography; isomorphism; dimorphism; allotropic conditions of matter; chemical affinity; laws of combination by weight and by volume, as deduced from the history of the individual elements; equivalent numbers; equivalent volumes; symbolical notation, including questions on the unitary system; formulæ; nomenclature. Chemical actions produced under the influence of heat; nature of combustion; structure and properties of flame; principles of illumination; chemical action of light; photography. Oxygen; ozone. Hydrogen; water. Nitrogen; chemical constitution of the atmosphere; diffusion of gases; the oxides of nitrogen—nitric acid, ammonia. Chlorine, bromine, and iodine—their compounds with oxygen and hydrogen; theory of bleaching. Fluorine and hydrofluoric acid. Sulphur; sulphurous acid; manufacture and chemical applications of sulphuric acid; other oxygen compounds of sulphur; sulphuretted hydrogen. Phosphorus; oxygen and hydrogen compounds of phosphorus; theory of acids; monobasic, dibasic, and tribasic acids. Carbon; carbonic oxide and carbonic acid; the principal hydrogen compounds of carbon; manufacture of coal gas. Silicon and boron—their compounds with the elements previously enumerated. Metals; characters of metals as a class; metallurgical processes; alloys; classification of the metals. Potassium; nitre; gun-

* *

powder; theory of the action of gunpowder. Sodium; manufacture of carbonate of soda. Barium; strontium; calcium; mortars; cements. Magnesium; aluminum; glass; porcelain. Manganese; iron; composition and properties of cast iron, wrought iron, and steel; chromium. Cobalt; nickel; zinc; cadmium. Lead; manufacture of white lead. Copper; mercury; bismuth; tin; arsenic; antimony. Silver; gold; platinum. Principal compounds of the metals with the non-metallic elements; theory of salts. Principles of mineral analysis. Principles of electro-chemistry.

BOTANY AND VEGETABLE PHYSIOLOGY.(a)

Elementary tissues and chief chemical constituents of plants. Respiration, endosmose, ascent of sap, fixation of carbon. Cell-formation and cell-contents; starch, gum, oil, sugar, wax, alkaloids. General characters and functions of root, stem (wood and bark), leaf, stamen, pistil, fruit, seed. Fertilisation of cryptogams and phænogams; germination; propagation by division. Phyllotaxis, metamorphosis, vernation, æstivation, stipulation, placentation. Classification of plants into phænogams and cryptogams—cellular and vascular;—acotyledons, monocotyledons, and dicotyledons (angiosperms and gymnosperms); endogens and exogens. Distinctive characters of the principal British natural orders, viz.:—*Dicotyledons*, Ranunculaceæ, Cruciferæ, Caryophyllæ, Leguminosæ, Rosaceæ, Umbelliferæ, Compositæ, Scrophulariaceæ, Labiatæ, Amentaceæ; *Monocotyledons*, Orchideæ, Liliaceæ, Cyperaceæ, Gramineæ; *Acotyledons*, Filices, Musci, Lichens, Algæ, Fungi. Demonstration of the botanical characters of plants upon large and conspicuous specimens (provided by the examiners). Derivation and meaning of the following terms, and demonstration of their application on specimens (provided by the examiners):—Thalamiflora, calyciflora, corolliflora: hypogynous, perigynous, epigynous: monandrous, diandrous, etc.: individual, variety, species, genus, order, class, kingdom.

ZOOLOGY.

The differences between animals and plants. General structure and chemical constitution of the animal body. Distinctive characters and chief peculiarities of the following groups of animals:—Mammalia, Aves, Reptilia, Amphibia, Pisces, Cephalopoda, Gasteropoda, Pteropoda, Lamellibranchiata, Brachiopoda, Polyzoa, Tunicata.—Insecta, Myriapoda, Arachnida, Crustacea, Annelida, Vermes (Turbellaria, Trematoda, Taeniada, Acanthocephala, Nematoidea, Gordiacea), Rotifera.—Echinodermata.—Anthozoa or Actinozoa, Hydrozoa.—Infusoria.—Spongiada, Rhizopoda, Gregarinida.

Reference of specimens (provided by the examiners) to any of the groups named above.

Candidates shall not be approved by the examiners unless they have shown a competent knowledge in the fundamental principles of—1. Mathematics; 2. Mechanical and Natural Philosophy; 3. Chemistry; 4. Biology, including Botany and Vegetable Physiology and Zoology.

PRACTICAL CHEMISTRY.

Including qualitative analysis of inorganic acids and bases in solutions containing each other.

III.—PROFESSIONAL EDUCATION.

THE COURSES NECESSARY FOR QUALIFICATION.

The object of medical education may be said, though inaccurately, to be twofold. The final end is, of course, to enable a man to practise his profession with advantage to himself and safety to the public. But the only criterion or test of this capability available to the public is the *testamur*, certificate, or diploma of some responsible body, which is accepted and registered by the General Medical Council. These bodies are somewhat numerous, and their requirements very diversified; consequently, the young student must take care, provided he wants a given diploma, to make his course of instruction correspond with that required by the body whence he desires his qualification. Moreover, it often happens that after a time a man may, for certain reasons, desire the diploma of another body besides that he originally contemplated; and for this reason alone, were it for no other, a wide curriculum is most desirable. In strict logic, therefore, these rules should be here given, and we shall try to indicate them as briefly and clearly as possible.

(A.) REGULATIONS OF BODIES GRANTING THE DEGREE OF DOCTOR OF MEDICINE.

1. UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

Every student in Medicine is required to pass all the examinations for the degree of B.M., and to reckon the time of his medical study from the final examination for Arts.

1. Candidates for the degree of B.M. are required to pass two examinations, each of which is held yearly in full Michaelmas Term, usually at the end of November, due notice being given, in the usual manner, by the Regius Professor of Medicine.

The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine. The subjects of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), the Materia Medica, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and General Hygiene. Every candidate at this second examination is to be examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus; or in one of those four, and in some more modern author approved by the Regius Professor, as Morgagni, Sydenham, or Boerhaave.

Before a candidate is admitted to the first of these two examinations, he must have spent two years in professional studies after having passed the examinations required for the degree of B.A., unless he was placed in the first or second class in the School of Natural Science, in which case, if he received from the public examiners a special certificate of his attainments in Mechanical Philosophy, Chemistry, or Botany, he may be admitted to this examination at once, and need not then be examined again in any science specified in such certificate.

Before a candidate is admitted to the second examination, he must have completed sixteen terms from the date of the same *testamur* and two years from the date of his *testamur* in the first medical examination, and must deliver to the Regius Professor satisfactory certificates of his attendance at some first-class hospital.

No one from another University can be incorporated as a Graduate in Medicine without passing these two examinations, as well as having previously passed all examinations for the B.A. degree at his own University.

2. A Bachelor of Medicine wishing to proceed to the degree of Doctor is required to read publicly within the precincts of the Schools, in the presence of the Regius Professor, a dissertation composed by himself on some medical subject approved by the Professor, and to deliver to him a copy of it.

2. UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.—Before a student can become a Bachelor of Medicine he must have resided nine terms (three academical years) in the University, and have graduated in Arts, or have passed the Previous Examination.

Five years of medical study are required, unless the student has graduated with honours as Bachelor of Arts, in which case four years of medical study are deemed sufficient.

There are three examinations for M.B.

The first examination is in—1. Chemistry and other branches of Physics; 2. Botany. Before presenting himself for it the student must have attended lectures on Chemistry, including manipulations, and on Botany.

The second examination is in—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacology. The student must have completed two years of medical study; and must also produce certificates of attendance on lectures on the Elements of Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy; and of one year's hospital practice, and of one season's dissections.

The third examination is in—1. Pathology and Practice of Physic; 2. Clinical Medicine; 3. Medical Jurisprudence, Surgery, and Midwifery. The candidate must have completed the course of medical study, and must produce certificates of attendance on one course of lectures on each of the following subjects:—Pathological Anatomy, Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and Midwifery; and of having attended hospital practice during three years, and of having been clinical clerk for six months at a recognised hospital, or of having had special charge of hospital, dispensary, or union patients under a qualified medical practitioner.

After the third examination an Act has to be kept, which consists in reading an original thesis, followed by a *viva voce* examination on the subject of the thesis, as well as on other subjects of the Faculty.

The Degree of Doctor of Medicine may be taken three years after M.B. An Act has to be kept, with *viva voce* examinations, and an essay has to be written extempore. A Master of Arts of four years' standing can proceed direct to M.D. provided he produces the same certificates and passes the same examinations as for M.B.

Degree of Master in Surgery.—The candidate must have

(a) Candidates for this and other botanical examinations are expected to bring with them a pocket-lens or simple microscope of two powers, and also a sharp penknife.

passed all the examinations for the degree of M.B., and must produce certificates of having attended a second course of lectures on Human Anatomy, one course of lectures on the Principles and Practice of Surgery, one year's clinical surgical lectures, ten cases of midwifery, a second season of dissections, three years' surgical practice of a recognised hospital, and of having been House-Surgeon or Dresser for six months. The subjects of the examination are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery; and 4. Midwifery.

The examinations are partly in writing and partly *viva voce* in the dissecting-room and in the hospital. They take place in the Michaelmas and Easter Terms.

3. UNIVERSITY OF LONDON.

This University grants degrees both in Medicine and Surgery, and certificates in subjects relating to Public Health. Those available for young students are the Bachelorships of Medicine and Surgery.

Every candidate for the degree of Bachelor of Medicine shall be required—

1. To have passed the matriculation examination in this University (unless he has taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras, and Latin was one of the subjects in which he passed).

2. To have passed the preliminary scientific examination, which is in Mechanical and Natural Philosophy, Inorganic Chemistry, Practical Chemistry, Botany and Vegetable Physiology, and Zoology. (Candidates for the degree of M.B. are strongly recommended by the Senate to pass the preliminary scientific examination before commencing their regular medical studies.)

3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, at one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom.

4. To pass two examinations in Medicine.

FIRST M.B. EXAMINATION.

No candidate shall be admitted to the first M.B. examination unless he have passed the preliminary scientific examination at least one year previously, (a) and have produced certificates to the following effect:—

1. Of having completed his nineteenth year.

2. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts in one of the before-named universities, been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the subjects in the following list:—

Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine.

3. Of having, subsequently to having passed the matriculation examination or taken a degree in Arts, dissected during two winter sessions.

4. Of having, subsequently to having passed the matriculation examination or taken a degree in Arts, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, etc.

5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines.

The fee for this examination shall be five pounds.

Candidates shall be examined in the following subjects:—Anatomy, Physiology, Materia Medica and Pharmaceutical Chemistry, Organic Chemistry.

Law of substitution; compound radicals; homologous series; principles of ultimate analysis. The chemical history of the cyanogen group; cyanogen; hydrocyanic acid; cyanic acid and urea; sulphocyanic acid; uric acid. Amylaceous and saccharine substances; fermentation; alcohol, wine, beer, bread, etc. Homologues of alcohol; ethers, simple and mixed; oxidation of alcohol; aldehyd and acetic acid and their homologues. Glycol and oxalic acid and their homologues. Glycerine; fatty and oily bodies; saponification. Principal vegetable acids. Ammonia and its derivatives; ammonium and ammoniacal salts. The chief natural organic bases. The chief constituents of the vegetable organism; cellulose; vegetable fibrin; albumin, casein, glutin, etc. The chief constituents of the animal organism; animal fibrin, albumin, casein, gelatin; blood, milk, bile, urine, etc. Decay, putrefaction; destructive distillation. The chemical principles of the processes of nutrition and respiration in plants and animals.

SECOND M.B. EXAMINATION.

No candidate shall be admitted to the second M.B. examination within two academical years of the time of his passing the first examination, nor unless he have produced certificates to the following effect:—

1. Of having passed the first M.B. examination.

2. Of having, subsequently to having passed the first M.B. examination, attended a course of lectures on each of two of the subjects comprehended in the foregoing list, and for which the candidate had not presented certificates at the first M.B. examination.

3. Of having conducted at least twenty labours. (Certificates on this subject will be received from any legally qualified practitioner in Medicine.)

4. Of having attended the surgical practice of a recognised hospital or hospitals during two years, with clinical instruction on and lectures on Clinical Surgery.

5. Of having attended the medical practice of a recognised hospital or hospitals during two years, with clinical instruction on and lectures on Clinical Medicine. N.B.—The student's attendance on the surgical and on the medical hospital practice may commence at any date after his passing the preliminary scientific examination, and may be comprised either within the same year or within different years; provided that in every case his attendance on surgical and medical hospital practice be continued for at least eighteen months subsequently to his passing the first M.B. examination. Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, union, during six months.

7. Of having acquired proficiency in vaccination. (Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.)

The candidate shall also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended.

The fee for this examination shall be five pounds.

Candidates shall be examined in the following subjects:—General Pathology, General Therapeutics and Hygiene; Surgery, Medicine, Obstetric Medicine, Forensic Medicine.

The examinations shall include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry.

BACHELOR OF SURGERY.

No candidate shall be admitted to the examination for the degree of Bachelor of Surgery unless he have produced certificates to the following effect:—

1. Of having passed the second examination for the degree of Bachelor of Medicine in this University.

2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject.

Candidates are examined on Surgical Anatomy and surgical operations, by printed papers; examination, and report on cases, of surgical patients; performance of surgical operations upon the dead subject; application of surgical apparatus; *viva voce* interrogation.

MASTER IN SURGERY.

The examination for the degree of Master in Surgery shall take place once in each year, and shall commence on the fourth Monday in November.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—

1. Of having taken the degree of Bachelor of Surgery (b) in this University.

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the preliminary scientific examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the preliminary scientific examination and the first M.B. examination in the same year, if they so prefer.

(b) Candidates who have obtained the degree of Bachelor of Medicine

2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University—*a*. To Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University. *b*. Or to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University; and of having been engaged during three years in the practice of his profession. *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. (One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. examination have been placed in the first division.)

3. Of moral character, signed by two persons of respectability.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

DOCTOR OF MEDICINE.

The examination for the degree of Doctor of Medicine shall take place once in each year, and shall commence on the fourth Monday in November.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—

1. Of having passed the second examination for the degree of Bachelor of Medicine in this University.

2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University—*a*. To Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University. *b*. Or to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University; and of having been engaged during three years in the practice of his profession. *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. (One year of attendance on Clinical or Practical Medicine, or two years of practice, will be dispensed with in the case of those candidates who at the second M.B. examination have been placed in the first division.)

3. Of moral character, signed by two persons of respectability.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

EXAMINATION IN SUBJECTS RELATING TO PUBLIC HEALTH.

A special examination shall be held once in every year in subjects relating to Public Health, and shall commence on the second Monday in December.

No candidate shall be admitted to this examination unless he shall have passed the second examination for the degree of Bachelor of Medicine in this University at least one year previously; nor unless he shall have given notice of his intention to the Registrar at least two calendar months before the commencement of the examination.

Candidates shall be examined in the following subjects:—Chemistry and Microscopy, in relation to the examination of air, water, and food; Meteorology and Geology, as far as they bear on the duties of Health Officers, viz.:—General knowledge of meteorological conditions; reading and correction of instruments. General knowledge of soils; their conformation and chemical composition.

Vital Statistics, in reference to the methods employed for determining the health of a community; birth-rate; death-rate; disease-rate; duration and expectancy of life. Present amount of mortality, and its causes, in different communities.

Hygiene.—General principles of Hygiene. Special topics: Soil, construction of dwellings, conservancy of cities, unhealthy trades, supply of food to cities and examination of food, disposal of sewage, water-supply.

Medicine, in reference to the origin, spread, and method of prevention of diseases generally, but especially those of the epidemic class.

Sanitary Engineering, as far as regards the arrangements connected with water-supply, sewerage, and ventilation. A knowledge of the reading of plans, sections, scales, etc.

Sanitary Law, as far as it relates to the duties of Officer of Health. A knowledge of the powers given under the various Sanitary Acts, as defined in the instructions issued by the Local Government Board, and of the methods of procedure in special cases.

The examination, which shall be both written and practical, shall extend over four days.

Candidates shall not be approved by the examiners unless they have shown a competent knowledge in all the principal subjects of the examination.

4. UNIVERSITY OF DURHAM.

For Registration.—Candidates for registration as students in Medicine must have passed the Medical Registration examination appointed by the University, or such other examination as the Warden and Senate may deem equivalent thereto.

Any Arts examination recognised by the General Medical Council is accepted by the University.

For Licences and Degrees in Medicine and Surgery.—Two licences and three medical degrees are conferred by the University of Durham, viz., licences in Medicine and Surgery, and the degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine.

Regulations for the Licence in Medicine.—1. The candidate must produce certificates of registration as a student in Medicine, of good moral conduct, of having attained the age of twenty-one years, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

2. The candidate must have been engaged in medical and surgical study for four years after registration as a student in Medicine. One of the four years must be spent at the University of Durham College of Medicine, Newcastle-on-Tyne; the other three may be spent either at Newcastle-on-Tyne, or at one or more of the schools recognised by the licensing bodies named in Schedule (A) of the Medical Act, 1858.

There are two professional examinations—the first is held at the end of the second winter session; the final at the end of the fourth year of medical study.

Regulations for the Licence in Surgery.—The regulations are the same as those for the licence in Medicine, except that the final examination is directed more particularly to Surgery, and may or may not be passed at the same time as the final examination for the licence in Medicine.

Regulations for the Degree of Bachelor of Medicine.—1. The candidate must produce certificates of registration as a student in Medicine, of good moral conduct, of having attained the age of twenty-one years, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

2. The candidate must have obtained a degree in Arts of the University of Durham, or must have passed the Arts examination for graduation in Medicine of the University, or must produce one or other of the following certificates:—(*a*) A certificate of graduation in Arts at any of the following Universities, viz.:—Oxford, Cambridge, Durham, London, Queen's University (in Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), and Queen's College (Kingston). (*b*.) A certificate of having passed the preliminary or extra-professional examination for graduation in Medicine of any of the following Universities, viz.:—London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's University (Ireland); the Arts examination, qualifying for the membership of the Royal College of Physicians of London; the Arts examination, qualifying for the Fellowship of the Royal College of Surgeons of England.

3. The candidate must have been engaged in medical and surgical study for four years after registration as a student in Medicine. One of the four years must be spent at the University of Durham College of Medicine, Newcastle-on-Tyne; the other three may be spent either at Newcastle-on-Tyne, or at one or more of the schools recognised by the licensing bodies named in Schedule (A) of the Medical Act, 1858.

There are two professional examinations. The first is held at the end of the second winter session, the final at the end of the fourth year of medical study. The subjects are the same as for the licence in Medicine, but the examinations are more stringent.

Regulations for the Degree of Master in Surgery.—The regu-

previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor in Surgery; and in the case of such candidates, the attendance on surgical practice required by Regulation 2 may commence from the date of the M.B. degree.

lations are the same as for the degree of Bachelor of Medicine, except that the final examination is directed more particularly to Surgery.

Regulations for the Degree of Doctor of Medicine.—1. The candidate must have obtained the degree of Bachelor of Medicine, must be of the age of twenty-four years, and must have been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the Military or Naval Services, or in medical and surgical practice. 2. The candidate must write an essay, based on original research or observation, on some medical subject, selected by himself, and approved of by the Professor of Medicine, and must pass an examination thereon, including the collateral medical sciences involved in the subject of the essay.

EXAMINATIONS.

Registration Examinations.—Registration examinations will be held at Durham, commencing on September 19, 1876, and on April 17 and September 18, 1877. Application must be made, at least one month before the day of examination, to Arthur Beanlands, Esq., Durham, to whom candidates must, at the same time, send the examination fee of £1, and certificates of age and character, and specify the optional subject in which they wish to be examined. The following are the subjects for the registration examinations:—Necessary Subjects—The history contained in the Acts of the Apostles; English Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Euclid, Books I. and II.; Latin Grammar, with—*in September*, 1876 and 1877, Virgil, Æneid, Lib. I. and II.; *in April*, 1877, Cæsar, De Bello Gallico, Lib. I. and II. In addition to the above, all candidates are required to satisfy the examiners in one (at least) of the following optional subjects:—Greek Grammar, with Xenophon's Memorabilia, Books I. and II.; French Grammar, with Voltaire's Charles XII.; German Grammar, with Goethe's "Dichtung und Wahrheit," Book I.; elementary questions in Mechanics, Hydrostatics, and Pneumatics. In addition to the foregoing examinations the Warden has authority, in case of urgency, to appoint an extraordinary registration examination at any time. The fee for such examination is £2.

Professional Examinations.—The first professional examination for licences and degrees in Medicine and Surgery is held at the end of the second winter session. The following are the subjects of the examination:—Anatomy, Physiology, Chemistry, Botany. The next examination will be held in April, 1877. The final professional examination for licences and degrees in Medicine and Surgery is held at the end of the fourth year of medical study. The following are the subjects of the examination:—Materia Medica, Therapeutics, Medical Jurisprudence, Pathological Anatomy, Midwifery, Diseases of Women and Children, Medicine, and Surgery. The next examination will commence on June 11, 1877.

Examination for the Degree of Doctor of Medicine.—The candidate must write an essay, based on original research or observation, on some medical subject, selected by himself, and approved of by the Professor of Medicine, and must pass an examination thereon, including the collateral medical sciences involved in the subject of the essay. The examinations for licences and degrees in Medicine and Surgery are conducted in Newcastle. 1. By printed papers of questions. 2. Practically in Anatomy, Physiology, Chemistry, Materia Medica, Pathology, Surgery, Medicine, Midwifery, and Medical Jurisprudence. 3. *Viva voce* on all the subjects.

Every candidate wishing to present himself for any of the above examinations must give at least fourteen days' notice to the Registrar of the College, and must, at the same time, send the fee (£1) and the necessary certificates.

Examination for the Degree of Doctor of Medicine, for Medical Practitioners of Fifteen Years' Standing, without Residence.—The Warden and Senate of the University of Durham, with the view of affording to practitioners of fifteen years' standing an opportunity of obtaining the degree of Doctor of Medicine, have instituted a special examination, under the following regulations:—

1. That the candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom.

2. That the candidate shall have been in the active practice of his profession for fifteen years.

3. That the candidate shall not be under forty years of age.

4. That the candidate shall produce a certificate of moral character from three registered members of the medical profession.

5. That if the candidate shall not have passed, previous to his professional examination (in virtue of which he has been placed on the Register), an examination in Arts, he shall be required to pass an examination in Classics and Mathematics. The subjects for this examination shall be as follows:—*a.* An English essay. (A short essay on some subject to be specified at the time of the examination.) *b.* Arithmetic. *c.* Euclid—Books I. and II. *d.* Latin—Translation from Virgil, Æneid, Lib. I. and II., together with grammatical questions. *e.* One of the following subjects:—(i.) Greek—Translation from Xenophon's Memorabilia, Books I. and II., with grammatical questions. (ii.) French—Translation from Voltaire's Charles XII., with grammatical questions. (iii.) German—Translation from Goethe's "Dichtung und Wahrheit," Book I., with grammatical questions. (iv.) Elements of Mechanics, Pneumatics, and Hydrostatics. (v.) Some treatise on Moral, Political, or Metaphysical Philosophy.

6. That if the candidate shall have passed, previous to his professional examination (in virtue of which he has been placed on the Register), a preliminary examination, he shall be required to translate into English a passage from some Latin author—such as Virgil, Cæsar, or Celsus,—and shall have an opportunity of showing proficiency in Greek, Moral Philosophy, or some modern language.

7. That the candidate shall be required to pass an examination in the following subjects:—*a.* Principles and Practice of Medicine, including Psychological Medicine and Hygiene. *b.* Principles and Practice of Surgery. *c.* Midwifery, and Diseases peculiar to Women and Children. *d.* Pathology, medical and surgical. *e.* Anatomy, medical and surgical. *f.* Medical Jurisprudence and Toxicology. *g.* Therapeutics.

8. That the fee shall be fifty guineas, to be forwarded to the Registrar of the University of Durham College of Medicine, Newcastle-upon-Tyne, when the candidate enters his name for the examination.

9. That if the candidate shall fail to satisfy the examiners, the sum of twenty guineas shall be retained; but that if he shall again offer himself for the examination the sum of forty guineas only shall then be required.

An examination, in accordance with the above regulations, will be held on December 7, 8, 9, and 11, 1876, and on June 10, 11, 12, and 13, 1877.

The Arts examination will be held at the University, Durham, on Thursday, December 7. The professional examination at the University of Durham College of Medicine, Newcastle-on-Tyne, on December 8, 9, and 11.

The following is the programme of the professional examination:—

First Day, November 8.—Morning, four hours (nine to one o'clock).—Paper of Questions: Medicine, 3 questions; Insanity, 1; Hygiene, 1; Pathology (medical), 1; Anatomy (medical), 1; Therapeutics, 1. Afternoon, three hours (two to five o'clock): Clinical examination of cases of disease (medical).

Second Day.—Morning, four hours (nine to one o'clock).—Paper of Questions: Surgery, 2 questions; Midwifery, 2; Pathology (surgical), 1; Anatomy (surgical), 1; Medical Jurisprudence, 1; Toxicology, 1. Afternoon, three hours (two to five o'clock): Clinical examination of cases of surgical disease and injury.

Third Day.—*Viva voce* interrogation, two hours.

Gentlemen intending to offer themselves as candidates are requested to forward their names to Dr. Luke Armstrong, Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne. For the December examination, on or before November 1, 1876; for the June examination, on or before May 1, 1877, together with the fee and the before-mentioned certificates.

5. UNIVERSITY OF ST. ANDREWS.

ORDINARY DEGREES.

The degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum and examinations for these degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for candidates

for the degrees of Bachelor of Medicine and Master in Surgery present some difference:—

No one shall be received as a candidate for the degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities and colleges, viz.:—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork, and Queen's College, Galway.

The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court.

Attendance on the lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen shall not be reckoned for graduation in St. Andrews if the fee for such lectures be of less amount than is charged for the like course of lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

Fees for Graduation.—For the degree of Bachelor of Medicine, five guineas in respect of each of the three divisions of the examination on professional subjects; and if the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of five guineas; and every candidate for the degree of Doctor of Medicine, who has previously obtained the degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a candidate for the degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

SPECIAL DEGREES.

The degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years, whose professional position and experience are such as, in the estimation of the University, entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always, that degrees shall not be conferred under this section to a greater number than ten in any one year.

Regulations as to Special Degrees.—As regards registered medical practitioners above the age of forty years, the examinations are held in the University Library, annually, in April. The graduation fee is fifty guineas. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A certificate of age, being a baptismal certificate, or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the profession, or in the medical schools, recommending the candidate to the Senatus for the degree of M.D., and testifying to his professional position and skill. As only ten can graduate in each year, candidates are selected whose service and certificates seem, to the Medical Faculty, to present the highest professional claims; but where these seem equal, preference is given to priority of application and to age. 3. Candidates, when notified for examination, will remit a portion of the graduation fee—viz., £10 10s. This sum shall be forfeited should the candidate fail to appear, or to graduate, at the time appointed. 4. A satisfactory examination, written and *viva voce*, must be passed in the following departments:—(1) Materia Medica and General Therapeutics, (2) Medical Jurisprudence, (3) Practice of Medicine and Pathology, (4) Surgery, (5) Midwifery and Diseases of Women and Children.

6. UNIVERSITY OF EDINBURGH.

This University grants degrees in Medicine and Surgery.

No one is admitted to the degree of Bachelor of Medicine or Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course, and two courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

Every candidate for the degrees of M.B and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of medical science—viz., Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children (two courses of Midwifery of three months each being reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses), General Pathology (or, in schools where there is no such course, a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine), during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures above described; Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery, courses of the same duration as those of not less than one hundred lectures above prescribed, or two courses of three months' lectures being given at least twice a week; Medical Jurisprudence, Botany, Natural History (including Zoology), during courses including not less than fifty lectures.

2. That he has attended for at least two years the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons.

3. That he has been engaged, for at least six months, by apprenticeship or otherwise, in compounding and dispensing drugs at the laboratory of a hospital, dispensary, member of a surgical college or faculty, licentiate of the London or Dublin Society of Apothecaries, or a member of the Pharmaceutical Society of Great Britain.

4. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary, physician, surgeon, or member of the London or Dublin Society of Apothecaries.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to the following regulations;—

1. One of the four years of medical and surgical study required must be in the University of Edinburgh.

2. Another of such four years of medical and surgical study must be either in the University of Edinburgh, or in some other university entitled to give the degree of Doctor of Medicine.

3. Attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on courses of lectures as above prescribed.

4. One year's attendance on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on courses of lectures as above prescribed.

5. Candidates may, to the extent of four of the departments of medical study required, attend in such year or years of their medical and surgical studies, as may be most convenient to them, the lectures of the extra-academical teachers of Medicine specified in the foregoing Sub-section 4.

6. All candidates not students of the University availing themselves of the permission to attend the lectures of extra-academical teachers in Edinburgh must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

Every candidate must deliver, before March 31 of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year (or that he will have done so on or before the day of graduation), and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

Each candidate is examined, both in writing and *viva voce*—first, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; thirdly, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; fourthly, clinically on Medicine and on Surgery in a Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of Medicine, and is of the age of twenty-fours years, and produces a certificate of having been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the Military or Naval Medical Services, or in medical and surgical practice: provided always that the degree of Doctor of Medicine shall not be conferred on any person, unless he be a graduate of Arts in one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall,

before or at the time of his obtaining the degree of Bachelor of Medicine, or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects—namely, French, German, higher Mathematics, and Natural Philosophy; and provided also that the candidate for the degree of Doctor of Medicine shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree. The candidate must lodge his thesis with the Dean on or before April 30 of the year in which he proposes to graduate. No thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

NOTICES TO CANDIDATES FOR GRADUATION IN MEDICINE.

1. An *annus medicus* is constituted by at least two winter courses of one hundred lectures each, or by one such course, and two summer courses of fifty lectures each, all being duly certified.

2. Four *anni medici* are required for graduates in Medicine. Two at least of these years must be passed at a university which grants degrees in Medicine, one of the two being at Edinburgh.

3. One or two of the *anni medici* may be taken at qualified extra-academical schools, in the manner stated in the succeeding paragraph:

4. In University College, in King's College, in the hospital schools of London, in the extra-academical School of Edinburgh, in the School of the College of Surgeons of Dublin, and in certain medical schools where at least two lecturers have been qualified by the University Court, a candidate may make *two anni medici*—one of which must be constituted by hospital attendance and Practical Anatomy, and the other by at least two courses of one hundred lectures, or one such course, and two courses of fifty lectures. The classes at these schools only qualify to the extent of four, and one of the four must be Practical Anatomy.

5. In provincial schools where there are no lecturers qualified by the University Court, a candidate can make *one annus edicus monly*, and this is constituted by attendance on a qualified hospital, along with a course of Practical Anatomy.

The Fees are—For the degree of M.B., three Examinations, £5 5s. each, £15 15s.; for the degree of C.M., £5 5s. additional; for the degree of M.D., £5 5s. additional to that for M.B., exclusive of £10 Government stamp.

The fees for C.M. and M.D. are required to be paid on or before July 15.

Note.—Total fees and stamp for graduating as M.D. only, by regulations, for students commencing before February, 1861, £25.

N.B.—The above fees include all charges for the diplomas.

RIGHTS OF THE MEDICAL GRADUATES OF SCOTLAND ACCORDING TO THE MEDICAL ACT.

Before the passing of the Medical Act of 1858, the degree of Doctor of Medicine granted by the universities of Scotland (as the possessor underwent a complete education and examination in all departments of Physics and Surgery), qualified the graduate to practise every branch of the medical profession throughout Scotland. One principal purpose of the Medical Act was to extend local rights of practice over the whole of her Majesty's dominions. But according to the hitherto accepted reading of a dubious clause in the Act, no one can practise both Medicine and Surgery without possessing two distinct diplomas—one for Medicine, and another for Surgery. The universities were thus compelled, in justice to their graduates, to give them the additional title of Master in Surgery, not as implying any additional study or examination, but as declaring more distinctly their qualifications, and to permit registration as regularly qualified practitioners in the whole field of their professional education. The Secretary for War some time ago issued an order that candidates for admission into the Medical Service of the Army should obtain their qualifications in Physic and Surgery from two different sources; the effect of which would have been to prevent any one university from qualifying for this purpose. The Scottish Universities' Commissioners, recognising the serious evils of such a system, followed up a remonstrance which had been offered on the part of the University of Edinburgh, and obtained the rescinding of all restrictions in the source of qualification. Consequently, any single university in Scotland can now qualify candidates for the military service as well as for any other public medical service in the country.

The Medical Faculty have resolved that the written and oral examinations on Chemistry, Botany, and Natural History, in October, 1876, and April, 1877, shall be restricted in the following manner:—

1. *Chemistry.*—The principles of chemical combination and action, as illustrated in the simpler compounds of the more commonly occurring elements. The classification of organic compounds, and the general and distinctive characters of each group.

2. *Botany.*—The structure and functions of plants, vegetable organography and physiology, the principles of classification, classes, sub-classes, and sections of the natural system. (See "Balfour's "Class-book," or his "Manual of Botany.") Botanical characters to be demonstrated on conspicuous specimens of the following natural orders:—Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophyllaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Onagraceæ, Umbelliferæ, Dipsacaceæ, Compositæ, Campanulaceæ, Sterculiaceæ, Boraginaceæ, Labiatæ, Scrophulariaceæ, Primulaceæ, Euphorbiaceæ, Salicaceæ, Corylaceæ, Coniferæ, Cycadaceæ, Orchidaceæ, Amaryllidaceæ, Liliaceæ, Palmæ, Cyperaceæ, Gramineæ, Filices, Musci. The student will be examined practically on the microscopical structure of plants, and he will be required to describe the organs of fresh plants put into his hands.

3. *Natural History.*—The general principles of zoological classification. The characters of the classes of the Vertebrata, founded upon anatomical and physiological characters. The general characters of the vertebrate orders. The morphological, anatomical, and physiological characters of the sub-kingdoms of the Invertebrata, and the general characters of the invertebrate orders.

7. UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

Three medical degrees are conferred by this University, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.); all of which are recognised by the Medical Act as qualifying for practice throughout the British Dominions.

The degree of Bachelor of Medicine may be obtained by candidates of the age of twenty-one years who have complied with the regulations as to education and examination. The degree of Master in Surgery is only conferred upon those who at the same time obtain the Bachelorship of Medicine; and the degree of Doctor of Medicine may be conferred on candidates of not less than twenty-four years of age who have obtained the Bachelorship two or more years previously, and have fulfilled certain conditions to be afterwards mentioned.

The medical curriculum is as nearly as possible the same as that in the University of Edinburgh.

The following is the order of the course of study recommended to Students:—

First Winter Session: Anatomy, elementary or descriptive and practical; Chemistry.

First Summer Session: Botany, Practical Chemistry, Anatomy.

There may be advantages in beginning study in a summer session preceding the first winter, in which case instruction should be sought in Botany, elementary Anatomy, or elementary Chemistry.

Second Winter Session: Advanced Anatomy and Practical Anatomy, Physiology, Surgery; hospital attendance, surgical wards and clinical lectures.

First Professional Examination in April or October.

Second Summer Session: Zoology, Practical Anatomy, or Practical Chemistry, Practical Pharmacy; hospital attendance, surgical wards and clinical lectures.

Third Winter Session: Surgery, second course; Materia Medica; Practice of Physic; hospital attendance, medical wards and clinical lectures; Pathology.

Second Professional Examination in April or October.

Third Summer Session: Hospital attendance, medical wards and clinical lectures; Surgical Anatomy, Operative Surgery, Forensic Medicine.

Fourth Winter Session: Practice of Physic, second course; Forensic Medicine (for students proposing to graduate in 1877), Midwifery; hospital attendance, medical or surgical wards and clinical lectures; Midwifery practice.

Final Examination in July.

PROFESSIONAL EXAMINATIONS.

The professional examinations are conducted in writing, orally and practically, in three divisions as follows:—

First Division: On Chemistry, Elementary Anatomy, Botany.

Second Division: On Advanced Anatomy, Physiology, Zoology with Comparative Anatomy.

Third or Final Division: On Materia Medica, General Pathology, Surgery, Practice of Medicine, Midwifery, Forensic Medicine, Clinical Surgery, Clinical Medicine.

DEGREE OF DOCTOR OF MEDICINE.

The degree of Doctor of Medicine may be conferred on any candidate of not less than twenty-four years of age, who has obtained the Bachelorship two or more years previously, provided he possesses a degree in Arts, or has, in addition to the Preliminary Examination in General Education required for the Bachelorship, also passed before obtaining the Bachelorship, or within three years thereafter, an examination in Greek, and Logic or Moral Philosophy, together with any one of the other optional subjects belonging to the Examination in General Education. He must also produce evidence of having been engaged in professional study or avocations for two years after having obtained the Bachelorship, and must lodge an inaugural dissertation composed by himself on a medical, surgical, or allied subject. Theses for the degree of M.D. to be lodged with the Registrar on or before March 20, June 20, or October 20. As the granting or withholding of the degree depends chiefly on the character of the dissertation, candidates are advised to bestow both time and care on its preparation.

The fees for degrees are the same as in Edinburgh.

The Examinations in General Education take place twice yearly—viz., in October and April. The examinations for Session 1876-77 will be held on Thursday and Friday, October 12 and 13, 1876, and Friday and Saturday, March 30 and 31, 1877. Those who intend to present themselves for either of these examinations are required to send in their names to the Registrar on or before September 30 or March 20. A fee of 10s. must be paid on entering their names by those who are not matriculated students—which fee will be returned on matriculation within the year.

The Professional Examinations are held at the following periods—viz.: The first in October (October 17, 1876) and April (April 6, 1877); the second in October (October 18, 1876) and April (April 7, 1877); the third in July (July 16, 1877).

8. UNIVERSITY OF ABERDEEN.

The following are the degrees in Medicine granted by this University—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum, and examination for the degrees of B.M., C.M., and M.D. being in conformity with the Ordinances of the Scotch Universities Commissioners, are nearly the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of medical and surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other university entitled to give the degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each candidate for the degree of M.B. shall pay a fee of £5 5s. in respect of each of the three professional examinations.

2. If the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the £15 15s. so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of £5 5s.

3. And every candidate for the degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the degree of Bachelor of Medicine, a fee of £5 5s., exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been at the University of Aberdeen.

9. UNIVERSITY OF DUBLIN.

DEGREES AND LICENCES IN MEDICINE AND SURGERY.

The degrees and licences in Medicine and Surgery granted by the University are—1. Bachelor in Medicine. 2. Doctor in Medicine. 3. Master in Surgery.

1. *Bachelor in Medicine.*—A candidate for the degree of Bachelor in Medicine must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on the following courses of lectures, viz.:—Courses of five months' duration (November to April)—Anatomy, Practical Anatomy (with Dissections), Surgery, Chemistry, Practice of Medicine, Midwifery. Courses of three months' duration (April to July)—Botany, Practical Chemistry, Medical Jurisprudence, Materia Medica and Pharmacy, Institutes of Medicine.

Hospital Attendance.—1. Nine months' attendance on the clinical lectures of Sir Patrick Dun's Hospital. 2. Nine months' additional attendance on the clinical lectures of any hospital recognised by the Board. 3. Instruction in practical Midwifery, including not less than six deliveries. 4. Certificate of personal attendance on fever cases, stating name and date of each case.

Any of the above-named six or three months' courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows (and three of them, at the discretion of the candidate, may be attended in the University of Edinburgh), provided the candidate has kept an *annus medicus* in the School of Physic.

The schools recognised are—1. The School of the Royal College of Surgeons in Ireland. 2. The Carmichael School. 3. The School of Dr. Steevens' Hospital. 4. The St. Peter-street School. 5. The School of the Catholic University.

An *annus medicus*, or a year's attendance, in the School of Physic may be kept in three ways:—1. By attending at least two, or not more than three, of the foregoing courses which are of six months' duration. 2. By attending one course of six months' and two of three months' duration. 3. By nine months' attendance on Sir Patrick Dun's Hospital and clinical lectures: together with one course of six months', or, in lieu thereof, two courses of three months' duration.

The fee for nine months' attendance at Sir Patrick Dun's Hospital is £12 12s. The fee for each course of lectures is £3 3s. The fee for the *Liceat ad Examinandum* is £5. The fee for the degree of M.B. is £11.

2. *Doctor in Medicine.*—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

3. *Master in Surgery.*—The degree of Master in Surgery can only be obtained by students who are of Masters in Arts standing, and who have completed the professional curriculum and passed the examinations required. The curriculum extends over a period of four years, and comprises attendance upon the following courses of lectures:—viz., Anatomy, one course; Demonstrations, three courses; Dissections, three courses; Theory and Practice of Surgery, two courses; Practice of Medicine, one course; Chemistry, one course; Materia Medica, one course; Midwifery, one course; Practical Chemistry, one course; Botany, one course; Medical Jurisprudence, one course.

Hospital attendance for three sessions, each of nine consecutive months' duration, in any recognised hospital, together with attendance on the clinical lectures on Medicine and Surgery there delivered, are required. Any of the above-named courses may be attended at any of the medical schools of Dublin recognised by the Board, provided the candidate has kept an *annus medicus* in the School of Physic. The following hospitals are recognised by the Board:—1, Sir Patrick Dun's School of Physic Hospital; 2, Meath Hospital; 3, Richmond, Whitworth, and Hardwicke Hospitals; 4, Dr. Steevens' Hospital; 5, Jervis-street Infirmary; 6, City of Dublin Hospital; 7, Mercer's Hospital; 8, St. Vincent's Hospital; 9, Adelaide Hospital; 10, Mater Misericordiæ Hospital. Of the courses of lectures, which are of five months' duration, not more than three can be attended during any one session. Candidates will also be required to perform surgical operations on the dead subject. Candidates for the degree of Master in Surgery, who have already passed the examination for the degree of Bachelor of Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5. Fee for the degree of M.Ch., £11.

UNIVERSITY LICENCES.

Candidates for the licences in Medicine or Surgery must be matriculated in Medicine, and must have completed four years in medical studies. Candidates for the licences in Medicine or Surgery must pass the following examination in Arts, unless they be students in the Senior Freshman or some higher class: —Homer's Iliad, Books I., II. (emitting catalogue of ships), III.; Lucian's Dialogues (Walker's edition); Xenophon's Anabasis, Books I., II., III.; Virgil, Æneid, Books I., II., III.; Sallust; Horace, Satires; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra to the end of Simple Equations; Euclid, Books I., II., III. Students who have passed the foregoing examination will be required to pay the admission fee of £15.

1. *Licentiate in Medicine.*—The medical course and examination necessary for the licence in Medicine is the same as for the degree of M.B., with the exception that any general hospital approved by the Board of Trinity College may be substituted for Sir Patrick Dun's. Candidates who are already Licentiates in Surgery of the Royal College of Surgeons in Ireland, or Members of the College of Surgeons of England, on passing the foregoing Arts examination, will be admitted to examination for the licence in Medicine. Fee for the *Liceat ad Examinandum*, £5. Fee for the licence in Medicine, £5.

2. *Licentiate in Surgery.*—The surgical course and examination necessary for the licence in Surgery are the same as for the degree of Master in Surgery. Fee for the *Liceat ad Examinandum*, £5. Fee for the Licence in Surgery, £5.

Total Expenses of obtaining the Degrees of Bachelor in Medicine and Master in Surgery.—I. Lectures: 1. Anatomy (one course), £3 3s. 2. Practical Anatomy (three courses), £9 9s. 3. Dissections (three courses), £15 15s. 4. Surgery (two courses), £4 4s. 5. Practice of Medicine, £3 3s. 6. Chemistry (two courses), £4 4s. 7. Materia Medica and Pharmacy, £3 3s. 8. Midwifery, £3 3s. 9. Botany. 10. Medical Jurisprudence, £3 3s. 11. Institutes of Medicine, £3 3s. Matriculation fee, 5s. II. Hospitals: Sir P. Dun's (first year), £9 9s.; ditto (second year), £9 9s.; ditto (third year), £9 9s.; Practical Midwifery, £3 3s. Ophthalmic Surgery, £2 2s. III. Degrees: 1. *Liceat ad Examinandum in Medicina*, £5. 2. *Liceat ad Examinandum in Chirurgia*, £5. 3. M.B. degree, £11. 4. M.Ch. degree, £11. Total Expenses: 1. Lectures, £52 15s. 2. Hospitals, £33 12s. 3. Degrees, £32. Total, £118 7s.

N.B.—As no degrees in Medicine or Surgery are conferred except upon graduates in Arts, the expense of the degree of Bachelor in Arts, amounting altogether to £83 4s., should be added to the foregoing, making the total £281 11s.

10. QUEEN'S UNIVERSITY IN IRELAND.

This University confers the degrees of M.D. and M.Ch. Students who wish to obtain the degree of M.D. or of M.Ch. in the Queen's University must be matriculated students of one of the Queen's Colleges at Belfast, Cork, or Galway, and must pursue the courses of study prescribed by the Senate of the University.

Each candidate for the degree of Doctor in Medicine or Master in Surgery is required—1. To have passed in one of the Colleges of the Queen's University the entrance examination in Arts, and to have been admitted a matriculated student of the University. 2. To have attended in one of the Queen's Colleges lectures on one modern continental language for six months, and lectures on Natural Philosophy for six months. 3. To have also attended, in some one of the Queen's Colleges, at least two of the courses of lectures marked with an asterisk. For the remainder of the courses, authenticated certificates will be received from the professors or lecturers in universities, colleges, or schools recognised by the Senate of the Queen's University in Ireland. 4. To pass the University examinations—the first and second University examination, and the degree examination. The curriculum shall extend over at least four years, and shall be divided into periods of at least two years each. Candidates are recommended to pass the matriculation examination prior to entering on the second period. It is recommended that the first period shall comprise attendance on the following courses of medical lectures: —*Chemistry; *Botany, with Herborisations for practical study, and Zoology; *Anatomy and Physiology; *Practical Anatomy; *Materia Medica and Pharmacy. And that the second period shall comprise attendance on the following courses of medical lectures:—Anatomy and Physiology (second course), Practical Anatomy (second course), *Theory and Practice of Surgery, *Midwifery, *Theory and Practice of Medicine, *Medical Jurisprudence. In addition to the above courses of lectures, candidates shall have attended, during either the first or second period, a course of lectures on a modern continental language (in one of the colleges of the University), and Experimental Physics (in one of the colleges of the University). Also, during the first period—Practical Chemistry (in a recognised laboratory), and medico-chirurgical hospital (recognised by the Senate) containing at least sixty beds, together with the clinical lectures therein delivered, at least two each week—a winter session of six months. And during the second period—Practical Midwifery, at a recognised midwifery hospital, with the clinical lectures therein delivered, for a period of three months in a hospital containing not less than thirty beds, or six months in a hospital containing not less than fifteen beds; medico-chirurgical hospital (recognised by the Senate) containing at least sixty beds, together with the clinical lectures therein delivered, eighteen months, including either three winter sessions of six months each, or two winter sessions of six months each, and two summer sessions of three months each. Medical examinations are held in June, and in September and October. The June examinations are pass examinations. The honour examinations commence on the last Tuesday in September, and are followed by pass examinations. Each candidate for examination in June must forward to the Secretary, on or before June 1, notice of his intention to offer himself as a candidate, along with his certificates, and each candidate for examination in September or October must forward similar notice, along with his certificates.

(B.) BODIES GIVING LICENCES OR OTHER FORMS OF QUALIFICATION NOT BEING DEGREES IN MEDICINE.

1. THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

In the Royal College of Physicians there are three grades—Fellows, Members, and Licentiates. Of these the first is purely honorary, and so in a certain sense is the second. The third is that taken by the student on leaving his studies, and is valuable as being at once a qualification to practise Medicine, Surgery, and Midwifery, and is recognised by the Poor-law Board as a qualification in Surgery as well as in Medicine.

The College will, under its charter, grant licences to practise Physic, including therein the practice of Medicine, Surgery, and Midwifery (which licences are not to extend to make the Licentiates Members of the Corporation), to persons who shall conform to the following by-laws:—

Every candidate for the College licence (except when otherwise provided by the by-laws) is required to produce satisfactory evidence to the following effect:—

1. Of having attained the age of twenty-one years.
2. Of moral character.
3. Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College.
4. Of having been registered as a medical student in the manner prescribed by the General Medical Council. ["After October, 1870, every candidate (not exempted from registration) is required to have been registered at least four years previously."]
5. Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—*a.* Attending the practice of a hospital or other institution recognised by the College for that purpose. *b.* Receiving instruction as the pupil of a legally qualified practitioner holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery. *c.* Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* the candidate shall have passed an examination in the subjects of general education will not be recognised by the College.
6. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals, of having discharged the duties of clinical clerk at a recognised hospital for a period of not less than three months; of having performed the duties of dresser at a recognised hospital for a period of not less than three months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women.
7. Of having studied the following subjects:—Anatomy (with dissections) during two winter sessions; Physiology during two winter sessions; Chemistry during six months; Practical Chemistry during three months; Materia Medica during three months; Practical Pharmacy during three months (by Practical Pharmacy is meant instruction in the laboratory of a registered medical practitioner, or of a member of the Pharmaceutical

Society of Great Britain, or of a public hospital or dispensary recognised by the College); Botany during three months (this course of lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination will be exempt from attendance on this course); Morbid Anatomy during six months (this includes attendance and instruction in the post-mortem-room during the period of clinical study); Principles and Practice of Medicine during two winter sessions (it is required that the Principles of Public Health should be comprised in this course of lectures, or in the course of lectures on Forensic Medicine: the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Principles and Practice of Surgery during two winter sessions (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Clinical Medicine during two winter sessions and two summer sessions (the attendance on these lectures must not commence until after the first winter session at a recognised medical school); Clinical Surgery during two winter sessions and two summer sessions (the attendance on these lectures must not commence until after the first winter session at a recognised medical school: by Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with lectures on cases); Midwifery and the Diseases peculiar to Women during three months (certificates must also be produced of attendance on not less than twenty labours, and of instruction and proficiency in vaccination); Forensic Medicine during three months.

8. Of having passed the professional examinations.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Medicine at a university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery. Any candidate being a "registered medical practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been with the consent of the College admitted a candidate for the licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the examiners to render in his case unnecessary.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

BY-LAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE LICENCE.

Every candidate for the College licence, before he is admitted to examination, will be required to sign a declaration, stating that he has not been rejected within three months by any of the examining boards included in Schedule (A) to the Medical Act.

Any candidate who shall be rejected at the first examination, will not be readmitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of dissections, or other professional study satisfactory to the examiners, during that time.

Any candidate who shall be rejected at the second or pass examination, will not be readmitted to examination until after the lapse of six months, and will be required to produce a certificate of attendance on the practice of a recognised hospital, and also of attendance on clinical lectures, or other professional study satisfactory to the examiners, during that time.

The fee for the College licence is fifteen guineas, of which five guineas are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the licence, and he will be admitted to one subsequent first examination without the payment of an additional fee.

Any candidate who shall be rejected at the second or pass examination will have the fee paid on admission to this examination returned to him, less three guineas.

2. ROYAL COLLEGE OF SURGEONS, ENGLAND.

By far the most important qualification in this country is that of the Royal College of Surgeons of England, inasmuch as almost every English and many Scottish and Irish students become candidates for the Membership of that body. The College consists of two grades—Fellows and Members. The Fellowship is partly honorary, being obtained by the election of Members of a certain standing, but is now only obtainable by examination. The Membership is the qualification sought by students leaving their hospitals, hence the importance of the following regulations:—

I. Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge are not recognised.

II. The following will be considered as the commencement of professional education:—

1. Attendance on the practice of a hospital or other public institution recognised by this College for that purpose.
2. Instruction as the pupil of a legally qualified surgeon holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.
3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

The commencement of professional study, otherwise than by attendance on lectures in recognised medical schools, or by attendance on the practice of recognised hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the hospital or other institution to the practice of which he shall have entered, and will, consequently, date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the necessary preliminary examination in general knowledge.

III. Candidates will be required to produce the following certificates, viz.:—

1. Of being twenty-one years of age.
2. Of having been engaged, subsequently to the date of passing the preliminary examination, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge.
3. Of having attended lectures on Anatomy during two winter sessions.
4. Of having performed Dissections during not less than two winter sessions.
5. Of having attended lectures on General Anatomy and Physiology during one winter session.
6. Of having attended a practical course of General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class.

Note A.—By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not hereby intended that the learners shall perform vivisections.

7. Of having attended lectures on Surgery during one winter session.
8. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding Clause 7.

Note B.—The course of Practical Surgery referred to in Clause 8 is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to surgery, on the living person, or on the dead body. The methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person, or on the dead body. The performance, where practicable, of the operations of surgery on the dead body. The use of surgical apparatus. The examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy, and otherwise.

9. Of having attended one course of lectures on each of the following subjects, viz.:—Chemistry, Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months.

Note C.—The course of lectures on Chemistry included in Clause 9 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

10. Of having studied Practical Pharmacy during three months.
11. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study.
12. Of instruction and proficiency in the practice of Vaccination.

Note D.—In the case of candidates who commenced their professional education on or after October 1, 1868, the certificate of instruction in Vaccination will only be received from recognised vaccine stations, or from recognised vaccine departments in medical schools or hospitals, or other public institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place.

Note E.—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

13. Of having attended, at a recognised hospital or hospitals, the practice of Surgery during three winter(a) and two summer(b) sessions.

14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher during not less than three months.

Note F.—It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the hospital.

15. Of having, subsequently to the first winter session of attendance on surgical hospital practice, attended, at a recognised hospital or hospitals, clinical lectures on Surgery during two winter and two summer sessions.

16. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.

17. Of having attended, during the whole period of attendance on surgical hospital practice (see Clause 13), demonstrations in the post-mortem rooms of a recognised hospital.

18. Of having attended, at a recognised hospital or hospitals, the practice of Medicine, and clinical lectures on Medicine, during one winter and one summer session.

Notice.—Clauses 6, 8, 11, 14, and 17, and Notes A, B, C, E, and F, together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause 9, are applicable to candidates who commenced their professional education on or after October 1, 1870.

N.B. Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

Section II.

I. Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be considered as one branch of science.

II. Certificates will not be recognised from any hospital in the United Kingdom unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any school of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any school of Surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

III. No metropolitan hospital will be recognised by this College which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients.

IV. The recognition of colonial hospitals and schools is governed by the same regulations, with respect to number of patients and to courses of lectures, as apply to the recognition of provincial hospitals and schools in England.

V. Certificates of attendance upon the practice of a recognised provincial or colonial hospital, unconnected with, or not in convenient proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for a period of at least six months will be required.

VI. Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in the provincial schools in England, unless their names shall be duly returned from their respective schools.

N.B.—At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

VII. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

VIII. Members or licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any University recognised for this purpose by this College, will be admitted to examination on producing their diploma, licence, or degree, together with proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

IX. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College will be admitted to examination on adducing, together with their diploma or degree, proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

The following are regulations as to the examination for the qualification of Membership:—

The examination is divided into two parts.

1. The first, or primary examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body.

2. The second, or pass examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine,(c) is partly written, partly oral, and partly on the practical use of surgical apparatus, and the practical examination of patients.

3. The primary examinations are held in the months of January, April, May, July, and November, and the pass examinations generally in the ensuing week respectively.

4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the pass, or surgical examination, until after the termination of the fourth year of their professional education.

5. The fee of five guineas, paid prior to the primary examination, and allowed on the whole fee of twenty-two pounds (d) payable for the diploma, is retained; and after any two consecutive failures at the primary examination, the candidate is required to pay an *additional* fee of five guineas prior to being again admitted to that examination, which *additional* fee is also retained.

6. Five guineas, part of the sum of sixteen pounds fifteen shillings, the balance of the whole fee due for the diploma, and paid prior to the pass examination, is retained; and after any two consecutive failures at the pass examination, the candidate is required to pay an *additional* fee of five guineas prior to being again admitted to the said pass examination, which *additional* fee is also retained.

7. A candidate having entered his name for either the primary or pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within a period of three months from the date at which he shall have so failed to attend.

8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference.

9. A candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

Certificate of Qualification in Midwifery.

This College also, after due examination, grants a special certificate of qualification in Midwifery. This, however, though of great value to the possessor, cannot be registered, and is only granted to men otherwise qualified.

1. Persons who were Fellows or Members of the College prior to the first

(a) The winter session comprises a period of six months, and, in England, commences on October 1, and terminates on March 31.

(b) The summer session comprises a period of three months, and, in England, commences on May 1, and terminates on July 31.

(c) Candidates can claim exemption from examination in Medicine under the following conditions, viz.:—(1.) The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858; or a degree, diploma, or licence in Medicine of a colonial or foreign university approved by the Council of the College. (2.) A declaration by the candidate, prior to his admission to the final examination for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.

(d) This sum of twenty-two pounds is exclusive of the fee of two pounds paid for the preliminary examination.

day of January, 1853, will be admitted to examination for the certificate of qualification in Midwifery upon producing their diploma.

2. Persons having become members of the College subsequently to the first day of January, 1853, will be admitted to examination on producing their diploma, together with a certificate or certificates of having attended twenty labours.

3. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any University recognised for this purpose by this College, will also be admitted to examination on producing together with their diploma, licence, or degree, proof of being twenty-one years of age; of having been occupied at least four entire years in the acquirement of professional knowledge; of having attended one course of lectures on Midwifery; and of having attended not less than twenty labours.

4. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma or degree, proof of being twenty-one years of age; of having been occupied at least four entire years in the acquirement of professional knowledge; of having completed at recognised schools the anatomical and surgical education required of candidates for the diploma of Member of the College; of having attended one course of lectures on Midwifery; and of having attended not less than twenty labours.

5. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, prior to the first day of January, 1853, will be admitted to examination on producing the several certificates of professional education required for admission to examination for the diploma of Member of this College at the period when such persons shall respectively have, in such manner, commenced their professional education.

6. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, after the 31st day of December, 1852, will be admitted to examination on producing certificates of being twenty-one years of age; of having been engaged during at least four entire years in the acquirement of professional knowledge; of having completed at recognised schools the professional education required of candidates for the diploma of Member of this College; of having attended one course of lectures on Midwifery and the Diseases of Women and Children; and of having personally conducted thirty labours.

Note.—All candidates who commenced their professional education on or after October 1, 1866, will, in addition to the certificates enumerated in the foregoing clauses, be required to produce a certificate of having, prior to such commencement, passed a preliminary examination in general knowledge recognised by this College.

N.B.—The fee for the certificate is as follows, viz.:—1. Persons who were Fellows or Members of this College prior to January 1, 1853, two guineas. 2. Persons admitted Fellows or Members of this College subsequently to January 1, 1853, three guineas. 3, 4. Persons producing any other diploma or certificate or degree which may be considered by the Council to afford satisfactory proof of sufficient surgical and medical education, three guineas. 5, 6. All other persons, ten guineas.

The examinations are held in the months of February, May, August, and December.

3. SOCIETY OF APOTHECARIES (ENGLAND).

Every candidate for a certificate of qualification to practise as an apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. (This examination must be passed before the commencement of professional studies, which is defined by the Medical Council to be "the time of commencing studies at a medical school.") 2. Of having attained the full age of twenty-one years, of which satisfactory evidence will be required. 3. Of good moral conduct. 4. A certificate of three months' Practical Pharmacy from some recognised hospital or dispensary, or from a qualified medical practitioner (the apprenticeship not being required). 5. Of having pursued a course of medical study in conformity with the regulations of the Court.

Course of Study.—Every candidate must attend the following lectures and medical practice during not less than three winter and two summer sessions (each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from May 1 to July 31):—

First Year.—Winter Session: Chemistry; Anatomy and Physiology; Dissections. Summer Session: Botany; Materia Medica and Therapeutics; Practical Chemistry.

Second Year.—Winter Session: Anatomy and Physiology, including dissections and demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session: Midwifery and Diseases of Women and Children, and Vaccination; (a) Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session: Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.

All medical students presenting themselves for the second examination shall produce evidence of having served the office of clinical clerk at a recognised hospital during the period of six weeks at least; and also shall produce evidence that they have been examined at the class examinations instituted by the various lecturers and professors of their respective medical schools and colleges.

All students are required *personally* to register the several tickets of admission to lectures and medical practice within the first fifteen days of the months of October and May.

Professional Examinations.—The Court of Examiners meet in the Hall every Wednesday and Thursday, where all candidates are required to attend at 4.30 p.m. each day. Every person intending to offer himself for examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials and the fee at the office of the Beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturdays, ten to two.

The examination of candidates is divided into two parts, and is conducted partly in writing and partly *viva voce*.

The written and clinical examinations will take place on Wednesdays, and the *viva voce* examination on Thursdays.

The first examination, which may be passed after the second winter session, embraces the following subjects:—The British Pharmacopœia; Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany; and Materia Medica.

Second or pass examination, at the termination of the medical studies:—Principles and Practice of Medicine; Pathology; Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

All graduates in Medicine of British universities will be admitted to a clinical and practical examination in the Practice of Medicine and Midwifery only.

Licentiates of the Royal College of Physicians, London; of the Royal College of Physicians, Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall of Dublin, will be admitted to a Clinical and Practical examination in the Practice of Medicine, Midwifery, Forensic Medicine, and Toxicology.

Any candidate who has passed his first examination for the licence of the Royal College of Physicians, London; the licence of the King and Queen's College of Physicians, Ireland; the joint licence of the Royal College of Physicians and Surgeons, Edinburgh, or for the single licence of the College of Physicians, Edinburgh; the licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the degree of M.B., or Master in Surgery, in the Universities of Oxford, Cambridge, or London; or the second part of the professional examination for the degree of M.B., or Master in Surgery, in the Universities of Edinburgh, Aberdeen, St. Andrews, and Glasgow; or the first examination for the medical or surgical degrees in the Irish universities; or the first examination for the licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Anatomy and Materia Medica (to those candidates who have not undergone an examination in those subjects), Practice of Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, part of which examination will be conducted in writing.

Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland; and all candidates who have passed the first Anatomical Examination of the Royal College of Surgeons, London; the Royal College of Surgeons, Edinburgh; the Royal College of Surgeons, Ireland, are exempt from *writing* on Anatomy and Physiology *only* in their first examination.

Candidates who were apprenticed before August 1, 1858, and those students who commenced their hospital attendance on or before October 1, 1861, will be admitted to a *viva voce* examination on the following subjects:—In translating physicians' prescriptions; in such parts of Chemistry and Materia Medica as bear upon the Practice of Medicine, and on Toxicology: in Forensic Medicine, Visceral Anatomy, the Practice of Medicine, including Diseases of Women and Children; and in Midwifery.

All qualified candidates, unless registered, will be required to produce their diploma.

The examination of candidates for certificates of qualification to act as Assistant in compounding and dispensing medi-

(a) In compliance with a request from the General Medical Council of Education, the Court of Examiners of the Society of Apothecaries of London require that in future all pupils applying for their certificate of qualification to practise shall be instructed and furnished with certificates of proficiency in vaccination by gentlemen holding appointments in conformity with the regulations of the Local Government Board, Whitehall.

cines is as follows:—In translating physicians' prescriptions; in the British Pharmacopœia; in Pharmacy, Pharmaceutical Chemistry, Materia Medica, and Medical Botany.

No rejected candidate for the licence can be re-examined until the expiration of six months from his former examination. A candidate rejected on his first professional examination can be admitted to re-examination after the expiration of three months. No rejected candidate as an Assistant can be re-examined until the expiration of three months.

Fees.—For a certificate of qualification to practise, six guineas, half of which is retained in case of rejection, to be accounted for at a subsequent examination. For the first examination, three guineas; for an Assistant's certificate, two guineas; both of which sums are retained in case of rejection, and accounted for subsequently.

Students' Prizes.—The Society of Apothecaries annually offer two prizes for efficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most in the examination; and of a silver medal and a book to the candidate who does so in the next degree.

The examination in Botany will be held at the Hall of the Society on the third Thursday in June, at 10 a.m., and will be conducted by printed papers and *viva voce* questions.

The examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the third Wednesday in August, at 10 a.m., and will be conducted by printed papers and *viva voce* questions.

The Society's Botanic Garden at Chelsea is open daily (except Sunday), from ten to five. Cards of admission may be had at the Beadle's Office, Apothecaries' Hall, Blackfriars, E.C.

Examination in Arts.—An examination in Arts will take place at the Hall, three times a year, viz., on the last Friday and Saturday in the months of January, April, and September. The fee for the examination is one guinea; and this must be paid at least *one week* before the day of examination. If a candidate fail to pass the examination, the fee will not be returned to him, but he will be admissible to either, or to both, of the two next following examinations without payment of an additional fee, upon giving at least one week's notice.

To prevent the necessity of candidates who are desirous of entering to the Preliminary Examination in Arts of attending personally to sign their names, and also for the purpose of identification, the following notice must be written by the candidate, in the presence of a magistrate, clergyman, or a registered medical practitioner, and sent to Mr. Sargeant, at the Apothecaries' Hall, with the fee, at least *one week* before the day of such examination:—

(*This Form of Notice to be copied and written in full by the Candidate.*)

I, _____,
residing at _____,
intend to present myself for the Preliminary Examination in Arts at the Apothecaries' Hall, London, on the _____,
and that I intend to take _____ as my optional subject.

Signature _____

The above has been written and signed in my presence by the above-named candidate, with whom I am personally acquainted.

Sign _____
Address _____

Date _____

In Scotland, besides the Universities, there are three licensing bodies, viz.:—

4. ROYAL COLLEGE OF PHYSICIANS, EDINBURGH;
5. ROYAL COLLEGE OF SURGEONS, EDINBURGH;
6. FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The first alone can give a qualification in Medicine; the two latter can give only a surgical qualification. Each of the surgical bodies has, however, most sensibly joined with the College of Physicians, so that a candidate can, by a single set of examinations, acquire a qualification both in Medicine and Surgery. For this reason, and as the greater must include the less, we shall only give the rules applying to these conjoint examinations. These are so nearly identical, that one set of regulations will suffice.

The Royal College of Physicians and the Royal College of Surgeons, Edinburgh, and the Royal College of Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, while they continue to give their diplomas separately under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain two separate licences—one in Medicine, and one in Surgery.

The general principle of this joint examination is, that it is conducted by a board in which each body is represented, the object being to give to students facilities for obtaining from two separate bodies, and at less expense, a double qualification in Medicine and in Surgery. Students passing these examinations successfully will be enabled to register two qualifications under the Medical Act—viz., Licentiate of the Royal College of Physicians and Licentiate of the Royal College of Surgeons, Edinburgh; and Licentiate of the Royal College of Physicians of Edinburgh and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

Candidates for these qualifications commencing professional study on or after October 1, 1866, must have been engaged in professional study during four years, and in actual attendance at a university or recognised school of medicine during not less than four winter sessions or three winter sessions and two summer sessions, and must have completed the following curriculum:—

1. Anatomy, two courses of lectures in distinct sessions, six months each.
2. Practical Anatomy, twelve months.
3. Chemistry, one course of lectures, six months.
4. Practical or Analytical Chemistry, one course of lectures, three months.
5. Physiology, not less than fifty lectures.
6. Practice of Medicine, one course of lectures, six months.
7. Clinical Medicine, extending to six months.
8. Another course of Practice of Medicine, or of Clinical Medicine, at the option of the candidate.
9. Principles and Practice of Surgery, one course of lectures, six months.
10. Clinical Surgery extending to six months.
11. Another course of Surgery, or of Clinical Surgery, at the option of the candidate.
12. Materia Medica, one course of lectures, three months.
13. Midwifery, one course of lectures, three months.
14. Practical Midwifery, attendance on at least six cases of labour.
15. Medical Jurisprudence, one course of lectures, three months.
16. Pathological Anatomy, instruction in the post-mortem rooms of a recognised hospital, three months.
17. Practical Pharmacy, instruction, three months.
18. General Hospital, attendance on the practice of a public general hospital, containing on an average not less than eighty patients, twenty-four months.
19. Proficiency in Vaccination, certified by a public vaccinator or a registered practitioner.

[Attendance for six months on the practice of a public dispensary, or of having been engaged for six months as visiting assistant to a registered practitioner.—Edinburgh.]

Students are strongly recommended to avail themselves of any opportunities they may possess of studying Ophthalmic and Mental Diseases, Natural History, Comparative Anatomy, and Practical Physiology, in addition to what is required in the curriculum.

The examinations are conducted partly in writing and partly orally. Recent dissections, anatomical specimens, chemical tests, articles of the materia medica, the microscope, surgical and obstetrical apparatus, and pathological specimens, are employed at the discretion of the examiners. Candidates at the second examination are subjected in the hospital to a practical clinical examination in Medicine and Surgery.

Candidates for the double qualification who have passed the examination in Anatomy, Physiology, and Chemistry of one or other of the licensing bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, are admissible to the second professional examination. No candidate is exempted from examination in any of the subjects of the second examination.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee of £5 (£7 7s, Glasgow), which will not be returned in the event of his being remitted to his studies.

Three Irish bodies grant licences to practise—the King and Queen's College of Physicians, the Royal College of Surgeons, and the Apothecaries' Company.

7. KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

This body consists of Fellows and Licentiates. The regulations relating to the latter are as follows:—Candidates must produce—1. Evidence of having been engaged in the study of Medicine for four years. 2. A certificate of having passed the preliminary examination of one of the recognised licensing corporations before the termination of the second year of medical study. 3. Certificates of having studied, at a school or schools recognised by the College, the following subjects, viz.:—Practical Anatomy; Anatomy and Physiology, or Institutes of Medicine; Botany; Chemistry; Practical Chemistry; Materia Medica; Practice of Medicine and Pathology; Surgery; Midwifery; Medical Jurisprudence. 4. Certificates of having attended a medico-chirurgical hospital in which regular courses of clinical lectures are delivered, together with clinical instruction, for twenty-seven months; or such hospital for eighteen months with nine months' attendance on a medical hospital, and similar courses of clinical lectures and instructions. 5. A certificate of having attended Practical Midwifery for six months at a recognised lying-in hospital, or evidence satisfactory to the College in each individual case of having attended Practical Midwifery. 6. Certificates of character from two registered physicians or surgeons.

A candidate who has already obtained a medical or surgical qualification recognised by the College is only required to produce his diploma or certificate of registration, and the certificate of Practical Midwifery, and testimonials as to character.

EXAMINATION FOR THE LICENCE IN MEDICINE.

The examination consists of two parts. The subjects of the first part or previous examination are—Anatomy, Physiology, Botany, Chemistry. The subjects of the second part or final examination are—Materia Medica, Practice of Medicine, Medical Jurisprudence, Midwifery.

All candidates for the second or final examination (with the exception below specified) (a) are examined in the Practice of Medicine at the bedside in one of the hospitals of Dublin.

Candidates qualified as follows are required to undergo the *second part* of the professional examination *only*, viz.:—1. Graduates in Medicine of a university in the United Kingdom, or of any foreign university approved by the College. 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh, who have been admitted upon examination. 3. Graduates or Licentiates in Surgery. 4. Candidates who, having completed the curriculum above mentioned, have passed the previous examination of any of the licensing corporations in the United Kingdom.

DIPLOMA IN MIDWIFERY.

Candidates already qualified in Medicine or Surgery may apply for permission to be examined for the diploma in Midwifery. The certificates required to be lodged are the same as those required from *qualified* candidates for the licence to practise Medicine.

Fees.—Fee for the licence in Medicine, £15 15s. Fee for licence in Medicine and diploma in Midwifery (for which latter there is a separate examination), if taken out within an interval of a month, £16. Fee for the diploma in Midwifery, £3 3s.

The election for Fellowship takes place annually on St. Luke's Day (October 18).

RULES AND REGULATIONS RESPECTING FEMALE CANDIDATES FOR EXAMINATION FOR A LICENCE TO PRACTISE AS MIDWIVES AND NURSE-TENDERS.

Qualifications.—Age not less than twenty-one years; certificates of character.

Preliminary Examination.—Reading, writing, and arithmetic.

Course of Instruction.—Six months' attendance on systematic lectures on Midwifery, and not less than six months' attendance on bedside instruction in a lying-in hospital or maternity recognised by the College.

Subjects for the Examinations.—Midwifery (not including operations) and Nurse-tending.

Examination fee one guinea.

(a) Candidates who are physicians or surgeons of five years' standing are exempted from the clinical and written portions of the final examination.

FORM OF MIDWIFE'S LICENCE.

We, the President and Fellows of the King and Queen's College of Physicians in Ireland, having duly examined _____ in Midwifery and Nurse-tending, and having found her to possess a competent knowledge of the same, do hereby license and authorise the said _____ to exercise the calling of a Midwife and Nurse-tender.

8. THE ROYAL COLLEGE OF SURGEONS, IRELAND.

This body grants two qualifications—that of Fellow, and Letters Testimonial equivalent to a Licentiateship. The regulations relating to the latter are as follows:—

Candidates for the Letters Testimonial of the College may present themselves either at a Special or at a Stated Examination, as follows:—

SPECIAL EXAMINATIONS.

Every registered pupil shall be admitted, upon payment of a special fee of five guineas, to a Special Examination for Letters Testimonial, if he shall have laid before the Council the following documents:—

a. A receipt shewing that he has lodged, in addition to his registration and special fees, a sum of twenty guineas in the Bank of Ireland, to the credit of the President, and for the use of the College.

b. A certificate that he has passed a preliminary examination, conducted by a board recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject.

c. A certificate shewing that he has been engaged in the study of his profession for not less than four years.

d. Certificates of attendance during three years on a hospital recognised by the Council, where clinical instruction is given.

e. Certificates of attendance on three courses of lectures on Anatomy and Physiology; three courses of lectures on the Theory and Practice of Surgery; and of the performance of three courses of Dissections, accompanied by demonstrations; also certificates of attendance on two courses of lectures on Chemistry, or one course of lectures on General and one on Practical Chemistry; one course of lectures on Materia Medica; one course of lectures on the Practice of Medicine; one course of lectures on Midwifery; one course of lectures on Medical Jurisprudence; and one course of lectures on Botany.

N.B.—The subjects for examination, and the mode of carrying these out, for a Special Examination, will be the same as those hereinafter laid down for the Stated Examinations, and any rejected candidate will only be entitled to receive back fifteen guineas of the fees lodged by him.

STATED EXAMINATIONS.

1st. Stated Examinations shall be held in the months of April, July, and November, commencing on dates of which due notice shall be given beforehand by the Council of the College, and to which *candidates cannot be admitted unless they be registered pupils*, and at which they shall be divided into two classes—junior and senior.

2nd. The Junior Class shall produce certificates of having passed a preliminary examination conducted by a board recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject; and of having attended three courses of lectures on Anatomy and Physiology; three courses of lectures on Practical Anatomy, with dissections; two courses of lectures on Chemistry; one course of lectures on Materia Medica; one course of lectures on Botany; and one course of lectures on Forensic Medicine.

3rd. This class shall be examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry.

4th. The fee for this examination shall be five guineas, in addition to the registration fee of five guineas—not to be returned in case of rejection, but to be allowed the candidate in case he presents himself a second time for examination.

5th. The Senior Class shall produce certificates of having attended three courses of lectures on the Theory and Practice of Surgery, one course of lectures on the Practice of Medicine, and one course of lectures on Midwifery; also certificates of attendance on a recognised hospital for three winter and three summer sessions.

6th. This class shall be examined in Surgery, Operative Surgery and Surgical Appliances, Practice of Medicine, Medical Jurisprudence, and Prescriptions.

7th. The fee for the Senior Class Examination shall be fifteen guineas, returnable to the candidate in case of rejection.

8th. Both of these examinations shall be conducted partly by written and partly by oral questions.

9th. In addition to the foregoing fees, a fee of one guinea is to be paid to the Registrar on handing each licentiate his diploma.

10th. Every candidate rejected at any of the stated examinations, on applying for re-examination, shall be required to pay to the College, in addition to the regular fees, the sum of two guineas to reimburse the College the necessary expense of his re-examination.

This body also grants a diploma in Midwifery, for which the following are the regulations:—

Qualifications of Candidates for the Diploma in Midwifery.—Any Fellow or licentiate of the College shall be admitted to an examination for the diploma in Midwifery upon laying before the Council the following documents:—*a.* A certificate showing that he has attended one course of lectures on Midwifery and Diseases of Women and Children, delivered by a professor or lecturer in some school of Medicine or Surgery recognised by the Council. *b.* A certificate showing that he has attended, during a period of six months, the practice of a lying-in hospital recognised by the Council; or the practice of a dispensary for lying-in women and children recognised by the Council and devoted to this branch of Surgery alone. *c.* A certificate showing that he has conducted thirty labour cases, at least.

Fees to be paid by Candidates for the Diploma in Midwifery.—The candidate pays £1 6s. for the Midwifery diploma, provided he takes it out within one month from the date of his letters testimonial; after that date the fee will be £2 2s.

9. THE APOTHECARIES' HALL OF IRELAND.

This body grants a licence to practise on the following conditions:—

1. Of having passed an examination in Arts previously to entering on professional study.

2. Of being at least twenty-one years of age, and of good moral character.

3. Of pupilage to a qualified apothecary, or of having been otherwise engaged in practical pharmacy for a period of twelve months subsequent to having passed the examination in Arts.

4. Of having spent four years in professional study.

5. Of having attended the following courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Chemistry (in a recognised laboratory), during three months; Materia Medica, during three months; Principles and Practice of Medicine and Therapeutics, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Forensic Medicine, during one summer session; instruction in the practice of vaccination.

6. Of having attended, at a recognised hospital or hospitals, the practice of Medicine and clinical lectures on Medicine, during two winter and two summer sessions; also the practice of Surgery and clinical lectures on Surgery, during one winter and one summer session.

7. Of having performed the operation of vaccination successfully under a recognised vaccinator.

The examination for the licence to practise is divided into two parts:—The first part comprehends Chemistry, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy; the second—Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

The professional examinations will be held quarterly, and will commence on the first and second Mondays in the months of January, April, July, and October.

THE HIGHER QUALIFICATIONS.

Besides the ordinary qualifications available to students who have just finished their curriculum, there are certain higher grades attainable after a certain period. Thus at the Universities the student first graduates M.B., and after certain years, with or without a special examination, proceeds to the degree of M.D. At the Royal College of Physicians in the same manner, with or without the Licentiateship, one may proceed to take the Membership of the College; but this is hardly ever done save by those who desire to practise what is called "pure" Medicine. It is by the rules of most institutions a necessary qualification for one desiring the post of physician. The reason of this limitation is that the by-laws of the College impose such restrictions on its Members that it is hardly possible for them to practise as general practitioners. Again, at the College of Surgeons, those who have obtained the qualification of M.R.C.S.E. may, after certain special study, to which we need not further here refer, present themselves for examination for the Fellowship. This stands in the same relationship to the surgical branch of our profession as does the Membership of the Royal College of Physicians to the purely medical; but, inasmuch as the restrictions are less onerous, it is also possessed by many general practitioners. These however, are not Student-qualifications, and consequently the rules and regulations relating to them are here omitted.

THE SELECTION OF A SCHOOL.

ENTRANCE SCHOLARSHIPS.

The pupil or his friends having determined in their own minds the body whose qualification is to be sought, and the consequent curriculum to be followed, the next thing is to seek the means of following out this curriculum, and of obtaining the knowledge necessary for the acquisition of the diploma. This is commonly a simple enough matter, for if a student desires to obtain the degree of M.B. Edinburgh, he naturally enters himself as a student in the University. In London it is otherwise. Here we would advise all who desire an ordinary qualification in Medicine and Surgery to look forward to those offered by the Royal Colleges of Physicians and Surgeons. The licence of the Apothecaries' Society is in many ways useful, but it does not possess the same high character as that given by the Royal College of Physicians. The curricula of the English schools are specially adapted to the regulations of these bodies, and hence there is no difficulty in obtaining what the student wants. The difficulty to be solved is, where to get it of the best quality. In other words, the student or his friends have to select one of the eleven metropolitan or of the provincial schools in which to pursue his studies. This, in many instances, is settled simply as a matter of convenience; the youth's residence, or that of some of his friends, may make them select the nearest, be it great or small. But when neither this nor any other reason is operative, the selection of a school often becomes a somewhat difficult matter. Above all, there is the old difficulty of a large school or a small. The largest schools are St. Bartholomew's, Guy's, and University College; the first two having at the same time the largest hospitals, with the exception, perhaps, of St. Thomas's, in London; but, on the other hand, University College Hospital is one of the smallest. This very effectually deals with the idea that the success of a school exactly corresponds to the size of the hospital with which it is associated. The truth is, then, the size of the hospital does not matter greatly. It is quite impossible for any one student to attend upon the whole practice of even a small hospital with advantage. A physician or surgeon finds that the number of beds he can use with advantage to himself and others is very limited; and still more is this the case with the student. But to this we must return hereafter. Again, as regards class-work, there can be no doubt that with a large body of young men enthusiasm is highly contagious; but so, too, is indifference; and as regards tutorial work there can be no question of the superiority of a small class over a large one. The place to select—for all the recognised hospitals are large enough—is where the teachers are active and enthusiastic, and have got their way to make in the world, and whose success must in great measure depend on the success of their school. University College is a good example of what may be done in this way, for they have by such means raised their

numbers to a height which is hardly manageable in so small a hospital.

The following is a list of Entrance Scholarships given at the various London hospitals :—

St. Bartholomew's Hospital.—An open Scholarship in Science, £100 for one year. Subjects: Physics, Chemistry, Botany, and Zoology. Also £50 and £40 for newly entered students in October; preliminary education.

Charing-cross Hospital.—Two Entrance Scholarships, £30 and £20. Subjects, compulsory: English, Latin, French or German, Mathematics. Optional (one only may be selected): Chemistry, Mechanics, German or French. The subjects and authors will be the same as those chosen for the London matriculation of the preceding June.

Guy's Hospital.—Two of £60 and £30; Classics, Mathematics, Modern Languages, Botany, Physics, and Chemistry.

King's College.—Three Warneford Scholarships of £25—two for three years, one for two; Divinity, Classics, Mathematics, History (English), Chemistry, Botany, and Natural Philosophy.

London Hospital.—Two Entrance Science Scholarships, £60 and £40. Two Buxton Scholarships, £30 and £20.

St. Mary's Hospital.—One Entrance Scholarship, £120; one Exhibition, £20; Natural Science.

Middlesex Hospital.—Two Entrance Scholarships, £25 and £20, tenable for two years.

University College.—Three Entrance Scholarships, £30, £20, and £10, tenable for two years.

Westminster Hospital.—Three Entrance Scholarships, £50 for two years, £50 one year, £10 two years; Latin, Mathematics, and two of French, German, or Greek.

LONDON HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians.
Sir. G. Burrows, Bart., D.C.L., F.R.S., Dr. Farre, and Dr. Harris.

Consulting Surgeon—Sir J. Paget, Bart., D.C.L., F.R.S.

Physicians.
Dr. Black.
Dr. Andrew.
Dr. Southey.
Dr. Church.

Assistant-Physicians.
Dr. Gee.
Dr. Duckworth.
Dr. Hensley.
Dr. Brunton, F.R.S.

Physician-Accoucheur.
Dr. Greenhalgh.

Assistant Physician-Accoucheur.
Dr. Godson.

Surgeons.
Mr. Holden.
Mr. Savory, F.R.S.
Mr. Callender, F.R.S.
Mr. Thomas Smith.

Assistant-Surgeons.
Mr. Willett.
Mr Langton.
Mr. Morrant Baker.
Mr. Marsh.

Ophthalmic Surgeons.
Mr. Power.
Mr. Vernon.

Casualty Physicians—Dr. Wickham Legg, Dr. Ball, Dr. Moore.
Dental Surgeon—Mr. Coleman.
Administrator of Chloroform—Mr. Mills.
Medical Registrar—Dr. Champneys.
Surgical Registrars—Mr. Butlin, Mr. Macready.

LECTURERS.

Botany—Rev. George Henslow.
Chemistry and Practical Chemistry—Dr. Russell.
Clinical Medicine—Dr. Black, Dr. Andrew, Dr. Southey, and Dr. Church.
Clinical Surgery—Mr. Holden, Mr. Savory, Mr. Callender, Mr. Thos. Smith.
Comparative Anatomy—Dr. Moore.
Dental Anatomy and Surgery—Mr. Coleman.
Descriptive and Surgical Anatomy—Mr. T. Smith and Mr. Langton.
Forensic Medicine and Hygiene—Dr. Southey.
General Anatomy and Physiology—Mr. Morrant Baker.
Histology—Dr. Klein.
Materia Medica—Dr. Brunton.
Medicine—Dr. Black and Dr. Andrew.
Mental Diseases—Dr Claye Shaw.
Midwifery and the Diseases of Women and Children—Dr. Greenhalgh.
Ophthalmic Medicine and Surgery—Mr. Power.
Pathological Anatomy—Dr. Gee.
Surgery—Mr. Savory and Mr. Callender.

DEMONSTRATIONS.

Diseases of the Ear—Mr. Langton.
Diseases of the Eye—Mr. Vernon.
Diseases of the Skin—Mr. Baker.
Mechanical and Natural Philosophy—Mr. Graham.
Morbid Anatomy—Dr. W. Legg.
Orthopædic Surgery—Mr Willett.
Practical Anatomy and Operative Surgery—Mr. Cumberbatch, and Mr. Walsham.
Practical Physiology—Dr. Shuter.
Practical Surgery—Mr. Marsh.

Medical Tutor—Dr. Moore.

This Hospital comprises a service of 710 beds, of which 676 are in the Hospital in Smithfield, and 34 are for convalescent patients at Lauderdale House, Highgate.

SCHOLARSHIPS AND PRIZES.

The following scholarships and prizes are awarded :—Open Scholarship in Science, founded 1873; subjects of examination—Physics, Chemistry, Botany, and Zoology. This scholarship, of the value of £100, tenable for one year, will be competed for on September 27 and following days. Preliminary Scientific Exhibition, founded 1873; subjects of examination—Physics, Chemistry, Botany, and Zoology. This Exhibition, of the value of £50 is awarded in October. Lawrence Scholarship and Gold Medal of the value of forty-five guineas, founded 1873, by the family of the late Sir W. Lawrence. Brackenbury Scholarship in Medicine, and Brackenbury Scholarship in Surgery, founded 1873, by the will of the late Miss Hannah Brackenbury who left £2000 for this purpose. Senior Scholarship of the value of £50—Anatomy, Physiology, and Chemistry. Junior Scholarships of the value of £50, £30, and £20 are awarded after an examination in the subjects of study of the first year at the end of the summer and winter sessions. The Jeaffreson Exhibition, of the value of £20, and tenable for two years, is awarded at the commencement of each winter session to the student who passes the best examination in the subjects of preliminary education. The Wix Prize is awarded for the best essay on the following subject—"The Physician in Chaucer's Canterbury Tales." Hichens Prize:—subject of examination—Bishop Butler's Analogy. Bentley Prize, for the best report of medical cases occurring in the wards of the Hospital during the previous year. It is expected that the reports will comprise the histories, progress, treatment, and results of not less than twelve cases, with observations thereupon. Foster Prize: subject of examination—Practical Anatomy; senior. Treasurer's Prize: subject of examination—Practical Anatomy; junior. The Kirkes Gold Medal: subject of examination—Clinical Medicine.

FEES.

Whole fee for attendance on lectures and hospital practice 105 guineas, payable by instalments, or a single payment of 100 guineas. Payment in either of these ways entitles to a perpetual ticket.

A College for resident students exists in connexion with the Hospital; Resident Warden, Dr. Norman Moore, from whom students will obtain information respecting rooms in the College, or will be advised regarding residence out of the Hospital.

All communications to be addressed to the Warden of the College, St. Bartholomew's Hospital.

ST. GEORGE'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. Wilson, Dr. Pitman.
Consulting Surgeons—Mr. Cæsar Hawkins, F.R.S., Mr. Tatum, Mr. Prescott Hewett, F.R.S.

Physicians.
Dr. Barclay.
Dr. Ogle.
Dr. Wadham.
Dr. Dickinson.

Assistant-Physicians.
Dr. Whipham.
Dr. Cavafy.

Surgeons.
Mr. Pollock.
Mr. Henry Lee.
Mr. Holmes.
Mr. Rouse.

Assistant-Surgeons.
Mr. Pick.
Mr. Haward.

Obstetric Physician—Dr. Barnes.
Ophthalmic Surgeon—Mr. Brudenell Carter.
Aural Surgeon—Mr. Dalby. *Dentist*—Mr. Vasey.

LECTURERS.—WINTER SESSION.

Chemistry and Physics—Dr. Noad.
Clinical Lectures on Diseases of Women—Dr. Barnes.
Clinical Medicine—Drs. Wadham and Dickinson.
Clinical Surgery—Messrs. Holmes and Rouse.
Descriptive and Surgical Anatomy—Mr. Pick.
Histology—Mr. Herbert Watney.
Morbid Anatomy—Dr. R. J. Lee.
Ophthalmic Surgery—Mr. Brudenell Carter.
Pathology—Dr Dickinson.
Physiological Chemistry—Dr. Ralfe.
Physiology and General Anatomy—Dr. Cavafy.
Principles and Practice of Physic—Dr. Barclay.
Principles and Practice of Surgery—Mr. Holmes.

SUMMER SESSION.

Aural Surgery—Mr. Dalby.
Botany—Dr. Whipham.
Clinical Demonstrations of Diseases of the Skin—Dr. Whipham.
Clinical Medical—Dr. Ogle.
Clinical Surgery—Mr. Pollock.
Comparative Anatomy—Dr. Brailey.
Dental Surgery—Mr. Vasey.
Materia Medica—Dr. Dickinson.
Medical Jurisprudence—Dr. Wadham.
Midwifery and Diseases of Women and Children—Dr. Barnes.
Practical Chemistry—Dr Noad.
Practical Surgery—Mr Haward.
Psychological Medicine—Dr. Blandford.

EXHIBITIONS AND PRIZES.

"The William Brown Exhibition," of £100 per annum, tenable for two years, to be competed for by perpetual pupils who have recently obtained their diploma. "The William Brown Exhibition," of £40 per annum, tenable for three years, to be competed for by students during their fourth year of study. The Brackenbury Prizes of £35 each in Medicine and Surgery, awarded annually after a competitive examination. The Treasurer's Clinical Prize of £10 10s., the gift of A. Shaw Stewart, Esq., to be competed for annually. Sir Charles Clarke's Prize for good conduct: The interest of £200 Consols, to be awarded annually to the student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A silver medal to be awarded annually for the best clinical report of medical and surgical cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the pupil of the Hospital who shall have delivered to the Surgeons the best report of not more than twelve surgical cases which have occurred in the Hospital during the preceding twelve months. Dr. Acland's Clinical Prize in Medicine will be awarded to the pupil of the Hospital who shall produce the best report of not more than twelve medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes: To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

FEES.

Perpetual pupils pay at the time of entry a compounding fee of £105.

Gentlemen are admitted to the hospital practice and lectures required for the licensing bodies on payment of the following fees—viz., £42 for the first year of study, £42 for the second year of study, and £10 10s. for each succeeding year. Pupils may also enter to the hospital practice and lectures separately.

For further particulars apply to Dr. Barclay, Treasurer, or Dr. Wadham, Dean of the school.

CHARING-CROSS HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Surgeon—Mr. H. Hancock, F.R.C.S.

Physicians.

Dr. A. J. Pollock.
Dr. A. Silver.
Dr. T. H. Green.

Assistant-Physicians.

Dr. R. Douglas Powell.
Dr. J. Mitchell Bruce.
Dr. J. Pearson Irvine.
Dr. T. Barlow.

Physician Accoucheur.

Dr. J. Watt Black.

Physician for Skin Diseases.

Mr. A. Sangster.

Medical Registrar.

Mr. W. B. Houghton.

Surgeons.

Mr. E. Canton.
Mr. F. Hird.
Mr. R. Barwell.

Assistant-Surgeons.

Mr. E. Bellamy.
Mr. J. Astley Bloxam.
Mr. R. J. Godlee.

Dental Surgeon.

Mr. John Fairbank.

Chloroformist.

Mr. Woodhouse Braine.

Surgical Registrar.

Mr. M. M. McHardy.

LECTURERS AND TEACHERS.

Anatomy—Mr. Edward Bellamy.
Bandaging, etc.—Mr. R. J. Godlee.
Botany—Mr. J. C. Saunders.
Chemistry & Practical Chemistry—Mr. C. W. Heaton; Demonstrator, Mr. T. Bolass.
Clinical Medicine—Dr. Alexander Silver.
Clinical Surgery—Mr. H. Hancock.
Comparative Anatomy—Dr. J. F. Blake.
Demonstrations and Dissections—Mr R. J. Godlee.
Dental Surgery—Mr. John Fairbank
Diseases of Children—Dr. T. Barlow.
Forensic Medicine - Dr. J. Pearson Irvine.
Materia Medica and Therapeutics—Dr. R. Douglas Powell.
Mental Diseases—Dr. L. Forbes Winslow.
Morbid Histology—Dr. J. Mitchell Bruce.
Operative Surgery—Mr. Edward Bellamy.
Pathology and Morbid Anatomy—Dr. T. Henry Green.
Physiology, Theoretical and Practical—Dr. Alexander Silver and Dr. Mitchell Bruce.
Practical Chemistry—Mr. C. W. Heaton.
Principles and Practice of Medicine—Dr. A. J. Pollock.
Principles and Practice of Midwifery and Diseases of Women—Dr J. Watt Black.
Principles and Practice of Surgery—Mr. Edwin Canton.
Public Health — Dr. J. Pearson Irvine, Mr. W. Heaton, and Mr. W. Bassie.
Skin Diseases—Mr. A. Sangster.
Surgical Pathology—Mr. J. Astley Bloxam.

SCHOLARSHIPS, MEDALS, AND PRIZES.

Two Entrance Scholarships, of the value of £30 and £20 respectively, tenable for one year, will be awarded annually in October, after a competitive examination in the following subjects:—Compulsory: English, Latin, French or German, Mathematics. Optional (only one of which may be selected): Chemistry, Mechanics, German or French. The subjects (as regards extent and the authors selected) will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding. Candidates must give notice of their intention to compete on or before Saturday, September 23, 1876. The successful Candidates will be required to enter for their medical education at Charing-cross Hospital.

The Llewellyn Scholarship of £25 is open to all Matriculated Students who have just completed their second academical year. The Examination is held at the end of the second summer session, and includes the following subjects:—Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery.

The Golding Scholarship of £15 is open to all Matriculated Students who have just completed their first academical year. The Examination is held at the end of the first summer session, and includes the following subjects:—Descriptive Anatomy, Physiology, Materia Medica, and Chemistry.

The Pereira Prize of £5 is open to all Matriculated Students who shall have completed their third academical year. It is awarded to the author of the best Clinical Reports of Cases in the Hospital during the preceding year, Medical and Surgical Cases being selected in alternate years.

Each Candidate must produce a certificate of good conduct from the Dean of the Medical School, at the time of giving in his name as a competitor: and the names of the Candidates for Scholarships are to be delivered to the Librarian one week before the first day of the examination.

The Governors' Clinical Gold Medal.—The competition for this medal is open to Matriculated Students who shall have completed, at the end of the current session, their attendance on the Medical and Surgical Practice of the Hospital. Candidates are examined on the subjects of Clinical Lectures delivered during the session, and on Medical and Surgical cases in the wards of the Hospital.

Silver Medals.—Silver Medals are awarded in all the classes.

Bronze Medals.—Where two sessions' attendance on a course are required, a Bronze Medal is awarded in the junior class, in addition to the Silver one in the senior class.

Certificates of Honour are awarded to both senior and junior students who, not being the most proficient, have yet attained a marked degree of excellence.

GUY'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir William Gull, Bart., Dr. G. Owen Rees.
Consulting Obstetric Physician—Dr. Henry Oldham.
Consulting Surgeons—Mr. J. Hilton, Mr. E. Cock.

Physicians.

Dr. S. O. Habershon.
Dr. S. Wilks.
Dr. F. W. Pavy.
Dr. W. Moxon.

Assistant-Physicians.

Dr. C. Hilton Fagge.
Dr. P. H. Pye-Smith.
Dr. Frederick Taylor.

Obstetric Physician.

Dr J. Braxton Hicks.

Assistant Obstetric Physician.

Dr. A. L. Galabin.

Medical Registrars.

Dr. Frederick Taylor.
Dr. J. F. Goodhart.

Surgeons.

Mr. J. Cooper Forster.
Mr. Thomas Bryant.
Mr. Arthur Durham.
Mr. H. G. Howse.

Assistant Surgeons.

Mr. N. Davies Colley.
Mr. R. Clement Lucas.
Mr. C. H. Golding-Bird.
Mr. W. H. A. Jacobson.

Ophthalmic Surgeons.

Mr. C. Bader
Mr. C. Higgens, *Asst.*

Dental Surgeons.

Mr. S. J. A. Salter.
Mr. H. Moon, *Asst.*

Aural Surgeon.

Mr W. Laidlaw Purves.

Surgical Registrar.

Mr. Frederic Durham.

Apothecary—Mr. James Stocker.
Curator of the Museum—Dr. Fagge.
Secretary to the School—Mr. Stocker.
Dean—Dr. F. Taylor.

WINTER COURSES.—LECTURES.

Anatomy, Descriptive and Surgical—Mr. Howse and Mr Davies Colley.
Chemistry — Dr. Debus and Dr. Stevenson.
Clinical Medicine—Dr. Habershon, Dr. Wilks, Dr. Pavy, and Dr. Moxon.
Clinical Surgery Mr. Forster, Mr. Bryant, Mr. Durham, and Mr. Howse.
Clinical Lectures on Midwifery and Diseases of Women—Dr Braxton Hicks.
Experimental Philosophy—Prof. A. W. Reinold.
Medicine—Dr. Habershon and Dr. Wilks.
Physiology and General Anatomy—Dr. Pavy and Dr Pye-Smith.
Surgery—Mr. Bryant and Mr. Arthur Durham.

DEMONSTRATIONS.

Cutaneous Diseases—Dr. F. Taylor.
Morbid Anatomy—Dr. Fagge and Dr. Goodhart.
Practical Surgery—Mr. Davies-Colley.
Practical Anatomy—Mr. R Clement Lucas, Demonstrator; Mr. C. H. Golding-Bird and Mr. W. H. A. Jacobson, Assist.-Demonstrators.
Practical Physiology—Dr. Pye-Smith.

SUMMER COURSES.—LECTURES.

Botany—Dr. Stokoe.
Clinical Medicine—Dr. Fagge, Dr. Pye-Smith, and Dr. F. Taylor.
Clinical Surgery—Mr. Davies-Colley, Mr. Clement Lucas, Mr. Golding-Bird, and Mr. Jacobson.
Clinical Lectures on Diseases of Women—Dr. A. L. Galabin.
Comparative Anatomy and Zoology—Mr. Jacobson.
Dental Surgery—Mr. Moon.
Hygiene—Dr. F. Taylor.
Materia Medica and Therapeutics—Dr. Moxon.
Medical Jurisprudence—Dr. Alfred S. Taylor.
Mental Diseases—Dr. Savage.
Midwifery and Diseases of Women—Dr. Braxton Hicks.
Ophthalmic Surgery—Mr. Bader.
Pathology—Dr. Fagge.

DEMONSTRATIONS.

Morbid Histology—Mr. Howse.
Practical Chemistry—Dr. Debus.
Operative Surgery—Mr. Davies-Colley.

This Hospital contains 695 beds.

PRIZES.

For First Year's Students.—Entrance Examination, commencing October 9, in Classics, Mathematics, Modern Languages, Chemistry, Botany, and Physics: Prizes £60 and £30. At the end of the summer session, in Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Comparative Anatomy: Prizes, £50, £25, and £10 10s. (presented by one of the Governors). *For Second Year's Students.*—In the winter session, the Michael Harris Prize of £10 in Anatomy. Summer session, examination in Anatomy and Physiology: Prizes £25 and £10; the Sands-Cox Scholarship of £15 per annum, tenable for three years—subjects, Physiology and Elementary Physics. *For Third Year's Students.*—Summer session, examination in Medicine, Surgery, Midwifery, and Medical Jurisprudence. *For Senior Students.*—The Treasurer's Gold Medal for Clinical Medicine; the Treasurer's Gold Medal for Clinical Surgery; the Gurney Hoare Prize of £25 for Clinical Medicine and Surgery.

FEES.

The fees for hospital practice and lectures are as follows:—The payment of one hundred guineas in one sum on entrance, or in two moieties at the commencement of the first winter and of the following summer session, entitles a student to a perpetual ticket.

Payment may be made by instalments at the commencement of each sessional year, as follows:—First year, £40; second year, £40; third year, £30 (on payment of this instalment the student is entitled to a perpetual ticket). Materials used in practical courses are charged extra.

For further information apply to the Dean, Dr. F. Taylor; or the Medical Secretary, Mr. J. Stocker.

ST. MARY'S HOSPITAL.

MEDICAL OFFICERS.

Consulting Medical Officers.
Sir James Alderson, M.D., F.R.S., Dr. Chambers, Dr. Sibson, F.R.S.; Mr. Coulson, Mr. Lane, Mr. White Cooper.

Physicians.
Dr. Handfield Jones.
Dr. Sieveking.
Dr. Broadbent.

Surgeons.
Mr. Spencer Smith.
Mr. Haynes Walton.
Mr. James R. Lane.

Assistant-Physicians.
Dr. Cheadle.
Dr. Lawson.
Dr. Shepherd.

Assistant-Surgeons.
Mr. Norton.
Mr. Edmund Owen.
Mr. Herbert Page.

Physician-Accoucheur—Dr. Alfred Meadows.
Assistant Physician-Accoucheur—Dr. Wiltshire.
Physicians in charge of the Department for Diseases of the Skin—Dr. Handfield Jones, F.R.S., Dr. Cheadle.
Surgeon in charge of the Ophthalmic Department—Mr. Haynes Walton.
Surgeon in charge of the Department for Diseases of the Throat—Mr. Norton.
Aural Surgeon—Mr. G. Field.
Surgeon-Dentist—Mr. Howard Hayward.
Instructor in Vaccination—Mr. W. A. Sumner.

LECTURERS.—WINTER SESSION.

Anatomy—Mr. Norton.
Clinical Medicine—Dr. Handfield Jones, Dr. Sieveking, and Dr. Broadbent.
Clinical Surgery—Mr. Spencer Smith, Mr. Haynes Walton, and Mr. J. R. Lane.
Chemistry and Natural Philosophy—Dr. C. R. A. Wright.
Dental Surgery—Mr. Howard Hayward.
Dissections—Mr. J. G. Garbutt Demonstrator; Mr. G. H. Hetherington, Assistant Demonstrator.
Experimental Physiology—Dr. Shepherd.
Medicine—Dr. Chambers and Dr. Broadbent.
Pathology—Dr. Cheadle.
Physiology—Dr. Lawson.
Surgery—Mr. James R. Lane and Mr. Edmund Owen.
Practical Surgery—Mr. Herbert Page.

SUMMER SESSION.

Aural Surgery—Mr. G. Field.
Botany—Mr. Helmsley.
Comparative Anatomy—Mr. St. George Mivart.
Diseases of the Skin—Dr. Cheadle.
Medical Jurisprudence—Dr. Randall.
Materia Medica—Dr. Farquharson.
Midwifery—Dr. Meadows and Dr. Wiltshire.
Ophthalmic Surgery—Mr. Haynes Walton.
Practical Chemistry—Dr. C. R. A. Wright.

Demonstrations in Morbid Anatomy—Dr. Mahomed.

The Hospital contains 170 beds—68 medical, and 102 surgical. There are special departments for the Diseases of Women and Children, and for Diseases of the Eye, the Ear, the Skin, and the Throat.

SCHOLARSHIPS, PRIZES, ETC.

Three scholarships in Natural Science, each of a total value of £120, tenable for three years, and an exhibition in Natural Science, for one year, value £20. One of the scholarships and the exhibition are awarded by open competitive examination at the commencement of the winter session. For the year 1876 two extra scholarships will be awarded; one in Natural Science of a total value of £100, and one in Classics and Mathematics of £35. A scholarship in Anatomy, of the annual value of £20 (the holder of which is styled Assistant-Demonstrator, and assists in the teaching of Practical Anatomy), is offered for competition amongst those students who have completed their second winter session; and a scholarship in Pathology, of the value of £20 (the holder of which is styled Assistant-Curator), for those students who have completed their third winter session. Examinations for prizes are held at the termination of each session in the various classes for students of the first, second, and third year. Two Prosectors are appointed annually, who each receive a certificate and £5 for their services in the dissecting room.

FEES.

The entrance fee for general students may be paid in instalments by arrangement with the Dean of the School. Students who have kept the two years' course at the University of Cambridge are admitted as perpetual pupils on payment of 55 guineas, and those who have kept a portion of the course elsewhere, at a proportionate reduction. A fee of £1 1s. is required to be paid to the library and reading-room. Instruction in vaccination can be obtained; fee £1 1s.

Further information may be obtained from Dr. Shepherd, Dean of the School; or from the Registrar, at the Hospital.

KING'S COLLEGE HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir Thos. Watson, Bart., M.D., Dr. George Budd, Dr. Arthur Farre, Dr. W. A. Guy, Dr. W. O. Priestley, Dr. A. B. Garrod.

Physicians.
Dr. George Johnson.
Dr. Lionel S. Beale.
Dr. Alfred B. Duffin.
Dr. William Playfair.
Dr. J. Burney Yeo.

Surgeons.
Sir W. Fergusson, Bart.
Mr. John Wood.
Mr. Henry Smith.

Assistant-Surgeons.
Mr. H. Royes Bell.
Mr. William Rose.

Dental Surgeon.
Mr. S. Hamilton Cartwright.

Assistant-Physicians.
Dr. David Ferrier.
Dr. E. B. Baxter.
Dr. John Curnow.
Dr. T. C. Hayes.

Ophthalmic Surgeon.
Mr. J. Soelberg Wells.

Aural Surgeon.
Dr. Urban Pritchard.

Vaccinator—Mr. R. W. Dunn.
Pathological Registrar—Dr. Urban Pritchard.
Chlorofarmist—Mr. Charles Moss.
Registrars—Mr. A. B. Barrow and Mr. A. Nicholson.

LECTURES.

Anatomy, Descriptive and Surgical—Dr. John Curnow.
Botany—Mr. Robert Bentley.
Chemistry and Practical Chemistry—Mr. C. L. Bloxam; Mr. W. N. Hartley, Demonstrator; Mr. J. M. Thomson, Assist.-Demonstrator.
Clinical Medicine—Dr. George Johnson.
Clinical Surgery—Sir William Fergusson, Bart.
Comparative Anatomy—Mr. A. H. Garrod.
Dental Surgery—Mr. S. Hamilton Cartwright.
Forensic Medicine—Dr. D. Ferrier.
Hygiene—Dr. W. A. Guy.
Materia Medica and Therapeutics—Dr. E. B. Baxter.
Principles and Practice of Medicine—Dr. L. S. Beale.
Obstetric Medicine, and the Diseases of Women and Children—Dr. W. Playfair.
Ophthalmology—Dr. J. Soelberg Wells.
Pathological Anatomy—Dr. A. B Duffin.
Physiology and Practical Physiology—Dr. Gerald F. Yeo.
Psychological Medicine—Dr. Edgar Sheppard.
Principles and Practice of Surgery—Mr. John Wood.

Dean of the Faculty—Professor Bentley.
Sub-Dean and Medical Tutor—Mr. F. R. Cross.

University of London Preliminary Scientific Examination.—Special courses of lectures and demonstrations are given to

meet the requirements of the University of London for this examination.

SCHOLARSHIPS AND PRIZES.

Warneford Scholarships: "For the encouragement of the previous education of medical students," two scholarships of £25 per annum for three years, one of £25 per annum for two years, and "For the encouragement of resident medical students," one scholarship of £25 per annum for two years. College Scholarships: The following are given every year to matriculated students of this department:—1. One of £40 for two years, open to students of the third and fourth years; 2. One of £30 for one year, open to students of the second year; 3. One of £20 for one year, open to students of the first year. Daniell Scholarship: £20, tenable for two years, is open to every student of the College who has worked in the laboratory for at least six months. Sambrooke Registrarships: Two of £50 every year. Science Exhibitions: One annually of £25, tenable for two years, for proficiency in Mathematics, Mechanics, Physics, Chemistry, Botany, and Zoology. Leathes Prizes: Bible and Prayer-book to two matriculated medical students. Warneford Prizes: £40 is expended in the purchase of medals and books as prizes to two matriculated medical students. Class Prizes are awarded annually for proficiency in each subject of study; these consist of books of the value of £3. Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session, and two Surgical Clinical Prizes of the same value, are given for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of the late Dr. Todd. It consists of a bronze medal and books to the value of £4 4s. Tanner Prize: £10 for proficiency in the study of Obstetric Medicine.

FEES.

The fees, amounting to £105, may be paid either in one sum of £100 on matriculation, or in three amounts at the commencement of each winter session. Students are, however, recommended to add to the above the fee for attendance on the medical tutor's class for one year—viz., £3 3s.; or in the case of those preparing for the Preliminary Scientific Examination of the University of London, £5 5s. All resident students are required to attend the tutor during their first year.

For further information apply to Professor Bentley, Dean of the Medical Faculty.

LONDON HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. Herbert Davies.
Consulting Surgeons—Mr. Luke, Mr. John Adams, and Mr. Curling.

Physicians.	*Surgeons.*
Dr. Andrew Clark.	Mr. Hutchinson.
Dr. Ramskill.	Mr. Maunder.
Dr. Langdon Down.	Mr. Couper.
Dr. Hughlings-Jackson.	Mr. Rivington.
Dr. Sutton.	Mr. Jas Adams.
Dr. Fenwick.	Mr. Waren Tay.
	Mr. McCarthy.
Assistant-Physicians.	
Dr. Woodman.	
Dr. Stephen Mackenzie.	*Assistant-Surgeon.*
Dr. A. E. Sansom.	Mr. Reeves.

Obstetric Physician—Dr. Palfrey. *Surgeon-Dentist*—Mr. A. W. Barrett.
Surgeons to the Ophthalmic Department—Mr. James Adams and Mr. Waren Tay.
Surgeon to the Aural Department—Mr. Rivington.
Surgeon to the Skin Department—Mr. McCarthy.
Physician to the Skin Department—Dr. S. Mackenzie.

LECTURERS.

Anatomy and Pathology of the Teeth—Mr. A. W. Barrett.
Botany—Mr. John Gilbert Baker.
Chemistry—Dr. C. Meymott Tidy.
Comparative Anatomy—Dr. E. B. Aveling.
Descriptive and Surgical Anatomy—Mr. Walter Rivington.
Diseases of the Throat and Use of the Laryngoscope—Dr. Morrell Mackenzie.
Forensic Medicine—1. Toxicology, Mr. J. E. D. Rodgers; 2. Medical Jurisprudence and Public Health, Dr. C. Meymott Tidy.
Materia Medica and General Therapeutics—Dr. M. Prosser James.
Medicine—Dr. Herbert Davies and Dr. S. Fenwick.
Midwifery and Diseases of Women—Dr. James Palfrey.
Pathology and Demonstrations of Morbid Anatomy—Dr. H. G. Sutton.
Practical Anatomy—
Practical Chemistry—Dr. C. Meymott Tidy.
Practical Histology, and Use of the Microscope—Mr. J. McCarthy.
Physiology and General Anatomy—Mr. J. McCarthy.
Ophthalmic Surgery—Mr. J. Couper.
Special Operative Surgery—Mr. C. F. Maunder.
Surgery—Mr. John Couper.

Secretary to the College Board—Mr. R. Kershaw.

SCHOLARSHIPS AND PRIZES.

Nine scholarships will be offered for competition during the ensuing winter and summer sessions.

Two Entrance Scholarships in Natural Science, of the value of £60 and £40 respectively, will be offered for competition at the end of September. The subjects will be the same as those for the Preliminary Scientific (M.B.) Examinations at the University of London. (See the University Calendar for details.)

The two Buxton Scholarships will be awarded in October to the students who distinguish themselves most in the subjects appointed by the General Council of Medical Education and Registration as the subjects of the preliminary examinations. 1. A scholarship, value £30, to the student placed first in the examination. 2. A scholarship, value £20, to the student placed second in the examination. 3. A scholarship, value £20, will be awarded to the first year student who shall pass in April, 1877, the best examination in Human Anatomy. 4. A scholarship, value £25, will be awarded to the first year or second year student who shall pass at the end of the winter session the best examination in Anatomy, Physiology, and Chemistry. 5. A hospital scholarship, value £20, for proficiency and zeal in Clinical Medicine. 6. A hospital scholarship, value £20, for proficiency and zeal in Clinical Surgery. 7. A hospital scholarship, value £20, for proficiency and zeal in Obstetrics (awarded at the end of June, 1877). A prize of £5 is also awarded to the student who has attended most midwifery cases for the Hospital during the previous twelve months. The Duckworth-Nelson Prize, value £10, will be awarded by competition at the end of the winter session, 1877, and will be open to all students who have not completed their education. The subjects of examination will be Practical Medicine and Surgery. Money prizes, to the value of £60 per annum, are awarded by the House Committee to the most meritorious of the dressers in the out-patient rooms.

FEES.

Perpetual fee for attendance on all the lectures with two years' Practical Anatomy, and for attendance on medical and surgical practice, qualifying for examination at most of the medical and surgical boards, 90 guineas if paid in one sum, or 100 guineas in three instalments of 40, 35, and 25 guineas at the commencement of the first, second, and third years respectively; composition fee for gentlemen entering at or before the beginning of their second winter session, their first year having been spent elsewhere, 70 guineas; perpetual fee for lectures alone, 50 guineas; perpetual fee for hospital practice alone, 50 guineas. Extra fees: Practical Chemistry (for apparatus, etc.), £2 2s.; subscription to the library (compulsory), £1 1s. The composition fee is payable in two instalments of 40 and 30 guineas.

Students in Arts of Universities where residence is required, who may have attended lectures in Anatomy, Physiology, Chemistry, Botany, or Comparative Anatomy, and have obtained signatures for such attendance, fulfilling the requirements of the Examining Boards, may become pupils of the London Hospital, eligible for all hospital prizes and appointments, on payment of the fee of fifty guineas for practice (perpetual) at the Hospital.

Communications addressed to the Secretary, at the London Hospital Medical College, Turner-street, Mile-end, London, E., will receive immediate attention.

MIDDLESEX HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians.—Dr. Francis Hawkins, Dr. A. P. Stewart. Dr. Goodfellow.
Consulting Surgeon.—Mr. Shaw.
Consulting Dental Surgeon.—Mr. Tomes, F.R.S.

Physicians.	*Surgeons.*
Dr. Henry Thompson.	Mr. Nunn.
Dr. Greenhow, F.R.S.	Mr. Hulke, F.R.S.
Dr. Cayley.	Mr. Lawson.
Assistant-Physicians.	
Dr. Robert King.	*Assistant-Surgeons.*
Dr. G. H. Evans.	Mr. Morris.
Dr. Sidney Coupland.	Mr. Andrew Clark.

Obstetric Physician—Dr. Hall Davis.
Assistant Obstetric Physician—Dr. Arthur Ellis.
Ophthalmic Surgeon—Mr. Critchett.
Dental Surgeon—Mr. Turner.
Curator of Museum and Pathologist—Dr. Sidney Coupland.
Registrars—Dr. Henry Humphreys, M.A., and Dr. R. W. Lyel.
Resident Medical Officer—Mr. Lucas.
Chloroformist—Mr. G. Everitt Norton.

LECTURES.—WINTER SESSION.

Chemistry—Mr. Wm. Foster.
Clinical Lectures on Medicine and Surgery—The Physicians and Surgeons.
Clinical Lectures on Diseases of Women and Children—Dr. J. Hall Davis.
Descriptive and Surgical Anatomy—Mr. Morris.
Pathological Anatomy—Dr. Cayley.
Physiology and General Anatomy—Mr. B Thompson Lowne.
Practical Demonstrations on Diseases of the Eye—Mr. Critchett.
Practical Surgery—Mr. Lawson, Mr. Morris.
Principles and Practice of Medicine—Dr. Greenhow.
Principles and Practice of Surgery—Mr. Hulke.

SUMMER SESSION.

Botany—Mr. Hensman.
Clinical Lectures on Medicine and Surgery—The Physicians and Surgeons.
Clinical Lectures on Diseases of the Eye—Mr. Critchett.
Comparative Anatomy and Zoology—Mr. Hensman.
Materia Medica and Therapeutics—Dr. Thorowgood.
Medical Jurisprudence—Dr. R. King.
Midwifery and Diseases of Women and Children—Dr. J. Hall Davis.
Practical Demonstrations on Diseases of the Skin—Dr. G H Evans.
Practical Demonstrations on Diseases of Women and Children—Dr. Arthur Edis.
Practical Demonstrations on Diseases of the Larynx and Ear—Mr. A. Clark.
Practical Physiology and Histology—Mr. B. Thompson Lowne.
Practical Chemistry—Mr. Wm. Foster.
Psychological Medicine—Dr. Henry Rayner.
Public Health—Dr. G. H. Evans.

This Hospital contains upwards of 300 beds, of which 185 are for surgical, and 120 for medical cases. There is a special department for cancer cases, affording accommodation for thirty-three in-patients, whose period of residence in the Hospital is unlimited. Wards are also appropriated for the reception of cases of uterine disease and of syphilis, and beds are set apart for patients from diseases of the eye. There are special out-patient departments for diseases of the skin, the throat, the eye, and ear.

PRIZES AND SCHOLARSHIPS.

Two Entrance Scholarships of the annual value of £25 and £20, tenable for two years, are afforded for competition at the commencement of the winter session.

Two Broderip Scholarships of the annual value of £30 and £20, tenable for two years, and a clinical prize of ten guineas, are annually awarded to those students who pass the most satisfactory examination at the bedside, and in the post-mortem room.

The Murray Scholarship is open to all general students who have entered since April 30, 1873. It will be awarded in May, 1877. Examinations in Medicine, Surgery, and Midwifery.

The Governors' Prize of twenty guineas is awarded annually to the student who shall have most distinguished himself during his three years' curriculum.

FEES.

The fee for attendance on the hospital practice and lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries is £90 if paid in advance, or £35 on entrance, £35 at the beginning of the second winter session, £20 at the beginning of the third winter session, and £10 for every additional year's attendance.

Dental students who intend to become Licentiates in Dental Surgery of the Royal College of Surgeons are admitted to attend the requisite courses of lectures and hospital practice on payment of a fee of forty guineas, either in one payment, or by instalments of twenty-five guineas on entrance, and fifteen guineas at the beginning of the second winter session.

ST. THOMAS'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Honorary Consulting Physicians—Dr. Barker, Dr. J. Risdon Bennett.
Honorary Consulting Surgeon—Mr. F. Le Gros Clark.

Physicians.
Dr. Peacock.
Dr. Bristowe.
Dr. Murchison.
Dr. Stone.

Obstetric Physician.
Dr. Gervis.

Assistant-Physicians.
Dr. Ord.
Dr. John Harley.
Dr. Payne.

Assistant Obstetric Physician.
Dr. Cory.

Resident Assistant-Physician.
Dr. Starkey.

Surgeons.
Mr. Simon.
Mr. Sydney Jones.
Mr. Croft.
Mr. Mac Cormac.

Ophthalmic Surgeon.
Mr. Liebreich.

Assistant-Surgeons.
Mr. Francis Mason.
Mr. W. W. Wagstaffe.
Mr. A. O. MacKellar.

Dental Surgeon.
Mr. J. W. Elliott.

Assistant Dental Surgeon.
Mr. W. G. Ranger.

Resident Assistant-Surgeon.
Mr. H. H. Clutton.

Demonstrator of Morbid Anatomy—Dr. Greenfield.
Analytical Chemist of the Hospital—Dr. Albert J. Bernays.
Curator to the Museum—Mr. C. Stewart.
Apothecary—Mr. R. W. Jones.
Medical Registrar—Dr. T. C. Charles.
Surgical Registrar—Mr. C. H. Newby.

LECTURES.—WINTER SESSION.

Chemistry—Dr. Albert J. Bernays.
Demonstrations—The Anatomical Lecturers, Dr. R. W. Reid, and Anatomical Assistants.
Descriptive Anatomy—Mr. Francis Mason and Mr. W. W. Wagstaffe.
General Pathology—Dr. Payne.
Physics and Natural Philosophy—Dr. Stone.
Physiology and General Anatomy—Dr. Ord and Dr. John Harley.
Demonstrations in Physiology Dr. T. C. Charles.
Morbid Anatomy and Practical Pathology—Dr. Greenfield.
Practical and Manipulative Surgery—Mr. Croft and Mr. MacKellar.
Special Anatomical and Microscopical Demonstrations—Mr. Rainey.
Surgery—Mr. Sydney Jones and Mr. Mac Cormac.
Theory and Practice of Medicine—Dr. Bristowe and Dr. Murchison.

SUMMER SESSION.

Botany—Mr. A. W. Bennett.
Comparative Anatomy—Mr. C. Stewart.
Forensic Medicine—Dr. Stone.
Materia Medica—
Mental Diseases—Dr. William Rhys Williams.
Midwifery—Dr. Gervis.
Ophthalmic Surgery—Mr. Liebreich
Practical and Manipulative Surgery—Mr. Croft and Mr. MacKellar.
Practical Chemistry—Dr. Albert J. Bernays.
Practical Physiology—Dr. Ord and Dr. John Harley.
State Medicine—Dr. A. Carpenter.

PRIZES AND APPOINTMENTS.

First Year's Prizes.—Winter: Entrance Scholarships of £60 and £40, awarded after an examination in Physics, Chemistry, Botany, and Zoology: the Wm. Tite Scholarship of £30; College Prizes—£20 and £10. Summer Prizes: £15, £10, and £5.

Second Year's Prizes.—Winter: The College Scholarship of 40 guineas, tenable for two years; College Prizes—£20 and £10. Summer Prizes: £15, £10, and £5. The Dresserships and the Clinical and Obstetrical Clerkships are open to students who have passed the primary examinations at the Royal College of Surgeons.

Third Year's Prizes.—Winter: £20, £15, and £10. The Cheselden Medal, awarded after a special examination in Surgical Anatomy and Surgery. The Mead Medal, awarded after a special examination in Practical Medicine and Hygiene. The Solly Medal, with a prize of at least 10 guineas, for a collection of surgical reports. The Treasurer's Gold Medal, for general proficiency during the entire course of study. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the third or fourth year's students for a physiological essay, to be illustrated by preparations.

FEES.

Gentlemen are informed that the admission fees to practice and to all the lectures may be paid in one of two ways:—1st. 100 guineas, paid on entrance, entitle a student to unlimited attendance. 2nd. Payment by three instalments—namely, of £40 at the beginning of the first year, £40 at the beginning of the second year, and £30 at the beginning of the third year—entitles a student after payment of the third instalment to unlimited attendance. Special entries may be made to any course of lectures, or to the hospital practice.

There are special departments for diseases of the eye, diseases of women and children, vaccination, diseases of the skin, diseases of the teeth, and mental diseases.

For further information, apply to Mr. Whitfield, Medical Secretary, St. Thomas's Hospital, London, S.E.

WESTMINSTER HOSPITAL.

HOSPITAL STAFF.

Consulting Physicians and Surgeons—Dr. Kingston, Dr. Radcliffe, Mr. Lynn, Mr. Brooke, Mr. Barnard Holt, Mr. Holthouse.

Physicians.
Dr. Basham.
Dr. Fineham.
Dr. Sturges.

Assistant-Physicians.
Dr. Allchin.
Dr. Donkin.
Dr. De Havilland Hall.

Surgeons.
Mr. Cowell.
Mr. Richard Davy.
Mr. Macnamara.

Assistant-Surgeons.
Mr. T. Cooke.
Mr. T. Bond.
Mr. Keene.

Obstetric Physician—Dr. Potter.
Assistant Obstetric Physician—Dr. Grigg.
Surgeon in charge of the Ophthalmic Department—Mr. Cowell.
Surgeon in charge of the Skin Department—Mr. Bond.
Surgeon in charge of the Aural Department—Mr. Keene.
Dental Surgeon—Mr. Walker.

Medical Registrar.
Dr. A. Hughes Bennett.

Surgical Registrar.
Mr. W. R. Cheyne.

LECTURERS.

Anatomy—Mr. Richard Davy.
Aural Surgery—Mr. Keene.
Botany—Mr. E. M. Holmes.
Chemistry—Dr. Dupré.
Clinical Medicine—Dr. Basham, Dr. Radcliffe, Dr. Fiocham, Dr. Sturges.
Clinical Surgery—Mr. Holt, Mr. Holthouse, Mr. Cowell, Mr. Davy, Mr. Macnamara.
Comparative Anatomy—Dr. Carter Blake.
Dental Surgery—Mr. Walker.
Diseases of the Skin—Mr. Bond.
Forensic Medicine and Hygiene—Dr. Dupré, Mr. Boud.
Materia Medica and Therapeutics—Dr. Phillips.
Medicine — Dr. Fincham, Dr. Sturges.
Metallurgy—Dr. Dupré.
Midwifery and Diseases of Women—Dr. Potter.
Natural Philosophy—Mr. Brooke.
Ophthalmic Surgery—Mr. Cowell.
Pathology and Morbid Anatomy—Dr. Allchin.
Physiology—Dr. Maclure.
Practical Chemistry—Dr. Dupré.
Practical Surgery—Mr. Cowell.
Practical Physiology and Histology—Dr Allchin.
Psychological Medicine—Dr. Sutherland.
Surgery—Mr. Cowell.

Dean of the School—Mr. Cowell. *Sub-Dean and Tutor*—Dr. Allchin.
Tutor—Dr. De Havilland Hall.

DEMONSTRATORS.

Anatomy—Mr. Walter Ottley, M.B.
Morbid Anatomy—Dr. A. Hughes Bennett, Mr. Cheyne.
Minor Surgery and Bandaging—Mr. W. R. Cheyne.

In addition to the practice of the Hospital, which contains 191 beds, the general students of this school are admitted to the practice of the Royal Westminster Ophthalmic Hospital, and to that of the National Hospital for Epilepsy and Paralysis.

PRIZES.

There are three Entrance Scholarships: the Fence, value £50 a year, tenable for two years; the Houldsworth, £50 for one year; and a third, £10, tenable for two years; an Exhibition in Anatomy, Physiology, and Chemistry for first year's men, a Scholarship of twenty guineas in Anatomy and Physiology for second year's men, the Frederic Bird Prize and Medal, value £15, the Chadwick Prize of the value of £21 for general proficiency, and two clinical prizes of the value of five guineas each. Certificates of honour are also awarded to the most meritorious students.

FEES.

The entry fee to lectures and hospital practice required by the College of Physicians and Surgeons and the Society of Apothecaries may be paid in one sum of £80, which is perpetual; in two payments of £42 and £40 each, at the commencement of the first two years; or in four payments of 28, 14, 25, and 13 guineas respectively, at the commencement of the first four sessions.

Full particulars as to courses of lectures and mode of instruction will be found in the published Calendar, and any further information may be obtained by personal application to Mr. Cowell, the Dean of the School, or to Dr. Allchin, the Sub-Dean.

UNIVERSITY COLLEGE HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Physicians.
Sir William Jenner, Bart.
Dr. Reynolds.
Dr. Wilson Fox.
Dr. Sydney Ringer.
Dr. H. Charlton Bastian.

Obstetric Physician.
Dr. Graily Hewitt.

Physician to the Skin Infirmary.
Dr. W. Tilbury Fox.

Assistant Physicians.
Dr F. T. Roberts.
Dr. W. R. Gowers.
Dr. G. V. Poore.

Assistant Obstetric Physician.
Dr. John Williams.

Surgeons.
Mr. Erichsen.
Mr. Marshall.
Mr. Berkeley Hill.
Mr. Christopher Heath.

Assistant-Surgeons.
Mr. Marcus Beck.
Mr. A. Barker.

Ophthalmic Surgeons.
Mr. Wharton Jones.
Mr. J. F. Streatfeild.

Dental Surgeon.
Mr. G. A. Ibbetson.

Assistant Teachers of Clinical Medicine—Dr. F. T. Roberts and Dr. W. R. Gowers.
Assistant-Teachers of Clinical Surgery—Mr. Marcus Beck and Mr. A. Barker.
Assistant-Medical Officer in the Skin Department and Resident Medical Officer—Dr. H. R. Crocker.

LECTURES.—WINTER SESSION.

Chemistry—Dr. Williamson.
Clinical Medicine—Sir W. Jenner, Dr. Reynolds, Dr. W. Fox, Dr. S. Ringer, Dr. H. C. Bastian, Dr. Roberts, Dr. Gowers.
Clinical Midwifery—Dr. G. Hewitt.
Clinical Surgery—Mr. Marshall, Sir H. Thompson, Mr. C. Heath, Mr. W. Jones, Mr. Streatfeild.
Descriptive Anatomy—Mr. Ellis.
Demonstrations—Mr. Ellis, Mr. G. D. Thane, Mr. T. E. Maclean, Mr. L. S. Jameson.
Histology and Practical Physiology—Dr. B. Sanderson.
Medicine—Dr. J. R. Reynolds.
Physiology and General Anatomy—Dr. B. Sanderson.
Skin Diseases—Dr. T. Fox.
Surgery—Mr. Marshall

SUMMER SESSION.

Botany—Mr. Oliver.
Comparative Anatomy—Mr. E. R.—Lankester.
Dental Surgery—Mr. Ibbetson.
Forensic Medicine—Dr. Maudsley.
Hygiene—Dr. Corfield.
Materia Medica—Dr. Ringer.
Mental Diseases—Dr. Sankey.
Midwifery—Dr. Graily Hewitt.
Morbid Anatomy and Pathology—Dr. H. C. Bastian.
Natural Philosophy—Prof. G. C. Foster.
Ophthalmic Surgery—Mr. W. Jones
Practical Chemistry—Dr. Williamson.
Practical and Operative Surgery—Mr. B. Hill, Mr. M. Beck, Mr. E. A. Barker.
Practical Pharmacy—Mr. Gerrard.
Skin Diseases—Dr. T. Fox.

SCHOLARSHIP AND EXHIBITIONS.

The Atkinson-Morley Surgical Scholarship, of £45 per annum, tenable for three years, is awarded every year for proficiency in the theory and practice of Surgery. The Sharpey Physiological Scholarship, of about £70 a year, for proficiency in Biological Science. The Filiter Prize of £30, for proficiency in Pathological Anatomy. Dr. Fellowes' Clinical Medals, one gold and one silver, each winter and summer session, and certificates of honour, for reports and observations on the medical cases of the Hospital. The Liston Gold Medal, and certificates of honour, for reports and observations on the Surgical cases in the Hospital. The Alexandra Bruce Gold Medal, for Pathology and Surgery. The Cluff Memorial Prize, awarded every other year for proficiency in Anatomy, Physiology and Chemistry. Gold and silver medals, as well as certificates of honour, are awarded as class prizes. The Jews' Commemoration Scholarship of £15 a year, tenable for two years, for general proficiency in the Faculty of Arts or of Science, for students of one year's standing, and the Clothworkers' Exhibition for Chemistry and Physics, of £50 a year, tenable for two years, may be held by students who, after obtaining it, enter the Medical Faculty.

ENTRANCE EXHIBITIONS.

Three Entrance Exhibitions, of the respective values of £30, £20, and £10 per annum, tenable for two years, are awarded upon examination to gentlemen who are about to commence their first winter's attendance in a medical school.

FEES.

For the lectures and hospital practice for the licences of the Royal College of Physcians, Society of Apothecaries, and M.R.C.S., first year, £47 16s.; second, £39 8s.; third £14 7s.; fourth year, £4 4s.; perpetual, £105 15s.; for the hospital practice alone, £27.

Further information and detailed prospectuses may be obtained at the Office of the College.

PROVINCIAL MEDICAL SCHOOLS.

OXFORD.

There is no complete and perfect School of Medicine in connexion with the University of Oxford, but classes or lectures may be attended.

Professors, &c., at the University Museum.—Regius and Clinical Professor of Medicine—H. W. Acland, M.D., D.C.L., F.R.S. Savilian Professor of Astronomy—Rev. C. Pritchard, M.A., F.R.S. Savilian Professor of Geometry—H. J. S. Smith, M.A., F.R.S. (Keeper of the University Museum). Experimental Physics—R. B. Clifton, M.A., F.R.S. Natural Philosophy—Rev. B. Price, M.A., F.R.S. Geology—J. Prestwich, M.A., F.R.S. Mineralogy—N. Story Maskelyne, M.A., F.R.S. Chemistry—W. Odling, M.A., F.R.S.; Assistant—W. W. Fisher, M.A. Linacre Professor of Physiology—G. Rolleston, M.D., F.R.S. Demonstrator—C. Robertson. Assistants—W. H. Jackson, B.A.; George Coates, B.A. Zoology—J. O. Westwood, M.A., F.L.S. Demonstrator at Sanitary Laboratory—W. F. Donkin, M.A. Radcliffe Librarian—H. W. Acland, M.D., F.R.S. Sub-Librarian—John Haines. Lee's Readers (Christchurch): Chemistry—A. G. V. Harcourt, M.A., F.R.S.; Physics—R. E. Baynes, M.A.; Anatomy—J. Barclay Thompson, M.A. Botanic Garden: Professor—M. A. Lawson, M.A.

Students may also be admitted to the practice of the Radcliffe Infirmary.

CAMBRIDGE.

The winter session will commence on October 11. The following is a list of the classes and lectures in the Cambridge University School of Medicine:—

WINTER COURSES.

Anatomy—Professor Humphry and Dr. Wilson.
Anatomy and Physiology—Professor Humphry.
Chemistry—Professor Liveing.
Dissections — Professor Humphry and the Demonstrator.
Materia Medica—Professor Latham.
Medicine—Professor Paget.
Physics—Professor Maxwell.
Practical Chemistry — Professor Liveing and Mr. Hicks.
Practical Physiology—Dr. Michael Foster.
Zoology and Comparative Anatomy —Professor Newton.
Dissections—Mr. Bridge.

SUMMER COURSES.

Botany—Professor Babington.
Chemistry and Practical Chemistry—Professor Liveing and Mr. Hicks.
Comparative Anatomy, Dissections —Mr. Bridge.
Human and Comparative Osteology —Professor Humphry.
Human Osteology—Professor Humphry and the Demonstrator.
Pathology—Dr. Bradbury.
Practical Physiology—Dr. Michael Foster.
Practical Histology—The Demonstrator.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

This Hospital contains 120 beds.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Paget.
Dr. Latham.
Dr. Bradbury.

Surgeons.
Mr. Lestourgeon.
Dr. Humphry.
Mr. Carver.

Fees for attendance upon the practice (medical and surgical), £15 15s. for an unlimited period; £10 10s. for one year; £8 8s. for six months.

Dr. Wilson has been appointed to the London Hospital. The new Demonstrator here is not yet appointed.

THE QUEEN'S COLLEGE, BIRMINGHAM.

WINTER SESSION.

Chemistry—Professor A. C. Bruce.
Demonstrations on Practical Anatomy—Mr. Bennett May and Mr. G. H. Evans.
Descriptive and Surgical Anatomy —Professors Thomas and Jolly.
Medicine—Professor Foster.
Pathology—Professor Sawyer.
Physiology — Professors Norris, Bartleet, and Rickards.
Surgery — Professors Pemberton and Furneaux Jordan.

SUMMER SESSION.

Botany—Professor Hind.
Comparative Anatomy—Professor Savage.
Dental Surgery—Professor Howkins.
Diseases of Women and Children—Professors Berry and R. C. Jordan.
Materia Medica—Professor Mackey.
Forensic Medicine and Toxicology —Professor J. St. S. Wilders.
Midwifery — Professors Clay and Bassett.
Ophthalmic Surgery — Professor Solomon.
Practical Chemistry — Professor Bruce.

SCHOLARSHIPS AND PRIZES.

The Warden's Prize, of the value of £3 3s. is offered by the Rev. W. H. Poulton to the most proficient student of the first year. The Percy Prize, books of the value of £5 5s. are offered by Dr. Percy, Professor of Metallurgy in the Government School of Mines, to the student attending lectures in German who may pass the best examination in two German works. There must be not less than three competitors. Class Prizes. —Medals and certificates of Honour are awarded annually in each class after examination.

THE GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM.

GENERAL HOSPITAL STAFF.

Consulting Surgeon—Mr. D. W. Crompton.

Physicians.
Dr. Ball Fletcher.
Dr. Russell.
Dr. Wade.
Dr. Foster.
Dr. Rickards.

Surgeons.
Mr. Alfred Baker.
Mr. Oliver Pemberton.
Mr. T. H. Bartleet.
Mr. W. P. Goodall.
Mr. Robert Jolly.

Resident Physician and Medical Tutor.

Resident Surgeon and Surgical Tutor.
Mr. Alex. F. Hawkins.

Registrar and Pathologist—Dr. Robert Saundby.

QUEEN'S HOSPITAL STAFF.

Physicians.
Dr. Heslop.
Dr. Johnston.
Dr. Sawyer.
Dr. Mackey.

Surgeons.
Mr. West.
Mr. Gamgee.
Mr. Furneaux Jordan.
Mr. J. St. S. Wilders.

House-Physicians.
Dr. Hart.
Mr. Allen.

House-Surgeons.
Mr. Wilkins.
Mr. Cordley Bradford.

Obstetric Surgeon—Mr. John Clay.
Ophthalmic Surgeon—Mr. Priestly Smith.
Pathologist—Mr. Thomas.
Dental Surgeon—Mr. Charles Sims.

CLINICAL PRIZES.

The following prizes will be given annually:—Senior Medical Prize, for third or fourth year students: First Prize, £5 5s.; Second Prize, £3 3s. Senior Surgical Prize: First Prize, £5 5s.; Second Prize, £3 3s. Junior Medical Prize, for second year students: First Prize, £3 3s.; Second Prize, £2 2s. Junior Surgical Prize: First Prize, £3 3s.; Second Prize, £2 2s. Midwifery Prize, £4 4s.

The examination for all the above-mentioned appointments and Prizes will be conducted by the Clinical Board, and will be open for competition to all students registered by the Clinical Board.

BRISTOL SCHOOL OF MEDICINE.

COURSES OF LECTURES.—WINTER SESSION.

Chemistry—Mr. Thomas Coomber.
Descriptive and Surgical Anatomy —Mr. Nelson C. Dobson, and Dr. Henry Waldo.
Medicine—Dr. William H. Spencer.
Physiology—Mr. George F. Atchley and Dr. R. Shingleton Smith.
Principles of Surgery and Practical Surgery—Mr. Robert W. Coe and Mr. Robert W. Tibbits.

SUMMER SESSION.

Botany—Mr. Adolphe Leipner.
Comparative Anatomy—Mr. George F. Atchley.
Materia Medica and Therapeutics—Dr. George F. Burder.
Medical Jurisprudence—Mr. Wm. P. Keall.
Midwifery and Diseases of Women—Dr. Joseph G. Swayne.
Pathological Anatomy—Dr. Wm. H. Spencer.
Practical Chemistry—Mr. Thomas Coomber.
Practical Physiology—Mr. Geo. F. Atchley and Dr. R. Shingleton Smith.

BRISTOL ROYAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Honorary and Consulting Physicians—Dr. William Budd, Dr. Frederick Brittan, and Dr. Alexander Fairbrother.

Honorary and Consulting Surgeons—Mr. John Harrison, Mr. Thomas Green, and Mr. Augustin Pritchard.

Physicians.
Dr. Edward L. Fox.
Dr. William H. Spencer.
Dr. R. Shingleton Smith.
Dr. Henry Waldo.

Assistant-Physician.
Dr. John E. Shaw.

Surgeons.
Mr. Crosby Leonard.
Mr. Robert W. Tibbits.
Mr. Charles Steele.
Mr. Edmund C. Board.
Mr. Christopher H. Dowson.

Assistant-Surgeon.
Mr. Arthur W. Prichard.

House-Surgeon—Mr. Henry M. Chute.

Assistant House-Surgeon—Dr. J. Greig Smith.

This Infirmary was founded in the year 1735, and is one of the largest provincial hospitals in England. It contains 250 beds.

PRIZES.

Suple's Medical Prize, consisting of a gold medal of the value of five guineas, and about seven guineas in money, is given annually to the successful candidate in an examination held by the Physicians. The examination comprises reports of cases in the medical wards, and the preparation of morbid specimens illustrative of disease, accompanied, if possible, by microscopic and chemical illustrations, besides written replies to questions in Medicine.

Suple's Surgical Prize corresponds in value and character to the medical one described above. In this case the examination is conducted by the Surgeons, and comprises surgical subjects only.

Clark's Prize.—The interest of £500, bequeathed by the late Henry Clark, Esq., Consulting Surgeon to the Infirmary, will be given annually to the prizeman of his third year at the examination held at the Medical School, provided he has attended his Hospital Practice at the Bristol Royal Infirmary, and can produce certificates of good moral character.

Pathological Prize.—The Pathological Clerk at the expiration of his term of office will receive a prize of the value of three guineas if his duties have been performed to the satisfaction of the Faculty.

FEES.

An entrance fee of five guineas to the Infirmary, and subscription of one guinea per annum to the Library. Surgeon's pupil, twelve guineas for one year; twenty guineas for two years (at one payment); twenty-five guineas for three years (at one payment). Dresser (extra fee), twelve guineas for one year; twenty guineas for two years (at one payment); twenty-five guineas for three years (at one payment). Physician's pupil:—For six months, £8; for one year, £15; for eighteen months, £20; perpetual, £25.

The fee for apprenticeship to the House-Surgeon is £315, which includes five years' residence in the Infirmary and all attendance on Hospital Practice required by the various examining bodies, excepting Dressers' fees. House Pupils may also enter for a shorter period, at the rate of fifty guineas per annum, to the Infirmary, with a fee of fifty guineas to the House-Surgeon.

BRISTOL GENERAL HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Honorary and Consulting Physician—Dr. Henry E. Fripp.
Honorary and Consulting Surgeons—Mr. Robert W. Coe, Mr. W. Micholl Clarke, Dr. Henry Marshall.
Honorary and Consulting Physician-Accoucheur—Dr. Joseph G. Swayne

Physicians.
Dr. E. Markham Skerritt.
Dr. George F. Barder.
Dr. Samuel Martyn.

Physician-Accoucheur.
Dr. A. E. Aust Lawrence.

Physician's Assistant.
Mr. W. J. Seaward.

Surgeons.
Mr. F. Poole Lansdown.
Mr. George F. Atchley.
Mr. Nelson C. Dobson.
Mr. William P. Keall.

House-Surgeon.
Mr. William Henry Harsant.

Assistant House-Surgeon.
Mr. L. J. Hobson.

Dentist—Mr. T. C. Parson.

SCHOLARSHIPS AND PRIZES.

Lady Haberfield's Prize.—This prize founded by the late Lady Haberfield, and consisting of the interest of £1000, is awarded annually to the student who exhibits the greatest proficiency.

Saunders Scholarship.—A Scholarship, founded by the late John Nash Saunders, Esq., and consisting of the interest of £500, is awarded annually after examinations in Medicine and Surgery.

Clarke Scholarship.—A Surgical Scholarship of £15, founded by H. M. Clarke, Esq., of London, is awarded annually to the most diligent student attending the surgical practice of the Hospital.

The rules relating to the several scholarships may be had on application.

FEES.

Medical or Surgical Practice, £6 for six months; £10 for one year; £20 perpetual. Extra fee for Clinical Clerk or Dresser, five guineas for six months. Library fee, one guinea per annum. Resident pupils (including board, lodging, and washing), £100 for the first year, £60 for each subsequent year; or for five years, with apprenticeship to the Hospital, £260.

LEEDS SCHOOL OF MEDICINE.

CLASSES AND LECTURES.

Chemistry (at the Yorkshire College of Science) — Professor T. E. Thorpe.
Clinical Medicine—Dr. J. D. Heaton, Dr. T. Clifford Allbutt, and Dr. John Edwin Eddison.
Clinical Surgery—Mr. C. G. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jesson, and Mr. Edward Atkinson.
Demonstrations of Anatomy—Mr. E. Robinson and Mr. A. F. McGill, assisted by Mr. Robson.
Descriptive Anatomy—Dr. Robert T. Laud, Mr. John A. Nunneley, and Mr. Edmund Robinson.
Forensic Medicine—Mr. Thomas Scattergood.
General Anatomy and Physiology —Mr. C. J. Wright and Mr. John Horsfall.
Materia Medica—Dr. John Edwin Eddison.
Medicine—Dr. John D. Heaton, and Dr. T. Clifford Allbutt,
Mental Diseases—Dr. J. Crichton Browne.
Midwifery—Mr. W. N. Price, and Dr. James Braithwaite.
Pathology—Mr. A. F. McGill.
Practical Physiology—Mr. James Walker.
Surgery (including the Practical Course)—Mr. T. R. Jessop, and Mr. Edward Atkinson.

LEEDS GENERAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. Charles Chadwick.
Consulting Surgeon—Mr. Samuel Hey.

Physicians.
Dr. John Deakin Heaton.
Dr. T. Clifford Allbutt.
Dr. John Edwin Eddison.

Surgeons.
Mr. C. G. Wheelhouse.
Mr. T. Pridgin Teale.
Mr. T. R. Jessop.
Mr. Edward Atkinson.

Surgeons to the Eye and Ear Department.
Mr. John A. Nunneley, Dr. Robert T. Laud, Mr. R. P. Oglesby.

SCHOLARSHIPS AND PRIZES.

The Hardwick Scholarship in Clinical Medicine.—Candidates for this prize must be in attendance on the lectures of the Leeds School of Medicine, and must have completed their first year's course there. They must be in registered attendance upon the medical practice of the Hospital, and have served the office of Clinical Clerk, or be holding that office at the time of competition. The prize is given annually for the best set of reports of medical cases in the Hospital during the winter session, subject to such regulations as may be laid down at the commencement of the session. Its value is £10 in money. Should the funds admit, a second prize may be given.

The Surgeons' Clinical Prizes.—Three prizes of the value of £8, £5, and £3 in money will be given annually by the Surgeons of the Hospital, subject to conditions similar to those relating to the Hardwick Prize.

The Thorpe Scholarship in Forensic Medicine.—This is a prize of £10 (founded by a former member of Council), awarded at the close of each summer session, subject to such regulations as may be made from time to time, of which due notice will be given.

FEES.

The composition fee for attendance upon all the required courses of school lectures is forty-four guineas, to be paid on entrance; or twenty-three guineas on entrance, and twenty-three guineas in twelve months. The fees for the Comparative Anatomy course and for a second course of Practical Chemistry are not included in the composition fee. The entrance fee to the library and reading-room, £1 1s., is paid by all students on joining the School. Instruction in vaccination, as required by the College of Surgeons and by the Poor-law Board, is given by one of the Public Vaccinators—fee £1 1s.; students must attend on Tuesdays, at 3 p.m., for a period of six weeks. The fees for attending the medical practice or the surgical practice alone are as follows:—One winter session, £7 7s.; one summer session, £6 6s.; twelve months, £12 12s.; eighteen months, £15 15s.; three years, £21.

The fee of £21 for surgical practice is payable at the commencement of the first winter session, and that for medical practice at the commencement of the second winter session.

LIVERPOOL SCHOOL OF MEDICINE.

LECTURERS.

Anatomy—Mr. W. Mitchell Banks.
Botany—Dr. W. Carter.
Chemistry and Toxicology—Dr. J. C. Brown.
Comparative Anatomy—Dr. E. H. Dickinson.
Dental Mechanics — Mr. R. E. Stewart.
Dental Surgery—Mr. J. Snape.
Forensic Medicine — Dr. Ewing Whittle.
Diseases of Children—Dr. R. Gee.
Materia Medica—Dr. J. B. Nevins.
Medicine—Dr. A. T. H. Waters.
Obstetric Medicine and Gynæcology —Mr. A. B. Steele.
Ophthalmic Medicine—Mr. T. Shadford Walker.
Pathological Anatomy — Dr. A. Davidson.
Physiology—Dr. Richard Caton.
Surgery—Mr. Reginald Harrison.

DEMONSTRATORS.

Histology and Practical Physiology —Mr. Rushton Parker.
Practical Anatomy — Mr. Henry Ashby.

ROYAL INFIRMARY.

Consulting Physicians—Dr. Inman, Dr. Vose.
Consulting Surgeons—Mr. Long, Mr. Stubbs.

Physicians.
Dr. Turnbull
Dr. Waters.
Dr. Glynn.

Surgeons.
Mr. Bickersteth.
Mr. Hakes.
Mr. Harrison.

Resident Medical Officer—Mr. Paul.
Assistant-Surgeon—Mr. Banks.
Pathologist—Mr. Parker.
Dental Surgeon—Mr. Snape.
Surgeons to the Lock Hospital—Mr. McCheane, Mr. F. W. Lowndes.

The Infirmary contains nearly 300 beds. There are special wards for the treatment of uterine and other diseases of women.

The Lock Hospital adjoining the Infirmary contains sixty beds.

SCHOLARSHIPS AND PRIZES.

Roger Lyon Jones Scholarship.—By the will of the late R. L. Jones, Esq., of Liverpool, the sum of £2000 has been left to the School for the purpose of founding a scholarship, to be named after the donor. It is expected that this sum will yield about £90 annually, which will be divided, after competitive examination, between two or more gentlemen, students of Medicine at the School. As some time, however, must elapse before the bequest comes into the actual possession of the School, and as the Council have still to determine the conditions upon which the Scholarship shall be competed for, no award can be made during the following winter session.

Torr Medal.—A gold medal for Anatomy and Physiology, presented by Mr. John Torr, M.P., is awarded to the first student in the second year subjects.

Bligh Medal.—This gold medal, which is presented annually by Dr. John Bligh, Liverpool (also for the encouragement of the study of Anatomy and Physiology), is awarded to the first student in the first year subjects.

FEES.

Composition Fee.—A payment of £47 5s. on entrance, or in two equal instalments (one-half on entrance, and the remainder within twelve months), entitles the student to attendance on all the lectures and demonstrations (exclusive of Practical Chemistry) required for the Membership of the Royal College of Surgeons, the Licence of the College of Physicians and the Apothecaries' Society.

Library.—All medical students on registering are required to pay an annual fee of 10s. 6d. to the library and reading-room, or a perpetual fee of £1 1s.

The perpetual Hospital fee (£33 12s.) and the School composition fee for lectures required by the licensing bodies (£47 5s.) amount together to £80 17s. In addition to this must be reckened Practical Chemistry (£3 3s.), library fee (£1 1s.), Ophthalmology (£1 1s.), vaccination fee (£1 1s.), dissecting-room expenses (roughly estimated at £3 3s.), and a summer course of Practical Anatomy, which, though not absolutely essential, is generally taken (£2 2s.), in all amounting to £11 11s. The total expenses of the education necessary to procure a medical and surgical qualification thus amount to somewhat over £90.

LIVERPOOL NORTHERN HOSPITAL.

The winter session will commence on Monday, October 2.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Davidson. | Dr. Dickinson.

Surgeons.

Mr. Manifold. | Dr. Graham.
Mr. Lowndes. | Mr. Puzey.

The Hospital contains 144 beds.

FEES FOR HOSPITAL PRACTICE AND CLINICAL LECTURES.

Perpetual, 25 guineas; one year, 10 guineas; six months 7 guineas; three months, 4 guineas. Students can enter to the medical or surgical practice separately on payment of half the above fees The Hospital receives one resident pupil, fee 60 guineas per annum. Attendance on the practice of this Hospital qualifies for all the examining boards.

For further particulars apply to the House-Surgeon, Mr. Farnell.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.

Physicians.

Dr. Cameron. | Dr. Carter.

Surgeons.

Dr. Nottingham. | Mr. Hamilton.
Dr. Wollaston.

Senior House-Surgeon—Mr. Henry Caddy.

Junior House-Surgeons.

Mr. Gwatkin. | Mr. Wearing.

Two hundred beds.

Clinical Lectures given by the Physicians and Surgeons during the winter and summer sessions. Clinical Clerkships and Dresserships open to all students. A special ward for accidents and diseases of children. Rooms for a limited number of resident students.

FEES FOR HOSPITAL PRACTICE AND CLINICAL LECTURES.

Perpetual, twenty-five guineas; one year, ten guineas; six months, seven guineas; three months, four guineas.

The practice of the Hospital is recognised by all the examining bodies.

UNIVERSITY OF DURHAM.—COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

LECTURERS.—WINTER SESSION.

Anatomy—Dr. Armstrong, Mr. Russell.
Chemistry—Professor Marreco.
Medicine—Dr. Philipson.
Mental Diseases—Mr. Wickham.
Physiology—Dr. Hume.
Surgery—Dr. Heath and Dr. Arnison.

SUMMER SESSION.

Botany—Mr. Armstrong and Mr. McBean.
Midwifery—Dr. Nesham.
Diseases of Women and Children—Dr. Gibson.
Medical Jurisprudence—Dr. Page.
Materia Medica and Therapeutics—Vacant.
Operative Surgery—Dr. Heath.
Practical Chemistry — Professor Marreco.
Pathological Anatomy—Dr. Gibb and Dr. Bramwell.
Practical Physiology — Dr. Macdiarmid.
Pharmacy—Mr. Proctor.

Hospital Practice can be attended at the Newcastle Infirmary, which contains 230 beds.

FEES.

Composition fee for all the lectures payable on entering to the first winter session, £52 10s. Perpetual ticket for Pharmacy curriculum, £12 12s. Separate courses of lectures, each £4 4s. The composition fee entitles the holder to attend the lectures on Botany, Chemistry, Materia Medica, and Pharmacy, and to use the Museum of Materia Medica in the Library of the College.

Twelve months' hospital practice, £7 7s.; six months', £5 5s.; three months', £4 4s.; perpetual fee, £17 17s.; or, if paid by instalments, first year £7 7s., second year £6 6s., third year £5 5s. These fees also are payable in advance.

The winter session will open on October 2, 1876.

SCHOLARSHIPS AND MEDALS.

Four Scholarships of £25 a year each, tenable each for four years. Dickinson Memorial Scholarship, £15, tenable for one year, for general proficiency. Tulloch Scholarship, £20, tenable for one year, for Anatomy, Physiology, and Chemistry. Charlton Memorial Scholarship, £35, tenable for one year, for Medicine. Four Resident Dressers, who also act as Physicians' Clinical Clerks, are chosen every six months from the Senior Students. Two Assistants in the Pathological Department are chosen every six months. Fee for six months' board and residence, £10 10s.

At the end of each session a Silver Medal and Certificate of Honour will be awarded in each of the required Classes.

R. H. B. Wickham, F.R.C.S., Medical Superintendent of the Cox Lodge Lunatic Asylum, will deliver a course of lectures on Psychological Medicine, illustrated by cases in the Asylum, to students in their third and fourth years, during the latter half of the winter session.

Further particulars may be obtained from Dr. Luke Armstrong, Registrar, or from Dr. Bramwell, Secretary.

NEWCASTLE-UPON-TYNE INFIRMARY.

This Infirmary contains 230 beds. There are special wards for the treatment of children, opthhalmic, and syphilitic diseases.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Embleton.
Dr. Philopson.
Dr. B. Bramwell.
Dr. Gibson

Surgeons.

Dr. Heath.
Mr. Russell.
Dr. Arnison.
Dr. Armstrong.

Assistant-Surgeons.

Mr. A. Bell.
Dr. Hume.
Mr. J. Hawthorn.

Pathologist.

Dr. Bramwell.

Senior House-Surgeon.

Mr. Williamson.

Junior House-Surgeon.

Mr. G. Mickle.

FEES.

Fees for hospital practice and clinical lectures:—Twelve months, seven guineas; six months, five guineas; three months, four guineas. Perpetual fee, seventeen guineas; or if paid by instalments—first year, seven guineas; second year, six guineas; third year, five guineas.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.

PROFESSORS AND LECTURERS.—WINTER SESSION.

Chemistry—Dr. Henry E. Roscoe.
Clinical Medicine — Dr. William Roberts.
Comparative Anatomy—Mr. W. C. Williamson.
Descriptive and Practical Anatomy—Dr. Morrison Watson.
General Pathology and Morbid Anatomy—Dr. Henry Simpson, Dr. Julius Dreschfeld.
Hospital Instruction — The Physicians to the Royal Infirmary, the Surgeons to the Royal Infirmary.
Organic Chemistry—Mr. C. Schorlemmer.
Physiology and Histology — Dr. Arthur Gamgee.
Principles and Practice of Medicine—Dr. J. E. Morgan.
Surgery—Mr. Edward Lund.
Practical Surgery—Mr. S. M. Bradley

SUMMER SESSION.

Botany—Mr. W. C. Williamson
Medical Jurisprudence and Public Health—Dr. Arthur Ransome.
Practical Chemistry—Dr. Henry E. Roscoe.
Materia Medica and Therapeutics—Mr. Alexander Somers, Mr. Daniel John Leech.
Obstetrics—Dr. John Thorburn.
Ophthalmology—Mr. T. Windsor.
Practical Physiology and Histology—Dr. Arthur Gamgee.
Practical Morbid Histology — Dr. Dreschfeld.

Medical Tutor—Mr. J. Beswick Perrin.
Demonstrator in Anatomy—Mr. A. H. Young, M.B.
Demonstrator in Physiology—Mr. J. Priestley.
Registrar—Mr. J. Holme Nicholson.
Dean of the Medical School—Professor Gamgee, M.D., F.R.S.

EXHIBITIONS, PRIZES, ETC.

A Turner Scholarship of £25 for third year's students, a scholarship of £15 for second year's students, and one of £10 for first year's students. Prizes will also be given for general proficiency.

Platt Physiological Scholarships.—Two Scholarships of £50 each, tenable for two years, one of which is offered annually, are open to the competition of all students of the College who shall have studied Physiology in the College laboratory during one entire session, and whose age on January 1 preceding the examination shall not be under eighteen nor over twenty-five years. The next examination will be held on the 9th and

10th of October, 1876. The Scholarship will be awarded for the best original investigation in Physiology prosecuted in the College laboratory, and on the results of a written examination in Physiology and such subjects connected therewith as shall be prescribed. The Scholarship will not be awarded on the ground of comparative merit only. The candidate elected to the Scholarship will be required to attend during one year of his tenure the practical class in the physiological laboratory of the College, and during the other year the same or some other physiological laboratory in England or on the Continent approved of by the Council and the Senate of the College. If no original investigation shall have been carried on worthy of the Scholarship, the Council may, if they think fit, award one or more exhibitions to the candidate or candidates who shall have been most distinguished in the examination.

Dunville Surgical Prize, value £20.—The Prize will consist of books or surgical instruments at the option of the winner. Candidates must have studied in the Medical Department and the Manchester Royal Infirmary, during the winter session of 1874-5, the summer session of 1875, and the winter session of 1875-6, and have attended four courses of lectures, including one, at least, on Surgery. The examination will be conducted by means of written answers to questions on the Principles and Practice of Surgery, including Surgical Anatomy, and, at the option of the examiners, will also include the examination of patients and operations on the dead subject, together with reports of three surgical cases which have occurred in the wards of the Manchester Royal Infirmary during the preceding six months—the reports to comprise the history, progress, treatment, and results (with observations thereon) of these cases. The examination will take place soon after the end of the winter session of 1876-7. Notice of intention to compete must be sent to the Registrar in writing on or before 27th of March, 1877.

Gilchrist Scholarships.—Three of £50 each, tenable for three years, one of which is annually awarded to the candidate who shall stand highest at the Matriculation Examination of the University in London in June, provided that he pass in the honours division, and, failing such, two of £25 each will be given to the two candidates who stand highest in the first division. Further particulars will be found in the "Calendar" and in the prospectus of scholarships, exhibitions, and prizes.

FEES.

A composition fee, which may be paid in one sum of £48, or in two sums of £25 each at the commencement of the first and second years of studentship, admits to the whole of the lectures required to qualify, and to attendance on the class of Practical Anatomy during two winter sessions. Should a student desire to continue his study of Practical Anatomy beyond two sessions, he can do so on payment of extra fees at the rate of £2 2s. for a three months' or £3 3s. for a six months' course.

Extra fees of £1 1s. will be charged for attendance on the Demonstrations in Botany, and in Comparative Anatomy; and of £2 2s. for each of the courses of Morbid Histology, Operative Surgery, and the Medical Tutor's Class.

A charge of £1 1s. is also made for the chemicals used in the class of Practical Chemistry.

MANCHESTER ROYAL INFIRMARY

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. Peter Wood, Dr. R. F. Ainsworth, Dr. Frank Renaud, Dr. T. H. Watts.

Physicians.	*Surgeons.*
Dr. M. A. Eason Wilkinson.	Mr. F. A. Heath.
Dr. Henry Browne.	Mr. Edward Lund.
Dr. William Roberts.	Mr. George Bowring.
Dr. Henry Simpson.	Mr. S. M. Bradley.
Dr. John E. Morgan.	
Obstetric Physician.	*Ophthalmic Surgeon.*
Dr. John Thorburn.	Mr. Thomas Windsor.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Daniel J. Leech.	Mr. W. Whitehead.
Dr. Julius Dreschfeld.	Mr. J. Hardie.

Dental Surgeon—Mr. G. W. Smith.
Resident Medical Officer—Dr. George Reed.
Medical Supt. of the Royal Lunatic Hospital at Cheadle—Mr. G. W. Mould.
Pathological Registrar—Mr. Thomas Jones.
Secretary—Mr. B. Brown.

CLINICAL PRIZES.

One Medical and one Surgical Clinical Prize is offered annually for the best reports and commentaries on six medical and on six surgical cases respectively. The cases must be selected from those treated in the Infirmary within the preceding twelve months.

The reports shall be signed with a motto, and transmitted (together with a sealed envelope containing the name and address of the student and the motto chosen by him) to the Chairman of the Medical Committee not later than the 1st day of September.

The two Prizes shall be open respectively to the medical and surgical pupils for the current year; they shall be each of the value of six guineas, and shall consist of books or instruments, at the option of the successful candidates.

STUDENTS' FEES.

Medical Practice.—Three months, 6 guineas; six months, 9 guineas; twelve months, 12 guineas; full period required by the examining boards, 18 guineas.

Surgical Practice.—Three months, 9 guineas; six months, 12 guineas; twelve months, 18 guineas; full period required by the examining boards, 30 guineas.

Composition Fee.—The fees for the full period required by the examining boards of both medical and surgical practice may be paid by a composition fee of £42 on entrance, or by two instalments of £22 each at an interval of twelve months.

In addition to the practice of the Infirmary, the Monsall Fever Hospital and the Barnes' Convalescent Home will also be open, under certain regulations, to students for the purposes of instruction.

SHEFFIELD SCHOOL OF MEDICINE.

LECTURES.—WINTER SESSION.

Anatomy, Descriptive and Surgical —Mr. Skinner, Mr. E. Skinner.	Physiology—Dr. O'Keefe and Dr. Dyson.
Chemistry—Mr. Allen.	Demonstrations of Anatomy—Dr. E. Thomas, Mr. O. Barber, Mr. S. Snell.
Clinical Surgery—The Surgeon of the Infirmary and Public Hospital and Dispensary.	Principles and Practice of Medicine —Dr. Bartolomé, Dr. Hall.
Clinical Medicine—The Physicians of the Infirmary and Public Hospital and Dispensary.	Principles and Practice of Surgery — Mr. W. F. Favell, Mr. A. Jackson.
Dental Mechanics—Mr. G. Mosely.	

SUMMER SESSION.

Botany—Mr. Birks.	Materia Medica and Therapeutics —Dr. Young.
Demonstrations of Pathology and Microscopy—The House-Surgeon (at the Infirmary).	Medical Jurisprudence and Toxicology—Mr. Baker, Mr. Harrison.
Demonstrations of Operative Surgery—Mr. Favell.	Midwifery and Diseases of Women —Dr. Hime.
Demonstrations of Practical Histology and Physiology — Dr. Thomas.	Practical Chemistry—Mr. Allen.
Dental Surgery—Dr. Merryweather.	Practical Surgery—The House-Surgeon (at the Infirmary).
	Public Medicine—Dr. Drew.

SHEFFIELD GENERAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. Bartolomé.	Mr. Barber.
Dr. Law.	Mr. Favell.
Dr. Banham.	Mr. Parker.

House-Surgeon—Mr. Laver.

The Infirmary contains 200 beds for in-patients.

FEES.

The fees for perpetual attendance at the Infirmary are £15 15s. for medical, £21 for surgical practice. For twelve months' practice: Medical, £10 10s.; surgical, £6 6s. Six months': Medical, £6 6s.; surgical, £4 4s.

PUBLIC HOSPITAL and DISPENSARY.

Physicians.	*Surgeons.*
Dr. J. Hall.	Mr. A. Jackson.
Dr. Law.	Dr. Keeling.
Dr. H. J. Branson.	Mr. Thorpe.

House-Surgeon.—Mr. Shera.

This Hospital contains 100 beds. The fees are the same as those of the Infirmary. Recognised by the Royal College of Surgeons.

SHEFFIELD HOSPITAL FOR DISEASES OF WOMEN.

MEDICAL OFFICERS.

Dr. Jackson, Dr. Keeling, Dr. Hime, Mr. Woolhouse.

FEES.

Anatomy and Physiology, first course, £6 6s.; second course, £4 4s. Practice of Medicine, first course, £4 4s.; second course, £2 2s. Practice of Surgery, first course, £4 4s.; second course, £2 2s. Chemistry, first course, £4 4s. Midwifery and Diseases of Women, first course, £3 3s. Materia Medica, first course, £3 3s. Medical Jurisprudence, first course, £3 3s. Botany, first course, £3 3s. Practical Chemistry, first course, £3 3s. Practical Physiology, £3 3s. Practical Surgery, £3 3s. These fees include demonstrations.

Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £42.

All further information may be obtained on application to the Hon. Secretary, Arthur Jackson, St. James's-row, Sheffield.

SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.—FACULTY OF MEDICINE.

SESSION 1876-77.

Principal—Sir Alexander Grant, Bart., LL.D.

THE session will be opened on Monday, October 31, 1876, at two o'clock, when an address will be delivered by the Principal.

WINTER SESSION.

Anatomy—Prof. Turner.
Anatomical Demonstrations—Prof. Turner.
Botany—Prof. Balfour.
Chemistry—Prof. Crum Brown.
Clinical Medicine—Profs. Laycock, Maclagan, and Sanders. (Prof. Simpson on Diseases of Women.)
Clinical Surgery—Prof. Lister.
General Pathology—Prof. Sanders.
Institutes of Medicine or Physiology—Prof. Rutherford.
Materia Medica—Prof. Sir Robert Christison, Bart.
Midwifery and Diseases of Women and Children—Prof. Simpson.
Natural History—Prof. Sir C. Wyville Thomson.
Practice of Physic—Prof. Laycock.
Surgery—Prof. Spence.

WINTER AND SUMMER SESSION.

Practical Anatomy—Prof. Turner.
Anatomical Demonstrations—Prof. Turner.
Practical Chemistry—Prof. Crum Brown.
Practical Physiology, including Histology, Chemical Physiology, and Experimental Physiology—Prof. Rutherford.
Operative Surgery—Prof. Spence.
Bandaging and Surgical Appliances—Prof. Spence.
Obstetric Operations—Prof. Simpson.

SUMMER SESSION.

Practical Instruction in Mental Diseases at an Asylum — Prof. Laycock.
Practical Natural History — Prof. Sir C. Wyville Thomson.
Practical Botany—Prof. Balfour.
Practical Pathology and Morbid Anatomy—Prof. Sanders.
Vegetable Histology—Prof. Balfour.
Tutorial Class of Clinical Medicine in the Wards of the Royal Infirmary by the Clinical Tutor.

During the summer session lectures will be given on the following subjects:—

Anatomical Demonstrations—Prof. Turner.
Botany—Prof. Balfour.
Chemistry—Prof. Crum Brown.
Clinical Medicine—Profs. Laycock, Maclagan, Sanders, and Simpson (Diseases of Women).
Medical Psychology and Mental Diseases—Prof. Laycock.
Clinical Surgery—Prof. Lister.
Medical Jurisprudence—Prof. Maclagan.
Natural History — Prof. Sir C. Wyville Thomson.
Natural Philosophy—Prof. Tait.
Obstetrical and Gynecological Operations—Prof. Simpson.

Information relative to matriculation and the curricula of study for degrees, examinations, etc., will be found in the University Calendar, and may be obtained on application to the Secretary at the College.

A table of fees is given on opposite page.

During the summer session the following means are afforded for practical instruction:—

The *Dissecting Rooms* are open daily, under the superintendence of the Professor, assisted by J. A. Russell, M.A., M.B., C.M., and D. J. Cunningham, M.B., C.M.

The *Royal Edinburgh Asylum* is open to members of the class of Medical Psychology exclusively for practical instruction in Mental Diseases, by Professor Laycock and the Physician-Superintendent, Dr. Coulston.

Chemical Laboratories.—The laboratory for instruction in Analytical Chemistry and for chemical investigation, under the superintendence of the Professor and an assistant, is open from ten to four. The Laboratory for Instruction in Practical Chemistry, under the superintendence of the Professor, assisted by A. P. Aitken, M.A., D.Sc.

The *Physiological Laboratory* is open daily for physiological investigation, under the superintendence of the Professor, assisted by William Stirling, M.D., C.M., D.Sc.

The *Physical Laboratory* is open daily from ten to three, under the superintendence of Professor Tait.

The *Medical Jurisprudence Laboratory* is also open daily, from ten to three, under the superintendence of the Professor, assisted by J. O. Affleck, M.D.

The practice of Obstetrical and Gynecological Operations is carried out in the Obstetrical Museum, under the superintendence of the Professor, assisted by J. Halliday Croomb, M.B.

The *Natural History Laboratory* is open daily, under the superintendence of the Professor, assisted by Isaac Bayley Balfour, D.Sc.

The *Natural History Museum* in the Museum of Science and Art, Chambers-street, is accessible to the students attending the Natural History class.

The *Royal Botanic Garden*, *Herbarium*, and *Museum*, are open daily.

MEDICAL FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES.

Fellowships.—The Falconer Memorial Fellowship, value £100, tenable for two years. It is for the encouragement of the study of Palæontology and Geology, and is open to graduates in Science or Medicine of the University of not more than three years' standing. The next appointment may be made in October, 1876.

The Syme Surgical Fellowship, value about £100, tenable for two years, open to competition among Bachelors of Medicine of not more than three years' standing, who shall present the best thesis on a surgical subject, giving evidence of original research.

Scholarships.—The Sibbald Scholarship, value about £40, tenable for four years.

Bursaries.—The Abercromby Bursary of £20, tenable for four years, is open to students who have been brought up in Heriot's Hospital during their medical curriculum. The Sibbald Bursaries are open to the sons of duly registered medical men practising, or who may have practised in Scotland, and to the sons of parents who are, or who may have been householders in Edinburgh. They are of the value of £30 each, tenable for four years, and available for the Faculty either of Arts, Law, Medicine, or Divinity. One Griersou Bursary of £25 a year, tenable for three years, to be competed for by students who have reached the end of their first winter session, and have passed the medical preliminary examination in French and German—subjects of examination to be Chemistry, Botany, and Natural History. One Tyndall-Bruce Bursary of £25, tenable for one year, to be competed for by students who have reached the end of their third winter session—subjects of examination to be Materia Medica and Pathology. Competitors for the above bursaries must have studied the subjects of examination at the University of Edinburgh; and these are not to be held along with any other bursary or fellowship.

PRIZES.

The Ettles Medical Prize is awarded annually to the graduate in Medicine whom the Medical Faculty may consider the most distinguished of the year. Value about £40.

The Hope Chemistry Prize, open to all students of the University of not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the Chemical Laboratory of the University. Value £100.

A Hope Scholarship, value £30; particulars as to which may be obtained on application to the Professor of Chemistry.

The Neil Arnott Prize, of about £40, is awarded to the candidate who shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. Candidates must have been medical students of this University during either a summer or a winter session, and the successful candidate must continue a medical student of this University during the winter session. No student can appear for examination after the completion of his third *annus medicus;* no candidate shall be allowed to offer himself more than once.

The Ellis Prize for the best essay "On the Respiration of Plants as distinguished from their Nutrition," is open to students or graduates of five years' standing. Value, proceeds of the sum of £500 accumulated for three years.

The Medical Faculty Prizes.—Gold medals are given on the day of graduation to Doctors of Medicine whose theses are deemed worthy of that honour.

LECTURESHIP.

The Swiney Lectureship on Geology, value £144, tenable for five years, is open to Doctors of Medicine of the University of Edinburgh. It is in the patronage of the trustees of the British Museum.

MINIMUM COST OF ATTENDING THE MEDICAL CLASSES, WITH THE ORDER OF STUDY.

Whilst there is no authorised order of study, the usual course is given below—Preliminary Examination in Arts to be taken in the month of March or October, before entering medical classes. By order of the

General Medical Council, all medical students require to be registered as such within fifteen days after the commencement of the session. Students are recommended to commence their medical studies by attending the summer session.

First Summer Session.—Preliminary examination fee, 10s ; matriculation fee, 10s. ; Botany (garden fee, 5s.), £1 4s. ; Natural History, £4 4s. ; total, £9 8s.

First Winter Session.—Matriculation (for whole year), £1 ; Anatomy, £4 4s. : Practical Anatomy, £3 3s. ; Chemistry, £4 4s. ; hospital, £5 5s. (perpetual ticket, £10); total, £17 16s.

Second Summer Session.—Botany or Natural History, if not attended previously ; Practical Chemistry, £3 3s. ; examination in Botany, Natural History, and Chemistry, in October following,(a) £5 5s. ; total, £8 8s.

Second Winter Session.—Matriculation, £1 ; Institutes of Medicine, £4 4s.; Surgery, £4 4s. ; hospital, £5 5s.; examination in Botany, Natural History, and Chemistry, in April, if not previously passed; total, £14 13s.

Third Summer Session.—Practical Pharmacy, £2 2s.; dispensary, £2 2s. ; hospital; total, £4 4s.

Third Winter Session.—Matriculation, £1 ; Materia Medica, £4 4s. ; Pathology, £4 4s. ; Clinical Surgery, £4 4s. ; dispensary, £1 1s. ; hospital ; examination in Anatomy, Physiology, Materia Medica, Pathology, in April or July, £5 5s. ; total, £19 18s.

Fourth Summer Session.—Medical Jurisprudence, £4 4s. ; hospital and clinical lectures; total, £4 4s.

Fourth Winter Session.—Matriculation, £1 ; Practice of Medicine, £4 4s ; Midwifery, £4 4s. ; Practical Midwifery, £1 4s. ; Clinical Medicine, £4 4s. ; Vaccination, £1 1s: ; hospital ; total, £15 17s.

Fifth Summer Session.—Hospital ; final examination for M.B. and C.M., £10 10s. ; total minimum expenses for M.B. and C.M., £104 18s.

Only one course of instruction on each subject is here stated, that being the minimum.

Fees for Degrees.—Examination in Botany, Chemistry, chemical testing, and Natural History, £5 5s. ; examination in Antomy, Institutes of Medicine, Materia Medica, Pathology, £5 5s. ; final examination in Surgery, Midwifery, Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and prescriptions, during last summer session, £5 5s. ; total fees for M.B. diploma, £15 15s. Additional fee for C.M. diploma, £5 5s. ; additional fee for M.D. diploma, £5 5s.; Government stamp-duty (for M.D. only), £10.

Note.—Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25.

N.B.—The above fees include all charges for the diplomas.

ROYAL INFIRMARY, EDINBURGH.

In this hospital a portion of the beds is set apart for clinical instruction by the Professors of the University of Edinburgh Courses of Clinical Medicine and Surgery are also given by the ordinary Physicians and Surgeons. Special instruction is given in the Medical Department on Diseases of Women, Physical Diagnosis, etc., and in the Surgical Department on Diseases of the Eye. Separate wards are devoted to fever, veneral diseases, diseases of women, diseases of the eye ; also to cases of incidental delirium or insanity. Post-mortem examinations are conducted in the Anatomical Theatre by the Pathologist, who also gives practical instruction in Pathological Anatomy and Histology.

MEDICAL DEPARTMENT.

Professors of Clinical Medicine—Dr. Laycock, Dr. Maclagan, Dr. Sanders.

Extra Physicians and Lecturers on the Diseases peculiar to Women—Dr. J. Matthews Duncan, Dr. Alex. R. Simpson.

Ordinary Physicians and Lecturers on Clinical Medicine—Dr. Rutherford Haldane, Dr. George W. Balfour, Dr. T. Grainger Stewart.

Assistant-Physicians—Dr. Claud Muirhead, Dr. David J. Brakenridge.

SURGICAL DEPARTMENT.

Consulting Surgeons—Dr. Dunsmure, Dr. J. D. Gillespie.

Professor of Surgery—Mr. Spence.

Ordinary Acting Surgeons—Dr. P. H. Watson, Mr. Thos. Annandale (Lecturers on Clinical Surgery); Dr. Joseph Bell.

Professor of Clinical Surgery—Mr. Lister.

Ophthalmic Surgeons—Mr. Walker, Dr. D. A. Robertson.

Extra Surgeon for Treatment of Ovarian Diseases—Dr. Thomas Keith.

Assistant-Surgeons—Dr. John Duncan, Dr. John Chiene.

Dental Surgeon—Dr. John Smith.

Pathologist—Dr. James B. Pettigrew.

HOSPITAL TICKETS.

Perpetual, in one payment, £10 ; annual, £5 5s. ; half-yearly, £3 3s. ; quarterly, £1 11s. 6d. Separate payments for two years entitle the student to a perpetual ticket.

THE EXTRA-ACADEMICAL SCHOOL OF MEDICINE, EDINBURGH.

The Practical Anatomy Rooms and Chemical Laboratories open on October 2. The inaugural address will be delivered by Dr. Wyllie, on Tuesday, October 31, at eleven o'clock. Lectures commence on Wednesday, November 1.

(a) For those who have certificates for two summer sessions and one winter session, and who have attended two courses during each of these three sessions.

WINTER SESSION.

Anatomy : Practical Anatomy, Lectures, Anatomical Demonstrations—Dr. P. D. Handyside.
Chemistry : Lectures, Practical Chemistry, Analytical Chemistry —Dr. Stevenson Macadam and Mr. J. Falconer King.
Clinical Medicine (Royal Infirmary) —Drs. Rutherford Haldane, Geo. W. Balfour, & Grainger Stewart. Dr. Matthews Duncan (for the Diseases of Women).
Clinical Surgery (Royal Infirmary)—Dr. P. H. Watson & Mr. Annandale.
Materia Medica and Therapeutics—Dr. Francis W. Moinet.
Medical Jurisprudence and Public Health—Dr. Littlejohn.
General Pathology and Pathological Anatomy—Dr. John Wyllie.
Midwifery and Diseases of Women and Children — Dr. Matthews Duncan.
Institutes of Medicine or Physiology—Dr. M'Kendrick.
Practice of Physic—Dr. Rutherford Haldane, Dr. Claude Muirhead, and Dr. Grainger Stewart.
Surgery—Dr. P. H. Watson, Mr. Joseph Bell, Mr. Chiene, Dr. John Duncan.
Vaccination (Royal Dispensary)—Dr. Husband.
Natural History, Zoology, and Comparative Anatomy—Dr. Andrew Wilson.
Diseases of the Ear — Dr. Kirk Duncanson.
Diseases of Children—Dr. R. Peel Ritchie.

SUMMER SESSION.

Anatomy : Practical Anatomy, Anatomical Demonstrations—Dr. P. D. Handyside.
Chemistry : Practical Chemistry, Analytical Chemistry—Dr. Stevenson Macadam and Mr. J. Falconer King.
Clinical Medicine (Royal Infirmary) —Drs. Rutherford Haldane, Geo. W. Balfour, & Grainger Stewart. Dr. Matthews Duncan (for the Diseases of Women).
Clinical Surgery (Royal Infirmary) —Dr. P. H. Watson and Mr. Annandale.
Diseases of the Eye—Dr. Argyll Robertson.
Diseases of Children—Dr. R. Peel Ritchie.
Insanity—Dr. J. Batty Tuke.
Materia Medica and Therapeutics—Dr. Francis W. Moinet and Dr. William Craig.
Medical Jurisprudence and Public Health—Dr. Littlejohn.
Midwifery and Diseases of Women and Children—Dr. Keiller, Dr. Augus Macdonald, and Dr. Underhill.
Practical Physiology—Dr. M'Kendrick.
Practical Surgery—Dr. John Duncan.
State Medicine and Hygiene—Dr. Andrew Smart.
Surgical Anatomy and Operative Surgery—Mr. Chiene.
Surgical Appliances and Operative Surgery—Mr. Joseph Bell.
Vaccination—Dr. Husband.
Pathological Histology—Dr. John Wyllie.
Diseases of the Ear—Dr. Kirk Duncanson.
Natural History, Zoology, and Comparative Anatomy—Dr. Andrew Wilson.
Syphilology—Dr. Cadell.

The lectures qualify for the University of Edinburgh and the other Universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, and the other medical and public Boards.

FEES.

For a first course of lectures, £3 5s. ; for a second, £2 4s.; perpetual £5 5s. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4s. Practical Anatomy (six months' course), £3 3s. Anatomical Demonstrations, £2 2s. ; with Practical Anatomy, £1 1s. ; perpetual, £4 4s. Practical Chemistry, £3 3s. ; Analytical Chemistry, £2 a month, £5 for three months, or £10 for the session of six months. Vaccination, £1 1s. Syphilology, £1 1s. State Medicine and Hygiene, £2 2s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s. ; Practical Anatomy (including Anatomical Demonstrations), Operative Surgery, Diseases of the Ear, Insanity, and Diseases of Children, each £2 2s.

The minimum cost of the education in this School of Medicine for the double qualification of Physician and Surgeon from the Royal College of Physicians and Surgeons, including the fees for the joint examination, is £90 4s., which is payable by yearly instalments during the period of study; whilst the minimum cost for the single qualification of either Physician or Surgeon, including the fee for examination, is £80.

UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

LECTURES AND CLASSES.—WINTER SESSION.

Anatomy, Junior ; Anatomy, Senior ; Practical Anatomy—Prof. A. Thomson and Demonstrators.
Chemistry, Chemical Laboratory —Prof. Ferguson.
Clinical Medicine—Prof. McCall Anderson.
Clinical Surgery—Prof. Buchanan.
Forensic Medicine—Prof. P. A. Simpson.
Institutes of Medicine—
Materia Medica—Prof. Cowan.
Midwifery—Prof. Leishman.
Pathology—Dr. J. Coats.
Practice of Physic—Prof. Gairdner.
Surgery—Prof Macleod.

SUMMER SESSION.

Botany, Botanical Demonstrations —Prof. A. Dickson.
Clinical Medicine—Prof. McCall Anderson.
Clinical Surgery—Prof. Buchanan.
Embryology, and Demonstrations on Anatomy, Elementary Anatomy, Practical Anatomy—Prof. A. Thomson and Demonstrators.
Practice of Medicine—Prof. Gairdner.
Lectures on the Eye—Dr. T. Reid.
Operative Surgery—Prof. Macleod.
Practical Chemistry, Chemical Laboratory—Prof. Ferguson.
Practical Pharmacy—Dr. Fennent.
Practical Physiology—
Zoology—Prof. Young.

CLASS FEES.

Fee for each course, £3 3s., except lectures on the Eye, for which the fee is £1 1s.

In addition to the University courses, the following hospitals and dispensaries afford ample means for practical instruction in the various departments of Medicine and Surgery:—

WESTERN INFIRMARY.

This Hospital contains beds for medical and surgical patients, with wards for skin diseases and for diseases of women.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Prof. W. T. Gairdner.	Prof. George H. B. Macleod.
Prof. T. McCall Anderson.	Prof. George Buchanan.
Dr. James Finlayson.	Dr. Alexander Patterson.

Diseases of Women—Prof. W. Leishman.

Dispensary Physicians—Dr. Gavin P. Tennent, Dr. Joseph Coats, and Mr. D. C. M'Vail.

Dispensary Surgeons—Dr. James G. Lyon and Mr. D. N. Knox.

Pathologist—Dr. Joseph Coats.

Medical Superintendent—Mr. J. H. Lilly.

Lady Superintendent—Miss E Clyde.

The hour of visit is 9 a.m.

FEES.

The fees for admission to the practice of this Infirmary are —First year, three guineas; second year, three guineas; third year, one guinea. The fees for clinical lectures are the same as for the other courses in the University.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.

The winter session commences on November 1, and the summer session on May 1. Lectures are delivered on the subjects necessary for qualifying, and extra courses are given on practical subjects now required by examining boards. During summer, lectures on Insanity will be given by Dr. A. Robertson, and the City Parochial Asylum under his charge is free to students of this School.

The Royal Infirmary contains 570 beds. Of these 240 are for medical and 330 for surgical cases, with a special ward for the treatment of venereal disease in males. Diseases of the eye, ear, and throat are specially treated at the outdoor department.

APPOINTMENTS.

There are five Physicians' and five Surgeons' Assistants, who are boarded and lodged in the Hospital at the rate of £25 per annum, and who perform all the duties of House-Physicians and House-Surgeons. These appointments are held for twelve months—six in the medical, and six in the surgical wards—and are open to those students of the Infirmary who have passed all their examinations except the last, or who have a qualification in Medicine or Surgery.

Clinical Assistants, Dressers, and Dispensary Clerks are selected from the students without any additional fee; and from the large number of accident cases and cases of acute disease received into the wards, these appointments are numerous, and invaluable to the student. Attendance at the Dispensary for the treatment of out-patients, and admission to the Pathological Museum, are also free.

FEES.

For each course of lectures, first session, £2 2s.; second ditto, and perpetual, £1 1s.

The Anatomy Class fees are, first session, £4 4s.; second ditto, £4 4s.; afterwards, £1 1s. per annum for Practical Anatomy.

HOSPITAL FEE.

The fee for unlimited attendance on the practice of the Infirmary and on the courses of clinical instruction does not exceed £21.

Further information may be obtained from Dr. Thomas, the Superintendent of the Hospital.

ANDERSON'S UNIVERSITY.

LECTURES AND CLASSES.

Anatomy—Dr. Buchanan.
Chemistry—Mr. Dittmar.
Institutes of Medicine or Physiology—Dr. Eben. Watson.
Materia Medica—Dr. Morton.
Medical Jurisprudence (in Summer)—Dr. Alex. Lindsay.
Midwifery (in Summer)—Dr. J. G. Wilson.
Ophthalmic Medicine and Surgery—Dr. Wolfe.
Practice of Medicine—Dr. Wood Smith.
Surgery—Dr. Dunlop.

FEES.

Fee for each class, £2 2s.; second session, £1 1s. The fees for all lectures and hospital practice required for a diploma do not exceed £50.

Hospital practice and clinical lectures in the Royal Infirmary, containing 600 beds.

Students may also attend the Maternity Hospital (Physicians-Accoucheur—Drs. J. G. Wilson and Tanuahill), Eye Infirmary, Ophthalmic Institution, Dispensary for Skin Diseases, etc.

A syllabus, with full information, may be obtained by applying to Mr. Arthur Forbes, solicitor, 146, Buchanan-street, Glasgow, Clerk to the Medical School.

UNIVERSITY OF ABERDEEN.—FACULTY OF MEDICINE.

LECTURES.—WINTER SESSION.

Anatomy—Professor Struthers.
Chemistry—Professor Brazier.
Institutes of Medicine—Professor Ogilvie-Forbes
Medical Logic and Medical Jurisprudence—Professor Ogston.
Midwifery and Diseases of Women and Children—Professor Stephenson.
Practical Anatomy and Demonstrations—Professor Struthers and Demonstrator.
Practice of Medicine—Professor Smith-Shand.
Surgery—Professor Pirrie.
Zoology with Comparative Anatomy—Professor Nicol.

SUMMER SESSION.

Botany—Professor Dickie.
Materia Medica—Professor Harvey.
Practical Pharmacy—Professor Harvey and Assistant.
Practical Anatomy and Demonstrations—Professor Struthers and Demonstrator.
Practical Chemistry—Professor Brazier.
Zoology with Comparative Anatomy—Professor Nicol.

The Anatomical Course in summer includes instruction in Histology and in the use of the microscope; and instruction in Osteology for beginners.

FEES.

Matriculation fee (including all dues) for the winter and summer session, £1; for the summer session alone, 10s.

Pathological Anatomy, Dr. Rodger, £2 2s. Practical Ophthalmology (in summer), Dr. A. D. Davidson. Dental Surgery (in summer), Mr. Williamson.

The regulations relative to the registration of students of Medicine, and the granting of degrees in Medicine and Surgery, may be had of Professor Brazier, Secretary of the Faculty of Medicine.

Full information regarding the classes and degrees in the Faculties of Arts, Law, and Divinity, and in regard to Bursaries and Scholarships, will be found in the University Calendar, published by Messrs. Wyllie and Son, Union-street, Aberdeen, by post 2s. 2d.

ABERDEEN ROYAL INFIRMARY.

The Infirmary contains about 300 beds.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. A. Harvey.
Consulting Surgeon—Mr. David Fiddes.

Physicians.	*Surgeons.*
Dr. J. W. F. Smith-Shand.	Mr. W. Pirrie.
Dr. R. Beveridge.	Mr. A. Ogston.
Dr. Angus Fraser.	Mr. J. O. Will.
	Mr. R. J. Garden.
Resident Assistant-Physician.	*Resident Assistant-Surgeon.*
Mr. Johnston Shearer.	Mr. George S. Trail.

Ophthalmic Surgeon—Dr. Alex. D. Davidson.
Dental Surgeon—Mr. Williamson.
Chloroformist—Dr. P. B. Smith.
Resident Superintendent and Apothecary—Dr. R. Rattray.
Pathologist and Curator of Museum—Dr. J. Rodger.
Treasurer and Secretary—Mr. W. Carnie.

UNIVERSITY OF ST. ANDREWS.

There is no proper Faculty of Medicine in this University, but it is possible for the student to make an *annus medicus* by attendance on certain of the courses—as Natural History, Professor Nicholson, M.D.; Chemistry, Professor Heddle, M.D.; and Anatomy and Medicine, Professor Pettigrew, M.D.

SCHOOLS AND HOSPITALS IN IRELAND.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC.

THE School of Physic is under the conjoint superintendence of the University authorities and those of the King and Queen's College of Physicians.

LECTURES AND CLASSES.

Anatomy and Surgery—Dr. Benjamin G M'Dowel.
Botany—Dr. E. Percival Wright.
Chemistry—Dr. G. Emerson Reynolds.
Comparative Anatomy and Zoology—Dr. Alexander Macalister.
Institutes of Medicine—Dr. J. M. Purser.
Materia Medica and Pharmacy—Dr. Aquilla Smith.
Medical Jurisprudence—Dr. Robert Travers.
Midwifery—Dr. Edward B. Sinclair.
Natural Philosophy—Rev. J. Leslie.
Operative Surgery—Dr. Richard G. Butcher.
Ophthalmic Surgery—Mr. Henry Wilson.
Physic—Dr. William Stokes.
Practice of Medicine—Dr. W Moore.
Surgery—Dr. William Colles (Trin. Coll., Dr. Edward H. Bennett).
University Anatomist—Dr. Thomas E. Little.

Winter Session, 1876-77.—The winter session commences on October 1. Lectures will commence on November 1. The dissecting-room will be opened on October 2.

SCHOLARSHIPS AND EXHIBITIONS.

Medical Scholarships.—Two medical scholars are elected annually, by the Board of Trinity College, at an examination held at the end of June—subject to conditions stated in the College Calendar. Each scholarship is worth £20 per annum, and is tenable for two years.

Medical Exhibitions.—The Professors of the School of Physic give three exhibitions annually, amounting altogether in value to £40—subject to conditions prescribed by the Professors themselves.

SIR PATRICK DUN'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician.—Dr. William Stokes.

Consulting Surgeon.—Dr. W. Colles.

Clinical Physicians.
Dr. John Malet Purser.
Dr. William Moore.
Dr. Aquilla Smith.

Clinical Surgeons.
Dr. Benjamin G. M'Dowel.
Dr. Thomas E. Little.
Dr. Edward H. Bennett.

Midwifery Physician.
Dr. Edward B. Sinclair.

Lecturer in Operative Surgery.
Dr. Richard G. Butcher.

FEES.

Clinical Lectures and Hospital Attendance.—The payment of three guineas to the Hospital entitles any student to attend the clinic of the Hospital for twelve months, and to attend the lectures delivered by Dr. R. G. Butcher, University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College, are entitled to tend the Hospital as perpetual free pupils. In addition to the Hospital fee, the payment of a fee of six guineas is required for the privilege of attending the clinical lectures. Total fees for hospital and lectures for twelve months, nine guineas.

Practical Midwifery.—Students desirous of entering for twelve months' instruction in Practical Midwifery are required to pay a maternity fee of three guineas each. Students of Trinity College are not liable to any other payment for instruction in Practical Midwifery. Other students are required to pay three guineas each to the King's Professor for twelve months' practical instruction, in addition to the hospital maternity fee. Students who have paid the hospital maternity fee are entitled to attend the demonstrations in Obstetric Surgery given by the King's Professor. Total fees for College Students, three guineas; total fees for Externs, six guineas.

PRIZES.

Clinical Medals.—The Governors of the Hospital award a Silver Clinical Medal in Medicine to the student who shall pass the best examination on the medical cases treated in the Hospital during the year; and a silver Clinical Medal in Surgery to the student who shall pass the best examination on the surgical cases treated in the Hospital during the year.

QUEEN'S COLLEGE, BELFAST.

The lectures will commence on Tuesday, October 31.

Anatomy and Physiology—Dr. P. Redfern.
Chemistry—Dr. Thomas Andrews.
Materia Medica—Dr. J. S. Reid.
Medical Jurisprudence—Dr. J. F. Hodges.
Midwifery—Dr. R. F. Dill.
Natural Philosophy—Dr. Everett.
Practice of Medicine—Dr. James Cuming.
Practice of Surgery—Dr. A. Gordon.
Zoology and Botany—Dr. R. O. Cunningham.

The demonstrations in Anatomy are delivered by Dr. Anderson. The Lectures in Midwifery and in Medical Jurisprudence, and the courses of Botany and Practical chemistry, and a second course of Experimental Physics, will commence in May.

FEES.

Anatomy and Physiology—First course, £3; each subsequent course, £2. Anatomical Demonstrations and Practical Anatomy—each course, £3. Practical chemistry, £3. Other medical lectures—first course, £2; each subsequent course £1.

SCHOLARSHIPS.

Two medical scholarships are awarded to the students of each year of the medical course. The examinations commence on October 17.

BELFAST GENERAL HOSPITAL.

FEES.

Clinical Instruction—Perpetual fee, payable in one sum of £10 10s., or two instalments of £5 5s. each on entering for the first and second years. Hospital fee, 10s 6d. each session.

BELFAST LYING-IN HOSPITAL.

Fee for the session, £3 3s.

QUEEN'S COLLEGE, GALWAY.—FACULTY OF MEDICINE.

LECTURERS.

Anatomy and Physiology, and Practical Anatomy—Dr. Cleland.
Botany and Zoology—Dr. A. G. Melville
Chemistry—Dr. T. H Rowney.
Logic and Mental Philosophy—Dr. T. W. Moffatt.
Materia Medica—Dr. J. P. Pye.
Medical Jurisprudence—Dr J. P. Pye.
Midwifery and Diseases of Women and Children—Vacant.
Natural Philosophy—Dr. A. H. Curtis.
Practice of Medicine—Dr. N. Colahan.
Practice of Surgery—Dr. J V. Brown.

The County Galway Infirmary, Town, and Fever Hospitals are in the immediate vicinity of the Queen's College.

SCHOLARSHIPS AND EXHIBITIONS.

Eight scholarships of the value of £25 each, and exhibitions varying in value from £12 to £16, are appropriated to students pursuing the course for the degree of M.D.

FEES.

Anatomy and Physiology, £3 first session; afterwards £2. Practical Anatomy, £3; Practical Chemistry, £3; Operative Surgery, £3; other classes, £1 for each course extending over one term only, £2 for each course extending over more than one term, and £1 for each re-attendance on the same.

For further information, application may be made to Professor Moffett, Registrar.

QUEEN'S COLLEGE, CORK.—FACULTY OF MEDICINE.

LECTURERS.

Anatomy and Physiology—J. J. Charles, M A., M.D.
Chemistry and Practical Chemistry—Dr. Maxwell Simpson.
Materia Medica—Matthias O'Keefe, M.A., M.D.
Midwifery—Dr. J. R. Harvey.
Natural Philosophy—Mr. John England.
Practical Anatomy—The Professor, assisted by Demonstrators.
Practice of Medicine—Dr. D. C. O'Connor.
Practice of Surgery—Dr. W. K. Tanner.
Zoology and Botany—Dr. Joseph R. Green.

SCHOLARSHIPS.

Eight scholarships are awarded to students in Medicine, if qualified. Two junior scholarships of £25 each to students commencing their first, second, third, and fourth years. Clinical Medicine and Surgery at the North and South Infirmaries, and Clinical Midwifery at the Lying-in Hospital.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Henry H. Head.
Dr. James Little.

Obstetric Physician.
Dr. Richd. Purefoy.

Assistant-Physician.
Dr. Walter G. Smith.

Surgeons.
Dr. Albert J. Walsh.
Dr. John K. Barton.
Mr. Benjamin Wills Richardson.

Ophthalmic Surgeon.
Mr. H. Rosborough Swanzy.

Assistant-Surgeon.
Mr. Montgomery A. Ward.

Further particulars can be obtained from Mr. Richardson, 22, Ely-place, or any other member of the medical staff.

ST, VINCENT'S HOSPITAL DUBLIN.(a)

HOSPITAL STAFF.

Physicians.
Dr. Francis J. B. Quinlan.
Dr. Robert Cryan.

Surgeons.
Dr. Edward D. Mapother.
Mr. William H. O'Leary, M.P.

Surgeon-Dentist.—Mr. William J. Doherty.

Apothecary.—Mr. C. T. Boland.

(a) No return made this year.

FEES.

Winter and summer session, £8 8s.; separately, £6 6s. and £3 3s. Perpetual pupils, £21.

Further particulars may be learned on application to the Secretary, or at the Hospital during the hours of attendance.

DR. STEEVENS' HOSPITAL AND MEDICAL COLLEGE, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Visiting Physician—Dr. W. M. Burke.
Visiting Surgeons—Mr. S. G. Wilmot and Mr. C. Fleming.

Physicians.	*Surgeons.*
Dr. H. Freke.	Mr. W. Colles.
Dr. T. W. Grimshaw.	Mr. E. Hamilton.
	Mr. R. M'Donnell.

Physician-Accoucheur.	*Resident Surgeon.*
Dr. James Isdell.	Mr. J. W. Tweedy.

Surgeon-Dentist—Mr. J. A. Baker.
Surgeon-Oculist—Mr. Henry R. Swanby.

LECTURERS.

Anatomy—Mr. R. L. Swan; Mr. F. W. Warren, Dr. R. Bookey, Demonstrators.	Botany—Dr. Warren.
Anatomy and Physiology—Dr. E. Hamilton.	Materia Medica—Dr. T. W. Grimshaw.
Surgery—Mr. W. Colles.	Medical Jurisprudence—Dr. H. J. Tweedy.
Chemistry—Dr. C. A. Bell.	Medicine—Dr. H. Freke.
	Midwifery—Dr. James Isdell.

Curator of the Museum—Dr. Henry J. Tweedy.
Pathological Analyst—Dr. C. A. Bell.

FEES.

Hospital Practice, nine months, £9 9s.; ditto, six months, £7 7s. Practical Anatomy, £5 5s. Lectures, each course £3 3s.

Perpetual Pupils.—A perpetual fee of 78 guineas, which may be paid in two instalments, entitles the student to attend all the lectures and hospital practice required by the Colleges of Surgeons, Halls, and the Public Service.

Further particulars may be learned from any of the Professors; from the Resident Surgeon at the Hospital; or from Dr. Edward Hamilton, Hon. Sec., 120, Stephen's-green West.

JERVIS-STREET HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Stephen M. MacSwiney.	Dr. William Martin.

Surgeons.

Mr. M. Harry Stapleton.	Mr. Austin Meldon.
Dr. J. Stannus Hughes.	Mr. James Edward Kelly.
Mr. J. K. Forrest.	Mr. M. J. Kilgarriff.

Dr. W. E. Collins.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Arthur Wynne Foot.	Dr. John William Moore.

Surgeons.

Dr. George H. Porter.	Mr. Rawdon Macnamara.
Dr. James H. Wharton.	Mr. R. Perssé White.
Dr. Philip Crampton Smyly.	Mr. Lambert H. Ormsby.

The Hospital contains 120 beds for the reception of Medical and Surgical cases, and to which an extensive Dispensary (open daily), Lending Library, and Physical Laboratory are attached, is within a few minutes' walk of the University, the College of Surgeons, and the Ledwich School of Medicine.

An additional ward has been erected for the reception of children, in which the pupils will have an opportunity of studying Infantile Disease.

The office of Resident Pupil is open to pupils as well as apprentices.

Further information may be obtained on application to Lambert H. Ormsby, Esq., Hon. Sec., 12, Lower Fitzwilliam-street; or at the Hospital.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE, CECILIA-STREET, DUBLIN.

LECTURES AND CLASSES.

Anatomy and Physiology—Dr. Hayden and Dr. Cryan.	Materia Medica—Dr. Quinlan.
Anatomical Demonstrations—The Professors of Anatomy and Physiology.	Natural Physiology—The Rev. Dr. Molloy.
Botany—Dr. Sigerson.	Pathology—Dr. Lyons.
Chemistry—Dr. Campbell.	Practical Chemistry—Dr. Campbell.
Dissections—Dr. Hayes, Dr. Nixon, Dr. Whitty, Dr. Coppinger, and Dr. Kilgarriff.	Theory and Practice of Medicine—Dr. Lyons.
Medical Jurisprudence—Dr. MacSwiney.	Theory and Practice of Midwifery—Dr. Byrne
	Theory and Practice of Surgery—Mr. Tyrrell.

PRIZES AND EXHIBITIONS.

At the termination of the winter session, public examinations will be held, when, in addition to prizes in each class, the University Exhibition, value £20, will be awarded for the subjects mentioned in the school prospectuses.

At the termination of the summer session, the University Gold Medal, value £7, will be awarded, in addition to the usual prizes in each class.

FEES.

Three guineas for each course. A reduction of one-sixth is made to perpetual pupils paying the entire of their fees in advance, or in two instalments at the commencement of the first and second years of their course. Parents and guardians are recommended to forward all fees directly, by cheque or order, to the Registrar, Dr. Hayes, 29, Westland-row, or at the School.

Further particulars may be learned from any of the Professors; from the Medical Registrar, Dr. Hayes, 29, Westland-row; or on application at the School.

CITY OF DUBLIN HOSPITAL, UPPER BAGGOT-STREET.(a)

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Professor Apjohn, Dr. Charles Benson.
Consulting Surgeon—Dr. William Hargrave.
Consulting Ophthalmic Surgeon—Dr. Arthur Jacob.

Physicians.	*Surgeons.*
Dr. Hawtrey Benson.	Mr. Joliffe T. Tufnell.
Dr. J. Magee Finny.	Mr. Henry Gray Croly.
	Mr. William I. Wheeler.

Ophthalmic and Aural Surgeon—Mr. Loftie Stoney.

PRIZES, ETC.

The "Purser Stewardship," of £20 per annum (with apartments), founded by William A. Purser, L.R.C.S.I., a former pupil of the Hospital, is open to all students through the medium of competitive examination, for which a special certificate is given, if merited, and numerous medals and prizes are awarded in Medicine, Surgery, and Ophthalmology.

The Drummond Wing, for fever and other contagious diseases, affords full opportunity for studying these branches of Medicine.

Instruction in practical Pharmacy is given in the Compounding Department.

FEES.

Fee for total hospital attendance, twenty guineas; nine months, eight guineas; six months, six guineas; summer three months, three guineas.

For further particulars, apply to Dr. Wheeler, Hon. Sec., 56, Pembroke-road, between three and four o'clock, or at the Hospital between ten and eleven o'clock a.m.

MERCERS' HOSPITAL, WILLIAM-STREET, DUBLIN.

STAFF.

Physicians—Dr. T. P. Mason and Dr. George F. Duffey.
Surgeons—Mr. E. Ledwich, Mr. E. S. O'Grady, and Mr. B. F. M'Dowell.

FEES.

Six months, £6 6s.; nine months, £8 8s.; perpetual pupils, £21.

ROYAL COLLEGE OF SURGEONS IN IRELAND. SCHOOL OF SURGERY.

LECTURES.—WINTER SESSION.

Anatomy and Physiology—Dr. Mapother.	Surgery—Mr. J. Stannus Hughes and Mr. Stokes.
Descriptive Anatomy—Dr. Bevan and Mr. Thornley Stoker.	Practice of Medicine—Dr. James Little.
Midwifery—Dr. Cronyn.	Chemistry—Dr. Cameron.

SUMMER SESSION.

Materia Medica—Mr. Macnamara.	Midwifery—Dr. Cronyn.
Medical Jurisprudence—Dr. Davy.	Hygiene—Dr. Cameron.
Botany—Dr. Minchin.	Ophthalmic and Aural Surgery—Mr. Wilson.
Practical Chemistry—Dr. Cameron.	

A public course of lectures on Comparative Anatomy will be delivered by the Professor of Anatomy and Physiology, at the commencement of the session, and additional lectures on the same subject will be delivered during the winter.

The dissections are under the direction of the Professor of Anatomy, assisted by the demonstrators—Dr. Stoney, Dr. Ormsby, Dr. Wheeler, Dr. Wm. Stoker, Dr. Wm. J. Smyly, Dr. Peele, Dr. Franks, and Dr. Roe,—who will daily attend to give instruction and to assist the students.

The fee for each course of lectures is three guineas, excepting Descriptive Anatomy, which is eight guineas, and ophthalmic and Aural Surgery and Hygiene, which are free.

(a) No return made this year.

A composition fee of £55 2s. 6d. is taken as payment in full for all lectures and dissections required for the diploma in Surgery.

A Junior Exhibition of £15, a Senior Exhibition of £25, and Honorary Certificates will be awarded at the end of each winter session.

MATER MISERICORDIÆ HOSPITAL, ECCLES-STREET, DUBLIN.(a)

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. John Hughes.	Mr. Francis R. Cruise.
Dr. Thomas Hayden.	Mr. Henry J. Tyrrell.
Dr. Christopher J. Nixon.	Mr. Patrick J. Hayes.
Assistant-Physician.	*Assistant-Surgeon.*
Dr. Valentine Brown.	Mr. Charles Copplinger.

This Hospital contains 210 beds, including fifty beds for fever and other contagious diseases.

Certificates of attendance upon this Hospital are recognised by all the licensing bodies in the United Kingdom.

PRIZES.

Two clinical prizes (the "Leonard Prizes") of £15 each, one medical and one surgical, will be given at the end of the winter session, in accordance with the directions contained in the will of the late Mark Leonard, Esq., for the best report of not less than twenty cases for each prize; the cases reported to be those occurring in the Hospital during the winter session.

FEES.

Nine months, £8 8s.; six winter months, £6 6s.; three summer months, £3 3s.

Further particulars may be learned by application to Dr. Nixon, Secretary to the Medical Board, 32, Upper Merrion-street, or to any of the other medical officers.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

COURSES OF LECTURES.

Anatomy, Physiology & Pathology, etc.—Mr. E. Ledwich, Mr. T. P. Mason, and, Mr. J. E. Kelly.
Botany—Dr. McNab.
Forensic Medicine and Hygiene—Dr. R. Travers.
Surgical and Descriptive Anatomy, Demonstrations, and Dissections—Mr. Mason, Mr. Ledwich, Mr. Glanville, Mr. Robinson, and Mr. Porter.
Materia Medica and Therapeutics—Dr. M'Dowel.
Midwifery and Diseases of Women and Children—Vacant.
Theory of Chemistry, Practical Chemistry, & Natural Philosophy—Dr. Griffiths.
Theory and Practice of Medicine—Dr. Foot.
Theory and Practice of Surgery—Mr. Wharton and Mr. Barton.

FEES.

The fee for each of the above courses will be £3 3s.

A course of operations to be performed by the students, under the superintendence of the lecturers (subjects, etc., included), £5 5s.

Further information may be obtained from any of the lecturers, or from Mr. Edward Ledwich, Secretary, 7, Harcourt-street, Dublin.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.

MEDICAL AND SURGICAL STAFF.

Consulting Physician.—Sir D. J. Corrigan, Bart.

Physicians.	*Surgeons.*
Dr. J. T. Banks.	Mr. William Stokes.
Dr. B. G. M'Dowel.	Mr. William Thomson.
Dr. S. Gordon.	Dr. W. Thornley Stoker.
Dr. R. D. Lyons.	Dr. A. Corley.

Ophthalmic Surgeon—Dr. Charles E. Fitzgerald.
Resident Surgeon—Dr. Samuel Gordon, jun.

Clinical instruction will commence on October 1. These Hospitals contain 312 beds—110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases. Premiums will be awarded in Clinical Medicine and Surgery. The Richmond Institution for the Insane, containing over 1000 patients, adjoins these Hospitals.

FEES.

For the winter and summer session (nine months), £9 9s.; for the six winter months, £7 7s.; for the three summer months, £3 3s.; perpetual pupils, £25, paid on entrance. Resident clinical clerks, £21 for the winter session, £15 15s. for the summer session, including certificate of attendance.

Application to be made to Dr. Gordon, 13, Hume-street, or to Mr. Stokes, 3, Clare-street, Dublin.

(a) No return made this year.

EDUCATIONAL VACCINATING STATIONS.

In order to provide for the granting of those special certificates of proficiency in vaccination which are required to be part of the medical qualification for entering into contracts for the performance of public vaccination, or for acting as deputy to a contractor, the following arrangements are made:—

1. The vaccinating stations enumerated in the subjoined list are open under certain specified conditions, for the purposes of teaching and examination.

2. The public vaccinators officiating at the stations are authorised to give the required certificates of proficiency in vaccination to persons whom they have sufficiently instructed therein; and

3. The public vaccinators, whose names in the subjoined list are printed in italic letters, are also authorised to give such certificates, after satisfactory examination, to persons whom they have not themselves instructed.

London.—Principal Station, Surrey Chapel, Blackfriars-road: *Mr. James Furness Marson*, who attends on Tuesday and Thursday, at 1 p.m. North-west Stations—Marylebone Institution, 15, Lower Seymour-street: Mr. William A. Sumner, on Monday, at 10 a.m.; Albion Hall, Grove-place, Lisson-grove: Mr. William A. Sumner, on Wednesday, at 10 a.m. West Station, 9, St. George's-road, Pimlico, S.W.: Dr. Edward Lowe Webb, on Thursday, at 10 a.m. East Station, Eastern Dispensary, Leman-street: Mr. Charles T. Blackman, on Wednesday, at 11 a.m. North Station, Tottenham-court Chapel, Tottenham Court-road: Mr. William Edwin Grindley Pearse, on Monday and Wednesday, at 1 p.m. South-west Station, 2, Regent-place, Horseferry-road: Mr. William Edwin Grindley Pearse, on Tuesday, at 2 p.m. Strand Station: Mr. Robert William Dunn, on Monday, at 10 a.m.

Birmingham.—St. John's Wesleyan Chapel, Inge-street, Hurst-street, on Monday; the rooms occupied by the Working Men's Mutual Improvement Society, in Barr-street, on Tuesday; St. Mark's School-rooms, St. Mark's-street, on Wednesday; and "The British Workman" Reading Rooms, Sherborne-street, near Grosvenor-street, on Thursday: *Dr. Edmund Robinson*, at 11 o'clock on the days before mentioned.

Bristol.—The Public Vaccination Station, Peter-street: *Dr. Henry A. P. Robertson*, on Wednesday, at 10 a.m.

Exeter.—Old Fellows' Hall, Bamfyld-street: *Mr. Charles H. Roper*, on Thursday, at 3 p.m.

Leeds.—Heed-street: *Mr. Frederick Holmes*, on Tuesday, at 2.30 p.m.

Liverpool.—4, Oldham-street: *Mr. Arthur Browne Steele*, on Thursday, at 2 p.m.

Manchester.—72, Rochdale-road: *Mr. Ellis Southern Guest*, on Monday, at 2 p.m.

Newcastle-on-Tyne.—The Central Vaccination Station, 21, Nun-street: *Dr. Thomas C. Nesham*, on Thursday, at 3 p.m.

Sheffield.—The Public Vaccination Station, Townhead-street: *Mr. William Skinner*, on Tuesday, at 3 p.m.

Edinburgh.—The Royal Dispensary: *Dr. William Husband*, on Wednesday and Saturday, at 12.

Glasgow.—The Hall of the Faculty of Physicians and Surgeons: *Dr. Hugh Thomson*, on Monday, at 12. The Royal Infirmary: Dr. Robert Dunlop Tannahill, on Monday and Thursday, at 12.

THE INTRODUCTORIES.

The following are the days and hours of the various Introductory Lectures, with the names of the respective lecturers:—

Hospital.	Date.	Lecturer.	Hour.
St. Bartholomew's	Mon. Oct. 2	None.	
Charing-cross	,,	Dr. Bruce	4 p.m.
St. George's	,,	Dr. Blandford	4 p.m.
Guy's	,,	None.	
King's College	,,	Dr. E. B. Baxter	4 p.m.
London	,,	Dr. Andrew Clark.	
St. Mary's	,,	Dr. Wiltshire	3.30 p.m.
Middlesex	,,	Dr. Evans	3 p.m.
St. Thomas's	,,	Mr. F. Mason	4 p.m.
University College	,,	Dr. Mandsley	3 p.m.
Westminster	,,	Dr. Allchin	8 p.m.

THE STUDENT BEGINNING TO WORK.

TO THE ENTERING STUDENT.

The approaching Session is near at hand, and on October 2 will be formally opened by an introductory lecture at most, if not at all, of the London and Provincial Schools. The lectures will, no doubt, contain much that is good, and much that is new; but they will be delivered for the most part to gentlemen who have already got over the first difficulty of their student career. Happy they who are thus far advanced! Our remarks, however, are addressed to those who have still this important step to take—to those who have not yet entered a Medical School. Happy are the students who have friends—fathers, or brothers, maybe—in the profession, and whose minds have gradually been trained to the important step they are now taking, by men who have themselves already gone through the same process. Such students start with obvious advantages, and come up to London and to a hospital straightway without one moment's previous anxiety or misgiving, often furnished with letters of recommendation and introduction which secure hosts of friends from the very outset of their career.

The object of this Address to Students is to point out to those who are less favourably placed in this matter, how best to set to work, especially to such as have no knowledge of hospital life, and no means of otherwise becoming acquainted with the "ins and outs" of hospital ways and hospital doings. At so early a stage of one's professional career it is hardly possible to anticipate that the student will have any fixed idea of the department of practice in which he will engage, and therefore we will generalise rather than specialise, and make our remarks suitable for the many, rather than adapted for the few. We can, however, only regret that it is not possible to foresee a little the peculiar turn of mind which is almost sure to be developed later on, for if this were possible, much useful time might be saved. For instance, it is almost a waste of time for men to devote several years of life in order to qualify for high-class degrees, or honours, if their object is to settle down later on as general practitioners in a country village. This is relatively true for the affluent, but if it involve any personal sacrifice, it becomes absolutely true; true because of the loss of time, which may be much better spent, and because of the nervous strain which it so certainly demands. Thus, for the generality of students of Medicine, Arts degrees are not absolutely essential, and they involve an amount of time, of study, of nervous power, which might well be devoted to Medicine and Surgery.

But it is, no doubt, absolutely essential that a man should have a thoroughly sound classical and mathematical education; he ought to be able to pass the Fellowship Examination at the College of Surgeons, or the Matriculation Examination at the University of London, without any difficulty, and, if age and means allow, it will always be well to pass the Preliminary Scientific Examination at the London University *before entering a medical school.* While on the subject of preliminary studies, a few words to parents and guardians may prove useful. It should be known that there is an art in passing examinations; that many youths are rejected because they lack this art rather than the information required by the examiners, and many a one thus rejected is better informed on general matters than some others who have nevertheless passed the ordeal. This is because the latter have been better taught, or, rather, have been taught more in accordance with modern notions and modern requirements. This remark naturally leads up to the kind of school at which a youth ought to be educated, and is addressed rather to parents than to intending medical students. It is highly essential that every year at school be well spent, for it is during these years that the mind is being formed; but it is doubly important that the last two or three should be spent in immediate preparation for the Entrance Examinations just alluded to, and that the subjects required for them should be specially studied during this period—and studied, too, as we have already said, in an especial manner. There are schools where the entire education is made subservient to this end; and we are sure that this plan is the most economical in the long run. The students have all a common object in view, a like end to attain, and a wholesome wish to excel thereat. If circumstances absolutely prevent this kind of special preparation for the examinations, what may be done by a student who is nevertheless anxious to get on? For such we would advise a careful study of the calendars and rules of the various corporate bodies, of the examination questions and answers which they contain, and a self-examination according to the rules therein laid down. Self-examination may be made very useful if properly carried out. This is done by taking a question, copying it out on paper, and then settling down to answer it. This must be done as carefully and conscientiously as though it were being done in the presence of the examiners. Next compare the answer with the book, supplement what is necessary, scratch out what is wrong, and then thoroughly master the whole subject. Such a system, carried out regularly and conscientiously, will have its sure and certain reward; it is a system which will be useful throughout one's entire studentship, and applies to medical subjects as well as to those which are preliminary.

Hospital studies are partly theoretical and partly practical. Roughly speaking, the first two years are devoted to theoretical, the last two to practical work. It therefore becomes necessary, in selecting a hospital, to bear in mind that there is something beyond mere practical work; that so-called practical advantages can bear no fruit without a solid substratum of theoretical teaching. To a diligent student any hospital in London—even the smallest—affords ample opportunity of becoming acquainted with practical work; but we cannot say the same for every medical school. Some are so small that it is almost impossible to teach certain subjects—such as Chemistry and Physiology—thoroughly, because of the expense. It must be obvious that it is just as expensive to prepare a thoroughly good lecture on Chemistry to be delivered before a large audience as before a small one, and, if the numbers of entries be below a certain standard, the fees paid will not suffice to cover the expenses and pay a Professor for his time and trouble. The same applies more or less to every subject taught. In putting this matter forward, we only wish to point out to those about to enter the importance of mature consideration. While small schools labour under the disadvantage alluded to just now, their students are no doubt brought into more personal communication with the various teachers; while in very large ones they are simply students, and nothing more. Anything like a personal acquaintance is next to impossible. There are manifestly advantages in this personal intercourse between teachers and taught; and the opportunities thus afforded of personal help and advice are often the means of keeping men straight, when otherwise, for the want of the friendly warning, they might possibly go astray.

As a rule, then, we should advise a medium-sized school. Look more to this point than to the mere number of beds which the corresponding hospital is said to dispose of; it is vastly more important to students to learn their Anatomy and Physiology thoroughly than to wander listlessly through the long wards of a hospital, looking at cases which, for the most part, seldom come under the care of a general practitioner, and listening to clinical remarks which for the time being are quite unintelligible. The student, in spite of all and every diligence, will find the time all too short to master what is

required by the Examining Boards. It is all-important to get through the "First College" at the end of the second winter, and to do this creditably a student must pass the greater part of his time in the dissecting-room. The First College, however, safely passed, will leave him free to devote his second summer session to the out-patient dressing-rooms. This is a most important part of a general student's practice. For such as are going to practise in the country, more especially in or near a manufacturing town, where small casualties are frequently happening, the out-patient surgical practice is of the highest importance. We must not, however, here enter too freely into detail, as we wish to sketch the entire career rather than any one part of it. The third winter comes on without, at present, any special incentive to work. There are few, if any, college prizes to work for, and the Final Examinations are not due until the end of the fourth year. Men who are reading for the University will have no lack of work; but others will find time to spare. To these we would say, keep up your Anatomy and Physiology; try for an appointment in the dissecting-room as assistant-demonstrator, and at the end of the third winter go in for the First Fellowship Examination. Even if you have no immediate idea of passing the Final, such a thing is always well to your credit; and the fact of passing gives you a testimonial of great value, and one which may be of immense use to you when you least expect it. This over, your fourth and last winter will be approaching. And now all your attention will be required for the subjects of the Final Examinations of the College of Surgeons and of Physicians, or of the Hall; and in proportion as your previous studies have been systematic and thorough, will be the facility with which you "get up" the subjects now required. Your Anatomy becomes necessary to enable you to appreciate fractures, their deformities, the means by which these are produced, and the mechanism by which they may be overcome. Your Physiology is necessary to enable you to understand the deviations from the normal which constitute the groundwork of surgical pathology, and to form a basis for correct therapeutical treatment. Without your Chemistry the action and administration of drugs will be a puzzle that you will never thoroughly solve in later life; and the more momentous questions of forensic medicine, such as the detection of poisons and allied subjects, will be utterly incomprehensible to you. Thus, you observe how carefully the curriculum is laid down for you by those who, from years of practical experience, know what is best for your future interests. Be it yours to follow out the plan laid down with energy and thankfulness.

We will now just add a few words on the subject of books. There is a deeply rooted belief in "second-hand books." To first-year's men we would simply say, have nothing whatever to do with them. They are a snare and a delusion, and often tempt men to buy books which they do not require. We advise all "freshmen" to buy the latest edition of every text-book they require. New books soon get old, and new editions are only issued when the old ones no longer serve the purpose they originally had in view. The science of Medicine is ever changing, and the constant advances which are being made render it absolutely necessary to provide oneself with the most recent work on any subject which has to be got up for examination. The desire to economise one's funds is natural, but it is a false economy to buy an old edition—say of Erichsen or of Druitt—because it can be got at half-price. When a book is only worth half-price, it is because it only contains half the amount of information which is to be found in its later editions. We cannot pretend to point out the various books which a student requires. Each school has its fashion, and a student had better conform to it than not. The best advice on this subject we can give is—Don't be in a hurry to buy your books; consult your various teachers; they are only too glad to advise you; and a week's intercourse with them and with your fellow-students will do more to initiate you into these mysteries than anything we can possibly write.

We fancy some of our readers are wondering whether it is essential for future success to enter at a London school. To this we emphatically answer, "No!" It is the ambition of a large majority of students to obtain a degree in Medicine—an M.D., in fact. The strict regulations at Burlington House, the lengthened period of study required, and the very severe nature of the several examinations (no less than five), place the London degree beyond the reach of the bulk of students. Then what can be done? A student generally finishes his studies in London, gets his M.R.C.S., etc., and then goes to Aberdeen or elsewhere for a year and qualifies for the examination which gives him, if he pass, the coveted title of "Dr." We would advise a reversal of this practice. Let the student enter one of the Scotch Universities, and pass his first two years there. He will get a most thorough training in all the branches taught, and he can then come to London for his final two years. There is no place like London for surgical practice: the hospitals here are so large, and so well supplied with material, that we most earnestly advise the metropolis whenever a student can possibly manage it. He will come to London at the end of his second winter for the First College, and proceed as usual, and when all is finished return north, and get his M.B., and along with it his title as Doctor.

A few final words on making friends, and we will close this address. Unfortunately, there are always a number of ne'er-do-well's "hanging about" at the schools—fourth, fifth, sixth, and even eighth year's men,—who "condescend" to notice the new men, and to show them about. Of such be careful; they will lead you to no good. Make friends with men of your own year chiefly. Don't strive to be on terms of equality and too great intimacy with third and fourth years' men. It is thought by some students a great thing to be on speaking terms with the senior men. We advise you to avoid such friendships; they lead to loss of time, and unsettle you for the really serious task you have in hand. When you require help and guidance, such as your own year's men cannot give, seek it from the Dean, or from other teachers, but not, as a rule, from the senior men.

In conclusion, we say that although the student's task is a very hard one, and one which only those who have special aptitudes can thoroughly master, yet that success is sure to attend steady and persevering efforts.

THE STUDENT'S FIRST WINTER SESSION.

Let us suppose, then, that the young student comes to his medical studies with a good sound English education, and some little knowledge of Physics and Chemistry; his attention during the first winter will be mainly devoted to Chemistry, Anatomy, and Physiology. In Chemistry, he will find an enormous advantage in the little knowledge he brings with him; and it would greatly assist teachers of Chemistry in fulfilling their duty to be able to address gentlemen whose knowledge extended to the most important facts relating to Inorganic Chemistry, for then the time of the medical student could be directed mainly to Organic Chemistry, the part which is to be of most use to him in after-life: whereas, as matters now stand, he rarely reaches these studies, and still more rarely masters them. We would very strongly, therefore, endeavour to impress on the minds of those about to become students of Medicine the importance of acquiring some knowledge of Chemistry, and still more of Botany, before entering a medical school. In most public schools nowadays both of these subjects are taught, and every effort ought to be made to encourage the practice. Be that, however, as it may, let the student work hard to master the science of Chemistry during this his first year, for each succeeding session brings its own work with it.

Turning next to Anatomy, the first thing to which a student directs his attention is the "bones," and these should be mastered as soon as possible. This is, as a rule, not very difficult; he will have plenty of aid from his fellow-students. A thorough knowledge of the bones is invaluable, and carries with it much knowledge of the soft parts. Each groove, ridge, foramen, and channel has its own story, and the knowledge of how each is occupied must be constantly exercised in after-life. The next step should be a thorough study of the joints and ligaments, but this varies a good deal in different schools. In some—and perhaps this is the best plan—after the joints and ligaments, the student is sent at once to the study of muscles, as to origin, insertion, course, shape, composition, and mode of action. And these three subjects may be said to be the foundation of all surgical knowledge. In other schools, however, the student is at once turned into the dissecting-room to study all parts—muscles, nerves, vessels, fasciæ—as they are laid bare. This plan, too, has its excellencies; but on the whole it is better, if there is material for the purpose, to acquire a knowledge of the bones, ligaments, and muscles before attempting the more difficult concrete Anatomy. But whatever plan be adopted, let the knowledge acquired be real—a knowledge not of the memory, but of the understanding; for at the basis of Surgery, and of much of Medicine also, lies a sound knowledge of Anatomy. This leads us to point out another thing the student should do early—that is, to acquire some knowledge of the relative positions of the different viscera, and their external indications. This is best acquired in the post-mortem-room, which from the first the student should frequent. What of dissecting? The student should take to it as early as may be possible. He should endeavour, it is true, to master everything laid bare, but if he only acquire a manual dexterity, that at least is something.

And now as regards Physiology. Here we are almost reduced to despair. The absurd existing regulations compel a man to enter on the study of the very highest branches of Chemistry, in the shape of Physiological Chemistry, on the same day on which he begins to study its rudiments; to study the minute structure of a part or organ with whose shape or outward appearance he is altogether unacquainted. We can only tell him to do his best, and to learn as much as he can by means of his eyes; he must trust more to his ears another session.

Finally, as regards Hospital Practice, the sooner the young student begins to study what is, after all, to be the great business of his life, the better; but it should be begun with reason. Students should not be let loose like an undisciplined crowd of star-gazers; there should be rule in everything. In some hospitals the preposterous system of introducing the raw student into the medical wards did at one time prevail, and Sir Astley Cooper used to congratulate his class on having left the study of Medicine for the higher walk of Surgery. The sooner the young man understands that time spent in the medical wards at this period of his career is wasted, the better for him. Let him instead go at once to the surgical out-patient room; here he can *see* something. He can learn what an ulcer is, and how to dress it; what to do for a bad wound or bruise; that in many cases it is necessary to use a knife. He will see how different kinds of bandages are put on, and the different dodges, if one may say so, necessary to bandage different parts properly. In short, it is here that the student can best spend his time, thence proceeding in due course to the surgery of the wards. On the other hand, we would anxiously warn the young student against the physician's out-patient department. Here he will do no good, and he may be much harmed by it. He sees a gentleman busy prescribing for a crowd of patients, and he sees them rapidly disposed of, but he does not see the years of study and hard work which have enabled the physician to make in a few minutes a trenchant diagnosis. Vast numbers of these patients suffer from the same kind of illness: they are subject to the same influences—close, ill-smelling houses in foul alleys; a want of light and air; improper or badly cooked food, partaken of at improper times; and, above all, the only solace they have for so much squalor and discomfort—that which ever tends to perpetuate this—too much beer and gin. But we are diverging from our subject. Let, however, the young student avoid such studies until he is better qualified to appreciate them, and let him stick to those things he can see for himself in the surgical section.

In due time comes the First Summer Session. This is commonly devoted to the study of Botany, Materia Medica, and Practical Chemistry. About these we have a word to say, especially as regards the first. Botany and its uselessness is a favourite subject of declamation with some; but with these we can in nowise agree. Like other studies, it might well be excluded from the medical curriculum, but it certainly ought not to be excluded from the scheme of medical education. Botany is far best and easiest learnt at school; of all branches of natural science it is that which requires fewest appliances. Its material is everywhere; and, rightly taught and rightly learned, it is a source of unfailing delight. Hunting for plants is quite as exciting as hunting anything else. Let Botany be taught and studied, then, but let it be out of the curriculum; or, if in it—as needs must be sometimes,—let the student acquire the principles here, and apply them for himself in the fields and lanes. Materia Medica, too, has come in for much abuse; but was it so when men went through an apprenticeship? Then they imbibed Materia Medica, as it were, insensibly; by constant handling they knew the colour, smell, taste, relative weight, and a hundred other things concerning drugs. But that system has passed away, and something must take its place if men are to live by their profession. Therapeutics, again, which some men would substitute, should be taught at a later period of the student's course of study. Fortunately, we are all agreed on the necessity for practical Chemistry, but that should really take the shape of the analysis of vegetable and animal solids and fluids, not of simple solutions.

SECOND WINTER SESSION AND FIRST EXAMINATION.

With the Second Winter comes the near approach of the First Professional Examination. At the Royal College of Surgeons, whither nearly all students flock, the subjects are Anatomy and Physiology, not separately, but conjointly. This arrangement is unfortunate, for it leads the student to the study of Anatomy at the expense of Physiology, the idea having got abroad that it is the more important subject of the two. As a consequence, we believe we are right in saying that the majority of those plucked are so in Physiology. We mention this because it is in this winter that a competent knowledge of Physiology is to be acquired, and the student should pay at least as much attention to it as to Anatomy. But there is another thing the student should also look after—that is, the art of passing an examination. It is not enough that a student should have a full knowledge of his subjects: that knowledge should be methodised, and so formulated as to be at hand when wanted. There is nothing does this so well as class examinations, which are now held almost everywhere; but the student should also accustom himself to note-taking and to writing answers to questions, such as those set at the College, and regularly published in our columns. This will give him that ease and accuracy of expression so essential for passing a good written examination. There should be no "shots" at answering questions, no beating about the bush; with an examiner everything should be straightforward, simple, and unmistakable. Finally—a little thing—when sitting down to an examination, read over your paper carefully,

and see what question you can best answer; write down that answer first on one piece of paper; take the next one that suits you, and do likewise; and so on, gradually attacking the more difficult, until you finish. In this way you are left with plenty of time on your hands, whereas, did you hesitate and bungle over the first difficulty, you might be unable to finish the writing out of the answers to those questions with which you were best acquainted.

By the time the student has passed his First Examination he should be out of leading-strings, and able, with the advice of his teachers, to employ his time to good advantage. He has passed beyond the class we have meanwhile specially in view.

DEGREES IN SCIENCE IN THE DEPARTMENT OF PUBLIC HEALTH.

UNIVERSITY OF EDINBURGH.

In consequence of the great demand which now exists for Medical Officers of Health, and the importance to the public of some means of ascertaining that members of the medical profession have specially studied the subject of Public Health, Science Degrees in the Department of Public Health have been instituted by the University of Edinburgh under the following conditions:—

1. Candidates for graduation in Science in the Department of Public Health must be graduates in Medicine of a British University, or of such foreign or colonial Universities as may be specially recognised by the University Court.

2. Candidates who have not passed an *annus medicus* in the University of Edinburgh must, before presenting themselves for examination, have attended as matriculated students in the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations.

3. There are two examinations for the degree of Bachelor of Science in the Department of Public Health. Candidates who have passed the first examination may proceed to the second, immediately or at any subsequent Medical or Science examination.

4. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which instruction was given on Public Health, and that they have studied Analytical Chemistry practically for three months with a recognised teacher.

5. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court.

6. The subjects of the examinations for the degree of Bachelor of Science in the Department of Public Health are as follows:—

FIRST EXAMINATION.

1. *Chemistry.*—Analysis of air, detection of gaseous emanations and other impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and amount of their mineral and organic constituents; detection, chemical and microscopical, of adulterations in articles of food and drink, and in drugs; practical examination, including at least two analytical researches.

2. *Physics.*—Hydraulics and hydrostatics, in reference to water-supply, drainage, and sewerage; pneumatics, in reference to warming and ventilation; meteorology, and methods of making meteorological observations; mensuration, in reference to the plans and sections of public and private buildings, mines, waterworks, and sewers.

3. *Sanitary Law.*—Knowledge of the leading sanitary Acts of Parliament.

4. *Vital Statistics.*—Knowledge of statistical methods and data in reference to population, births, marriages, and deaths.

Examination.—First day: Chemistry and Physics. Second day: Sanitary law and vital statistics.

An oral examination and an examination in practical chemistry in the laboratory will take place a few days after the written examination.

SECOND EXAMINATION.

1. *Medicine.*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases and the geographical distribution of disease; insalubrious trades; overcrowding; epizootics, including pathological changes.

2. *Practical Sanitation.*—Duties of a Health Officer in reference to water-supply; insalubrious dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries; nuisances from manufactories, etc.; bad or insufficient supplies of food; outbreaks of zymotic diseases; quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals.

The written examinations will take place on October 20 and 21, 1876, and April 2 and 3, 1877, at eleven o'clock each day. Candidates who intend to present themselves for examination in October are required to lodge with the Clerk of the University proof of their being eligible, and to pay the fee on or before October 2; and for the examination in April on or before March 5.

DOCTOR OF SCIENCE.

Bachelors of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department on producing evidence that they have been engaged in practical sanitation since they received the degree of Bachelor of Science, and on presenting a thesis on some subject embraced in the Department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the examiners.

Candidates for the degree of D.Sc. must lodge their theses with the Dean of the Medical Faculty on or before January 31 in the year in which they propose to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

The fees for the degrees in Science in the Department of Public Health shall be—For the first B.Sc. in Public Health examination, £5 5s.; for the second B.Sc. in Public Health examination, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s.

The following are recommended as books to be studied in preparation for the above examinations:—E. Parkes's "Practical Hygiene"; George Wilson's "Handbook of Hygiene"; Edw. Smith's "Manual for Public Officers of Health" and "Handbook for Inspectors of Nuisances"; Michael, Corfield, and Wanklyn's "Manual of Public Health," edited by F. Hart; Baldwin Latham's "Sanitary Engineering"; Henry Law's "Rudiments of Civil Engineering"; George Monro's "The Public Health (Scotland) Act"; Alexander Buchan's "Introductory Text-book of Meteorology."

UNIVERSITY OF CAMBRIDGE.

EXAMINATION IN STATE MEDICINE.

An examination in so much of State Medicine as is comprised in the functions of Officers of Health will be held in Cambridge in October, 1876.

Any person whose name is on the Medical Register of the United Kingdom may present himself for this examination provided he is twenty-four years of age. The examination will be in two parts.

Part I. will comprise:—Physics and Chemistry. The principles of Chemistry, and methods of analysis with especial reference to analyses (microscopical as well as chemical) of air and water. The laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, and sanitary engineering in general.

Part II. will comprise:—Laws of the realm relating to public health. Sanitary statistics. Origin, propagation, pathology, and prevention of epidemic and infectious diseases. Effects of overcrowding, vitiated air, impure water, and bad or insufficient food. Unhealthy occupations, and the diseases to which they give rise. Water-supply, and disposal of sewage and refuse. Nuisances injurious to health. Distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

Candidates may present themselves for either part separately or for both together at their option. Every candidate will be required to pay a fee of four guineas before admission to each part of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the

examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of an Officer of Health.

All applications for admission to this examination, or for information respecting it, should be addressed to Professor Liveing, Cambridge.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

GENERAL REGULATIONS.

Candidates shall be already on the Medical Register, and be entered there as possessing a qualification in Medicine. Candidates shall not, in the meantime, be required to attend any special courses of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. Candidates shall be subjected to two examinations. Such examinations may be taken simultaneously, or with an interval not exceeding twelve months. The examinations shall be written, oral, and practical. The examinations shall be held in the Physicians' Hall, or elsewhere if found more convenient. Rejected candidates shall not be admitted for re-examination till after the expiry of six months. Fees will not be returned, except in the case mentioned in the paragraph relating to fees given below.

EXAMINATIONS.

I. The First Examination shall embrace—1. Physics: Especially pneumatics, hydrostatics, hydraulics, and engineering in relation to sanitary operations, including a knowledge of architectural and other plans, sections, etc. 2. Chemistry: Especially analysis of air, water, food, including the biology of putrefaction and allied processes. 3. Meteorology: Including climate, topographical and seasonal influences in relation to health and disease.

II. The Second Examination shall embrace—1. Epidemiology and Endemiology: Including the corresponding departments in the diseases of animals and plants; contagious diseases; diseases of periods of life, professions, trades, seasons, and climates. 2. Practical Hygiene: Duties of a health officer; food; water-supply; sewerage and drainage; construction of hospitals, public buildings, dwellings; manufactories; cemeteries; nuisances. 3. Sanitary Law and Vital Statistics.

Meetings for both examinations shall be held annually in April and October. The first examination shall be held on the second Tuesday of the month, and shall occupy two days; the second examination on the immediately succeeding Thursday of the same week, and shall occupy two days. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination will be allowed to come up again after a further period of six months; but if he then fail to pass, he will be required again to undergo the first as well as the second examination before obtaining the certificate.

FEES.

No one shall be recognised as a candidate till he has paid the fee for the first examination. The fees for examinations must be paid at least a week before the day of examination. The whole charges by the College for the certificate amount to ten guineas. The fee for the first examination is three guineas; the fee for the second examination is three guineas; the fee payable before receiving the certificate is four guineas. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has offered himself for both examinations fail to pass the first, he shall not be allowed to present himself for the second, and his fee for the second shall be returned to him.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN.

Waterloo-bridge-road.—Instituted 1816.

Consulting Physicians—Dr. Samuel Wilks and Dr. John Williams.

Consulting Surgeon—Mr. J. Cooper Forster.

Physicians—Dr. G. V. Poore, Dr. Wm. Park, Dr. George Roper, and Dr. W. S. Greenfield.

Surgeon—Mr. Edwin Canton.

Surgeon-Dentist—(Vacant).

Resident Medical Officer — Mr. Edmund Overman Day.

Secretary—Mr. William Champion.

Advanced students in Medicine, and such practitioners as may desire it, are permitted to attend the practice of this Hospital gratis. If a certificate signifying such attendance be required, the sum of five guineas must be paid to the Physicians and Surgeons in ordinary conjointly.

DENTAL SURGERY.

REGULATIONS RELATING TO THE DIPLOMA IN DENTAL SURGERY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

EDUCATION.

Candidates are required to produce the following certificates:—

1. Of being twenty-one years of age.

2. Of having been engaged during four years in the acquirement of professional knowledge.

3. Of having attended, at a school or schools recognised by this College, not less than one of each of the following courses of lectures, delivered by lecturers recognised by this College, namely:—Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica.

4. Of having attended a second winter course of lectures on Anatomy, or a course of not less than twenty lectures on the Anatomy of the Head and Neck, delivered by lecturers recognised by this College.

5. Of having performed dissections at a recognised school during not less than nine months.

6. Of having completed a course of chemical manipulation, under the superintendence of a teacher or lecturer recognised by this College.

7. Of having attended, at a recognised hospital or hospitals in the United Kingdom, the practice of Surgery and clinical lectures on Surgery during two winter sessions.

8. Of having attended, at a recognised school, two courses of lectures upon each of the following subjects, viz.:—Dental Anatomy and Physiology (human and comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by lecturers recognised by this College.

9. Of having been engaged, during a period of not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner.

10. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of Dental Surgery during the period of two years.

N.B.—The students of the London schools are required to register the above certificates at this College; and special returns will be required from the provincial schools.

[*Note.*—All candidates who shall commence their professional education on or after October 1, 1877, will, in addition to the certificates enumerated in the foregoing clauses, be required to produce a certificate of having, prior to such commencement, passed the preliminary examination in general knowledge for the diploma of Member of the College, or an examination recognised as equivalent to that examination.]

Candidates who were in practice as dentists, or who had commenced their education as dentists prior to September, 1859—the date of the Charter—and who are unable to produce the certificates required by the foregoing regulations, shall furnish the Board of Examiners with a certificate of moral and professional character, signed by two members of this College, together with answers to the following inquiries:—Name, age, and professional address. If in practice as a dentist, the date of the commencement thereof. Whether member or licentiate of any College of Physicians or Surgeons of the United Kingdom; and, if so, of what College. Whether graduate of any University in the United Kingdom; and, if so, of what University; and whether graduate in Arts or Medicine. The date or dates of any such diploma, licence, or degree. Whether member of any learned or scientific society; and, if so, of what. Whether his practice as a dentist is carried on in connexion with any other business; and, if so, with what business. Whether since September, 1859, he has employed advertisements or public notices of any kind in connexion with the practice of his profession. The particulars of professional education, medical or special. The Board of Examiners will determine whether the evidence of character and education produced by a candidate be such as to entitle him to examination.

N.B.—In the case of candidates in practice or educated in Scotland or Ireland, the certificate of moral and professional character may be signed by two Licentiates of the Royal College of Surgeons of Edinburgh, or of the Faculty of Phy-

sicians and Surgeons of Glasgow, or of the Royal College of Surgeons in Ireland, as the case may be.

EXAMINATION.

The examination is partly written and partly oral. The written examination comprises general Anatomy and Physiology, and general Pathology and Surgery, with especial reference to the practice of the dental profession. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, will only have to answer those questions set by the section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination will be examined only by that section. A candidate whose qualifications shall be found insufficient will be referred back to his studies, and will not be admitted to re-examination within the period of six months, unless the Board shall otherwise determine. Examinations will be held in January and June. The fee for the diploma is £10 10s., over and above any stamp duty.

[*Note.*—A ticket of admission to the museum, to the library, and to the College lectures will be presented to each candidate on his obtaining the diploma.]

LONDON SCHOOL OF DENTAL SURGERY AND DENTAL HOSPITAL OF LONDON.

The winter session will commence on Monday, October 2.

HOSPITAL STAFF.

Dental Surgeons.	*Assistant Dental Surgeons.*
Mr. Fox.	Mr. Moon.
Mr. Underwood.	Mr Medwin.
Mr. Gregson.	Mr. D. Hepburn.
Mr. Coleman.	Mr. Lane.
Mr. H Harding.	Mr. Bartlett.
Mr. Hill.	Mr. S. H. Cartwright.

Dental House-Surgeon—Mr. Jas. Merson.
Treasurer—Mr. Cartwright. *Dean*—Mr. T. T. K. Underwood.

COURSES OF LECTURES

Dental Anatomy and Physiology—Mr. C. S. Tomes	Mechanical Dentistry—Mr. J. S. Turner.
Dental Surgery and Pathology—Mr. S. H. Cartwright.	Metallurgy—Mr. G. H. Makins.

On every day during the lecture session the surgeons of the day will, if practicable, give demonstrations, especially intended for the junior pupils, of the operations performed in Dental Surgery.

The Dean will attend at the Hospital from five to six o'clock in he afternoons, from September 25 to October 7 inclusive; and on Wednesday mornings from half-past nine to half-past ten o'clock.

Special arrangements for the education of dental students are made at Charing-cross and Middlesex Hospitals.

PHARMACEUTICAL CHEMISTRY.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN. SCHOOL OF PHARMACY.

The session will commence on October 2, 1876, and extend to July 31, 1877.

Lectures on Chemistry and Pharmacy will be delivered by Professor Redwood on Monday, Tuesday, and Wednesday mornings at nine o'clock, commencing on Monday, October 2. The course consists of sixty lectures, comprising an exposition of the leading principles and doctrines of the science of Chemistry, and of those branches of allied physical science, the applications of which are involved in the highest qualifications required for the practice of Pharmacy. There will be two of these courses during the session—the course which commences in October and ends in February being repeated in the following five months. Each course will be complete in itself, and will include a description of all the most important chemical and Galenical preparations used in medicine, which will be fully illustrated with experiments, diagrams, and specimens.

Lectures on Botany and Materia Medica by Professor Bentley, on Thursday, Friday, and Saturday mornings at nine o'clock, commencing Friday, October 6. During the session two courses of lectures will be delivered, each consisting of sixty lectures. The first course, extending from October to the end of February, will comprise Botany and Materia Medica, with especial reference to Structural Botany, and the use of the microscope in distinguishing the various drugs; and the second course, which commences in March and extends to the end of July, will also comprise Botany and Materia Medica, with especial reference to Systematic and Practical Botany. Each course will be complete in itself, although each will have a definite object in view. The portion of the second course on Systematic and Practical Botany, consisting of twenty lectures, commences in May and ends in July. Separate entries may be made for this portion.

The Laboratories for the study of Practical Chemistry will be opened on Monday, October 2, at 10 a.m., under the direction of Professor Attfield. The Laboratories are fitted up with every convenience for the study of the principles of Chemistry by personal experiment. They are specially designed for the study of Pharmacy, but are also well adapted for the acquirement of a knowledge of Chemistry in its application to manufactures, analysis, and original research. There is no general class for simultaneous instruction, each student following an independent course of study always determined by his previous knowledge; pupils can therefore enter for any period at any date. A complete course of instruction, including the higher branches of Quantitative Analysis, occupies ten full months, and dates from the day of entry to that day twelvemonth. The Laboratories are open from ten o'clock in the morning until five in the afternoon daily, except on Saturdays, when they are closed at two o'clock. Vacation months, August and September.

SPECIAL INSTRUCTION.

SCHOOLS AND OTHER PLACES OF GENERAL AND SPECIAL INSTRUCTION.

Besides the regular schools with their various departments, there are many other institutions—devoted, some of them, to special purposes—where students and practitioners may acquire a sound knowledge of various subjects which hardly enter into the ordinary curriculum. We have already indicated that in the plan of studies the student may avail himself of a year at the beginning or at the end for such purposes. If at the beginning, we could not do better than advise him to take a session at the Royal School of Mines, studying especially Chemistry and Natural History, the value of which we have already inculcated. If he takes the year at the end, then such special studies as Eye Diseases, Skin Diseases, Lunacy, Diseases of Women and Children, may well engage his attention. These may, as a rule, be studied in connexion with his school; or, if a wider field is desired, in some one or other of the following institutions:—

Preliminary.

ROYAL SCHOOL OF MINES (GOVERNMENTAL).

During the twenty-sixth session (1876-1877), which will commence on October 2, courses of lectures and practical demonstrations will be given by the Professors. The fee for students desirous of becoming Associates is £30 in one sum on entrance, or two annual payments of £20, exclusive of the laboratories. Pupils are received in the Chemical Laboratory under the direction of Dr. Frankland, in the Metallurgical Laboratory under the direction of Dr. Percy, in the Biological Laboratory under Professor Huxley, and in the Physical Laboratory under Professor Guthrie. These laboratories will be re-opened on October 2. By order of the Lords of the Committee of Council on Education, the instruction in Chemistry, Physics, Applied Mechanics, and Natural History will be given in the new buildings in the Exhibition-road, South Kensington.

SOUTH LONDON SCHOOL OF CHEMISTRY AND PHARMACY,
325, Kennington-road, and Central Public Laboratory,
Kennington-cross, S.E.
Director—Dr. Muter.

Daily lectures in Classics, Chemistry, Physics, Botany, Materia Medica, and Pharmacy. Laboratory open for Practical Chemistry from ten till five. Special instruction for Medical Officers of Health in Water, Air, Gas, and Food Analysis. For fees, etc., apply to W. Baxter, Secretary, Laboratory, Kennington-cross, S.E.

THE HARTLEY INSTITUTION, SOUTHAMPTON.

In the department of preliminary medical education, which is recognised by the Royal College of Surgeons and Physicians, students are prepared for the regular curriculum of the medical schools, one winter and two summer sessions thus passed counting towards the four years' professional study required of all candidates for a diploma. Students in

this department also receive instruction in dressing, taking notes of cases, etc., at the Southampton Royal Infirmary. For further information address the Principal.

SCHOOL OF ANATOMY, PHYSIOLOGY, AND OPERATIVE SURGERY, AND PREPARATORY MEDICAL SCHOOL.

102, Stamford-street, Waterloo-bridge (temporary premises).

(Licensed by the Secretary of State for the Home Department, July, 1875.)

LECTURERS.

Anatomy, Physiology, and Surgery—Mr Thomas Cooke, F.R.C.S., Senior Assistant-Surgeon to the Westminster Hospital, assisted by two Demonstrators.

Medicine and Obstetrics—

Materia Medica, Botany, and Chemistry—George Brown, M.R.C.S., L.S.A., Gold Medallist Charing-cross Hospital, late Demonstrator of Anatomy at the Westminster Hospital Medical School; Edward B. Aveling, D.Sc. Lond., Lecturer on Comparative Anatomy at the London Hospital Medical School.

DOWNING COLLEGE, CAMBRIDGE.

Every alternate year an election to a Fellowship takes place, the holder of which must be engaged in the active pursuit of the studies of Law or Medicine. These Fellowships are of the annual value of £200, and are tenable for twelve years. They are not vacated by marriage, and the Fellows are not required to reside. Foundation Scholarships of £50 per annum (in some cases with rooms and commons) are offered annually for distinction in Natural Science, tenable until the B.A. degree, and in cases of special merit for three years longer. Minor Scholarships of £60 per annum, tenable for two years, are offered each year for competition before entrance, and one or more of these is awarded for proficiency in Natural Science.

LONDON SCHOOL OF MEDICINE FOR WOMEN,

30, Henrietta-street, Brunswick-square, W.C.

LECTURERS.

Anatomy — Mr. Reeves, London Hospital.
Physiology—Mr. Rivington, London Hospital.
Chemistry — Mr. Heaton, F.C.S., Charing-cross Hospital.
Botany—Dr. P. H. Stokoe, Guy's Hospital.
Materia Medica—Dr. Sturges, Westminster Hospital, and Dr. H. Donkin, Westminster Hospital.
Practice of Medicine — Dr. King Chambers, St. Mary's Hospital, and Mrs. Garrett Anderson, M.D.
Midwifery and Diseases of Women —Dr. Ford Anderson and Dr. Elizabeth Blackwell.
Forensic Medicine — Dr. Dupré, F.C.S., Westminster Hospital, and Dr. Shewen.
Surgery—Mr. Cowell, Westminster Hospital.
Ophthalmic Surgery—Mr. Critchett, Royal Ophthalmic Hospital, and Mr. James Adams, London Hospital.
Pathology — Dr. Bastian, F.R.S., University College, and Dr. Cheadle, St. Mary's Hospital.
Mental Pathology — Dr. Sankey, University College.
Comparative Anatomy—Dr. Murie, Middlesex Hospital.

Dean of the School—Mr. A. T. Norton, St. Mary's Hospital.

The Winter Session of 1876-77 will commence on October 4, and will comprise classes in Practice of Medicine, Pathology, and Practical Anatomy.

UNIVERSITY OF DURHAM COLLEGE OF PHYSICAL SCIENCE, NEWCASTLE-ON-TYNE.

The College has taken over the laboratories, lecture-room, etc., of the College of Medicine, and provides the full courses in Chemistry required by the licensing boards. A chair of Natural History in connexion with the College has been established. The course is recognised by the College of Surgeons.

LONDON.

General Hospitals.

ROYAL FREE HOSPITAL,

Gray's-Inn-road.

Physicians—Dr. O'Connor, Dr. Cockle, and Dr. Rickards.
Surgeons—Mr. Gant, and Mr. Rose.

There being a wide field for medical and surgical practice at this Hospital, students have excellent opportunities for gaining a bedside knowledge of Medicine and Surgery, also for the study of Pathology and Morbid Anatomy, and can prepare for examinations by attending a course of three or six months' clinical instruction. Vacancies for Clinical Clerks and Dressers. For particulars apply to any member of the Medical Staff, at the Hospital, daily at 2 p.m.

GREAT NORTHERN HOSPITAL,

Caledonian-road.

Physicians—Dr. Leared, Dr. Cholmeley, Dr. Crucknell, Dr. R. Bridges.
Obstetric Physician—Dr. Gustavus C. P. Murray.
Diseases of the Eye—Mr. B. T. Lowne.
Surgeons—Mr. Gay, Mr. W. Adams, Mr. T. Carr Jackson, Mr. W. H. Cripps, W. Spencer Watson.
Aural Surgeon—Mr. Harvey. Dental Surgeon—Mr. C. J. Fox.
Chloroformist—Mr. G. Eastes. House-Surgeon—Mr. F. H. Carter.
Junior Resident Medical Officer—Mr. G. Master.
Dispenser—Mr. J. W. Burgess.
Registrar of Out-Patients—Mr. F. Adams.

SEAMEN'S HOSPITAL (late *Dreadnought*), GREENWICH, S.E.

Consulting Physicians—Drs. Budd and Stephen H. Ward.
Visiting Physicians—Dr. Chas. H. Ralfe and Mr. Harry Leach.
Visiting Surgeon—Mr. D. Colley.
House-Physician—Dr. H. H. Murphy.
Surgeon—Mr. W. Johnson Smith.
House-Surgeon — Mr. W. H. Makins.

Secretary—Henry C. Burdett.

Special Hospitals.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST,

Victoria Park. Office—24, Finsbury-circus, E.C.

Consulting Physicians—Dr. T. B. Peacock, Dr. J. R. Bennett, and Dr. E. L. Birkett.
Consulting Surgeon—Mr. J. Hilton.
Physicians—Dr. S. H. Ward, Dr. J. Andrew, Dr. J. C. Thorowgood, Dr. A. B. Shepherd.
Assistant-Physicians—Dr. Eustace Smith, Dr. J. B. Berkart, Dr. G. H. Evans, and Dr. J. M. Fothergill.
Resident Medical Officer—Mr. Ernest O. Bark.

The Hospital affords accommodation for 164 in-patients. Information respecting medical instruction at the Hospital may be obtained on application to the Physicians.

HOSPITAL FOR SICK CHILDREN,

48 and 49, Great Ormond-street, W.C., and Cromwell House, Highgate.

Consulting Physician—Dr. West.
Physicians—Dr. Dickinson, Dr. Gee, and Dr. W. B. Cheadle.
Assistant-Physicians—Dr. R. J. Lee, Dr. O. Sturges, Dr. A. L. Galabin, Dr. Thos. Barlow.
Surgeon—Mr. Thomas Smith.
Assistant-Surgeons—Mr. Howard Marsh, Mr. J. W. Haward, and Mr. Edmund Owen.
Surgeon-Dentist—Mr. Alex. Cartwright.
Secretary—Samuel Whitford.

156 beds. In-patients, 1875, 873. Out-patients attending, 12,989. The practice of the Hospital, in both in- and out-patient departments, is open at nine every morning. Fee for six months' attendance, £3 3s.; perpetual, £5 5s.

BELGRAVE HOSPITAL FOR CHILDREN,

1, Cumberland-street, Eccleston-square, S.W.—Thirty beds.

President—His Grace the Duke of Westminster.

HONORARY MEDICAL STAFF.

Physicians—Dr. Farquharson and Dr. Hope.
Surgeons—Mr. Thos. P. Pick and Mr. Stirling.
House-Surgeon—Mr. Harper.

New patients last year—in, 132; out, 1040. Pupils will be admitted to the practice of the Hospital upon producing a certificate of being duly registered as medical students, and on such other conditions as the Committee may from time to time direct.

EVELINA HOSPITAL FOR SICK CHILDREN,

Southwark-bridge-road.

Founded and endowed in 1869 by the Baron F. de Rothschild.—100 beds.

Consulting Physician—Dr. Arthur Farre.
Consulting Surgeon—Mr. Prescott C. Hewett.

Physicians — Dr. E. Buchanan Baxter and Dr. Frodk. Taylor.
Physicians to Out-Patients — Dr. T. Crawford Hayes and Dr. Jas. Goodhart.
Surgeons—Mr. W. Morrant Baker and Mr. H. G. Howse.
Surgeon to Out-Patients—Mr. R. Clement Lucas.
House-Surgeon—Mr. W. E. Paley.

Secretary—Mr. Frank Livesay.

ST. LUKE'S HOSPITAL FOR LUNATICS,

Old-street, E.C.

Physicians—Dr. Henry Monro and Dr. William Wood.
Surgeon—Mr. Alfred Willett.
Resident Medical Superintendent—Dr. George Mickley.

There are two resident Clinical Assistants, whose appointments are tenable for six months. The Visiting Physicians are also allowed by the Committee to take pupils. Patients admitted gratuitously, or on payment according to their circumstances. For information address the Secretary, H. Crespin, Esq.

VICTORIA HOSPITAL FOR CHILDREN,

Gough House, Queen's-road, Chelsea.

This Hospital contains sixty-five beds, and has a large Out-patient Department of over 400 weekly. The Physicians attend daily at 9 a.m., and on Mondays and Thursdays at noon. The Surgeons attend at 10 a.m., except on Wednesday and Saturday. The Surgeon-Dentist attends on Saturday at 9.30 a.m.

Physicians—Dr. Evans and Dr. Cavafy.
Assistant-Physicians—Dr. Ridge Jones, Dr. Grigg, Dr. Pearson Irvine, and Dr. W. H. Allchin.
Surgeon—Mr. Cowell.
Assistant-Surgeons — Mr. F. Churchill and Mr. Fisher.
Dental-Surgeon—Mr. Risdon.
House-Surgeon and Registrar—Mr. R. Watford.
Secretary—Captain Blount, R.N.

A Convalescent Home has been established at Margate in connexion with the Hospital.

EAST LONDON HOSPITAL FOR CHILDREN.

This institution contains thirty-six beds.

Physicians — Dr. Barnes, Dr. Andrew Clark, Dr. Eustace Smith, Dr. John Magrath, and Dr. Horatio B. Donkin.
Surgeons—Mr. B. Shillitoe, Mr. A. Cæsar, and Mr. H. A. Reeves.
House-Surgeons—Mr. R. W. Leftwich and Mr. J. Cæsar.

Secretary—Ashton Warner.

FEVER HOSPITAL, ISLINGTON

260 beds.

Consulting Surgeon—Mr. W. S. Savory, F.R.C.S.

Consulting Physicians — Dr. A. Tweedie and Dr. C. Murchison.
Physicians—Dr. Broadbent and Dr. Cayley.

Resident Medical Officer—Mr. Shirley F. Murphy.
Secretary—Mr. Charles Finn.

BRITISH LYING IN HOSPITAL,
Endell-street, St. Giles's, W.C.
Consulting Physician—Dr. Priestley.
Consulting Surgeon—Sir William Fergusson, Bart.
Physicians—Dr. Heywood Smith, Dr. Arthur Edis, and Dr. Wiltshire.
Matron—Miss Freeman.
Secretary—Mr. Vincent Yardley.

ROYAL LONDON OPHTHALMIC HOSPITAL,
Blomfield-street, Moorfields, E.C.—Founded 1804.—70 beds.
Consulting Physician.—Dr. F. J. Farre.
Consulting Surgeon—Mr J. Dixon.
Surgeons—Messrs. Critchett, Bowman, Wordsworth, Streatfeild, J. W. Hulke, G. Lawson, J. Hutchinson, J. Couper, and Dr. J. Soelberg Wells.
House-Surgeon—A. S. Morton, Esq.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL,
King William-street, Charing-cross.

The Hospital contains thirteen wards with forty beds, and the patients (10,000 new cases annually) are seen daily at one, and operations performed at two. The following are the days of attendance of the Surgical Staff:—Monday and Friday, Mr. Power and Mr. Reuse. Tuesday, Thursday, and Saturday, Mr. Hogg. Wednesday and Saturday, Mr. Cowell.

The practice of the Hospital is open to students. Fees—for six months, £3 3s.; perpetual, £5 5s.

Secretary—Mr. Geo. C. Farrant.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC,
23, 24, and 25, Queen's-square, Bloomsbury.

The Hospital contains 90 beds, of which 15 (contained in the In Memoriam Wing) are allotted to patients able to contribute a portion of the bare cost of their maintenance whilst in the Hospital; the County Convalescent Branch, at Finchley, 25 beds. The Physicians attend every Monday, Tuesday, Wednesday, and Friday, at half-past two o'clock. In- and out-patients' electrical room and general practice at that hour.

Physicians—Drs. Ramskill, Radcliffe, Hughlings-Jackson, Buzzard.
Physicians for Out-patients—Drs. Charlton Bastian, Elam.
Assistant-Physicians—Drs. Maclure, Gowers.
Surgeon—W. Adams, F.R.C.S.
Resident Medical Officer and Registrar—Dr. Sturge.

Medical practitioners and students will be admitted on showing their cards.

HOSPITAL FOR DISEASES OF THE SKIN,
52, Stamford-street, Blackfriars.
Surgeons—Mr. Jonathan Hutchinson and Mr. Waren Tay. Assistant-Surgeons—Mr. Wyndham Cottle and Mr. Edward Nettleship.

THE BRITISH HOSPITAL FOR DISEASES OF THE SKIN,
Great Marlborough-street, W., and Finsbury square, E.C.
Surgeons—Mr. Balmanno Squire and Mr. George Gaskoin.

ST. PETER'S HOSPITAL FOR STONE AND GENITO-URINARY DISEASES,
54, Berners-street, W.

The practice is free to hospital students.

Surgeons—Mr. Walter J. Coulson and Mr. W. F. Teevan.
Assistant-Surgeon—Mr. F. R. Heycock.

HOSPITAL FOR DISEASES OF THE THROAT,
Golden-square, W.
Consulting Physician—Dr. Billing, M.D.
Consulting Surgeon—Sir W. Fergusson, Bart.
Physicians—Dr. Morrell-Mackenzie, Dr Semple, Dr. Prosser James, Dr. W. MacNeill Whistler.
Surgeon—Mr. Pugin Thornton

PROVINCIAL.

NORFOLK AND NORWICH HOSPITAL.
120 beds.

One year's attendance recognised by Examining Boards. Fees: for the Physicians' practice, £10 10s.; for the Surgeons' practice—one year, £20; two years, £30; perpetual, £40. Pupils resident and non-resident.

Physicians—Dr. Copeman, Dr. Eade, Dr. Bateman.
Honorary Consulting Surgeon—Mr. Nichols.
Surgeons—Mr. Firth, Mr. Cadge, Mr. Crosse.
Assistant-Surgeons—Mr. Williams, Dr. Beverley.
Resident Medical Officer—Mr. J. R. Baumgartner.

WEST RIDING LUNATIC ASYLUM, WAKEFIELD.

Dr. Herbert Major, the Medical Director of the West Riding Lunatic Asylum, lectures on Mental Diseases during the summer session. The systematic lectures are given at the School, and the clinical lectures at the Asylum, which now accommodates 1500 patients. It is needless to point out how great and unusual an advantage is here presented to those inclined to make themselves conversant with the improvement made of late years in the treatment and management of the insane.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.
(A Clinical and Training Institution for Gentlemen intended for the Medical Profession.)

Medical Officers—Dr. Millington, Dr. Totherick, Mr. Vincent Jackson, Mr. J. O'B. Kough, Mr. C. A. Newnham.
House-Surgeon—Mr W. A. Shoolbred.
Physicians' Assistant—Dr. F. Mortimer Hawkins.

This Hospital contains 210 beds; large male and female accident wards; wards for cases of burn; general medical and surgical wards; a ward for diseases peculiar to women; a children's ward, and a detached fever wing; also a commodious semi-detached out-patient department. To the general wards a clinical-room is attached, in which the analysis and microscopic inspection of the urine are conducted, also ophthalmoscopic and laryngoscopic examinations. Instruction is given in Chemistry, in Natural Philosophy, and in the Anatomy of the Dry Bones, Ligaments, Viscera, and Topographical Anatomy. The course of Practical Surgery includes the use of surgical apparatus, the performance of surgical operations, and the demonstration of Morbid Surgical Anatomy. In the Hospital the pupils are required to attend daily in the casualty-room, in the out-patient department, and in the wards, the instruction afforded being of a practical nature, including bandaging, the application of splints, tooth-drawing, and every kind of elementary professional detail, likewise how to observe and examine patients. The art of dispensing, the preparation of drugs, and of pharmaceutical compounds, can also be learnt in the Hospital Dispensary and Laboratory. Operations are performed every Thursday at eleven o'clock, and practitioners are admitted. The practice of the Hospital is recognised by all the examining boards.

Fees for hospital practice—For one year, ten guineas; perpetual, twenty guineas. Some members of the honorary staff receive resident pupils. For further particulars apply to Mr. Vincent Jackson (Honorary Secretary to the Medical Committee), 46, Darlington-street, Wolverhampton.

ROYAL DISPENSARY, EDINBURGH.
Consulting Physician—Professor Sanders.
Consulting Surgeon—Professor Spence.
Consulting Physicians-Accoucheur—Dr. Keiller and Dr. J. Matthews Duncan.
Medical Officers—Dr. Linton, Dr. W. Husband, Dr. James Andrew, Dr. D. Wilson, Dr. R. P. Ritchie, Dr. F. W. Moinet, Dr. A. J. Sinclair, and Dr. W. Gordon.
Midwifery Department—Dr. Wilson, Dr. Andrew, and Dr. Moinet.
Vaccination—Dr. Husband.
Apothecary—Mr. R. Urquhart.
Secretary to Medical Officers—Dr. Andrew.

ROYAL HOSPITAL FOR SICK CHILDREN, MEADOWSIDE HOUSE, EDINBURGH.
Consulting Physicians—Professor Sir Robert Christison, Bart., Drs. Charles Wilson, Graham Weir, and Matthews Duncan.
Consulting Surgeon—Professor Spence.
Pathologist—Professor Sanders.
Ordinary Physicians—Drs. Ritchie, Linton, Dunsmure, and Angus Macdonald.
Extra Physicians—Vacant.
Assistant-Physician—Dr. R. J. Hutchinson.
Surgeon-Dentist—Dr. Smith.
Ophthalmic Surgeon—Dr. Argyll Robertson.
Resident Physician—Vacant.
Honorary Secretary—Mr. John Henry, 20, St. Andrew-square.
Hon. Treasurer—R. S. Wyld, 19, Inverleith-row.

Fees: To Hospital, three months, £1 1s.; to Dispensary Department, three months, £1 1s.

GLASGOW ROYAL ASYLUM.

The Asylum contains nearly 600 patients, including all classes. Clinical instruction is given, and Dr. Yellowlees, Physician Superintendent, lectures on Mental Diseases at the University in summer; fee, £2 2s.

GLASGOW EYE INFIRMARY,
Berkeley-street, and 76, Charlotte-street.
Physician—Dr Harry Rainy.
Consulting Surgeon—Dr. George Buchanan.
Surgeons—Drs. Thomas Reid, Hector C. Cameron, Thos. S. Meighan.
Assistant Surgeons—Drs. Henry E. Clark and J. Crawford Renton.
Resident Clerk—Mr. Thomas Young.
Secretary—George Black, 88, West Regent-street.

Hour of visit, 1 p.m. Sixty-four beds. Student's fee for six months, attendance, £2 2s.; or for one year's attendance, £3 3s. To those attending, or who have attended, the lectures on the Eye in Glasgow University, £1 1s. for six months; or £1 11s. 6d. for twelve months.

GLASGOW DISPENSARY FOR DISEASES OF THE EAR,
241, Buchanan-street.

A course of lectures and clinical instruction are given to the students attending the Dispensary during the months of May, June, and July. Average number of cases treated, 800 annually.

Surgeon and Lecturer—Dr. James Patterson Cassells.

DISPENSARY FOR SKIN DISEASES,
63, John-street, Glasgow.
Physician—Professor McCall Anderson.
Number of new cases annually, about 1400.

Practical courses on Diseases of the Skin are held during the summer session. This Dispensary is in connexion with the cutaneous wards in the University Hospital.

Hon. Secretary—James Grahame.

DUBLIN INFIRMARY FOR DISEASES OF THE EYE AND EAR,
Ely place.
Ophthalmic and Aural Surgeon—Dr. Archibald Hamilton Jacob.
Consulting Physician—Dr. Evory Kennedy.
Consulting Surgeon—Mr. George H. Porter.
Obstetric Physician—Dr. John Cronyn.

ST. MARK'S OPHTHALMIC HOSPITAL AND DISPENSARY FOR DISEASES OF THE EYE AND EAR.
Attending Surgeons—Henry Wilson, F.R.C.S.I., and Richard Rainsford, M.B., M.Ch., F.R.C.S.I.

Instruction is given daily from ten to twelve o'clock, and operations performed on Wednesdays and Saturdays at eleven o'clock. Fee for three months' attendance, £3 3s.

Special courses on the Ophthalmoscope are held from time to time.

CORK OPHTHALMIC AND AURAL HOSPITAL.

SPECIAL DEPARTMENT FOR DISEASES OF THE THROAT.

Ophthalmic and Aural Surgeon—Dr. H. Macnaughton Jones.
Surgeon Extraordinary—Dr. Thomas Gregg.
Consulting Physician—Dr. Wm. Jackson Cummins.
Dentist for Throat Department—Mr. Joseph Corbett, jun.

There are twenty five beds for intern patients. The attendance of extern patients during the past year has been over 1900.

THE PUBLIC SERVICES.

It hardly comes within the scope of the objects aimed at by us in this number to say anything of the relative merits of these Services as compared with each other and with civil practice. Nevertheless, as a good many students enter our schools, having from the first made up their minds to enter one or other of the Medical Services, we may be excused from addressing students generally on the subject.

Formerly, when a student elected to enter one of these Services, he did so with the intention of making that Service his home for life; now all that is altered as regards the Queen's Services but the old rules still hold good as regards the Naval and Indian Medical Services.

Let us contrast these last, then, with the prospects of the young practitioner in civil life. A young man with money at command can usually secure a comfortable home and a fair income at a tolerably early period in civil practice; and here he may, as a rule, look forward to many years of fair domestic comfort, with a home and friends, though his income may not be a large one. Moreover, the great prizes of the profession are open to him. On the other hand, for a young man without capital, other than his education, to begin civil practice is indeed uphill work for many years, and some sink in the struggle. It is to this class that the Services are most attractive. By entering one or other of the Services, the young practitioner promptly steps into comparative affluence. His income is never very large, but it ought to suffice for a single man's wants; and matrimony should not once be thought of by a man who has a real affection for a woman until he has reached a rank which insures an adequate income for them both.

Here, then, we have a man without capital embarked in a career whence he derives sufficient emolument for all his real wants. Usually he has gentlemen only to deal with; and, with such behaviour as becomes a gentleman, he may be said to be settled for life. There is no *great* struggle to rise in the world; improved rank mainly comes with time and good conduct, though ability is sure to have influence also. In civil life, again, if there is not a large initial expenditure in purchasing a practice or a partnership, many years may elapse before a position of true independence is reached.

The new Army Regulations are apparently intended as a kind of sop to men in the position hinted at. They are to serve in the Army for ten years at a rate of pay on which they can fairly subsist, but no more; and, at the end of that time, all save a few will quit the Service with a bonus of £1000, or what remains of it. This money is certainly sufficient to enable a man to make a fair start in life; but during the most valuable period of his life he has been acquiring habits which are not favourable to private practice, and certainly not conducive to success in it. His experience is very limited; he has to deal with men under strict control, and his work is to a great extent concerned rather with making returns than with treating disease.

But we greatly dread that this is not the worst. An income which will be adequate for a man at two-and-twenty may not be so at two-and-thirty; and still more is this true of more advanced ages. The pay the young military surgeon now receives does not increase—it remains stationary; and in an expensive regiment there will be a constant tendency to draw on future prospects, and on the £1000 retiring bonus. This, of course, can only be done at a ruinous sacrifice, so that when the time comes the ex-Army Medical Officer may find himself with no bonus at all; with health wrecked by foreign service; and, it may be, laden with debts. The prospect is not enchanting.

Of the two other Services which are permanent, the Indian offers great attractions in spite of doubtful climate and prolonged expatriation. The pay is good, the allowances are good, and there are still many very good places to be picked up in the way of civil appointments, for which the less fortunate gentlemen of the Queen's Service are not eligible. On the whole, from a very extensive acquaintance among Indian Medical Officers, we can safely say that there is little discontent among them. True, some men succeed better than others, and when the time for their leave to Europe comes round, they return home far better off than their contemporaries who had stayed at home. The mortality and sickness among them is not great—not so great, we believe, as in the Queen's Service. To a young man seeking Service in preference to civil employment we should decidedly recommend the Indian in preference to the Queen's under the new regulations.

Of the three Services, the Naval is decidedly the most unpopular, and the reason is not far to seek. The curse of the Navy is the half-pay system. No sooner does a man arrive on shore, after a cruise lasting years, it may be, than he gets a week or two to see his friends and look about him, but if at the end of that time he wants an extension of leave, or if there is no post ready for him, then he is sent, it may be for months, on half-pay. A man gains his promotion as Surgeon. There may be no berth ready for him as Surgeon; it is too expensive to employ a Surgeon to do Assistant-Surgeon's work, and, as a reward on promotion, he is sent on half-pay! Were this remedied, and service made continuous, much dissatisfaction would be removed. There are, moreover, many little irksome details,—things which seem small individually, but which, collectively, sour a man's temper and make him discontented. The Navy is not popular; and yet the pay is good, and a careful man, were it not for these spells of half-pay, might save a great deal of it. There are a few expensive stations, but they are not many, and if a man likes he can send home a good deal of money or invest it for himself. The character of superior officers is a much more serious matter on board ship than ashore, and often the position of the medical officer is rendered very uncomfortable by having the misfortune to be under a tyrant.

ARMY MEDICAL DEPARTMENT, WHITEHALL-YARD.

SCHEDULE OF QUALIFICATIONS

Necessary for Candidates desirous of obtaining Commissions in the Army Medical Department, with extracts from the Regulations prescribed by the Royal Warrant of April 28, 1876 (*Clause* 58, *Army Circulars*, 1876), *by which the Pay, Promotion, and Retirement of Medical Officers are regulated and determined.*

(I.)—1. Every candidate desirous of presenting himself to compete for a commission in the Army Medical Department must be twenty-one years of age and not over thirty-two years at the date of commencement of the competitive examination. He must produce an extract from the registrar of his birth, or in default, a declaration, made before a magistrate by one of his parents or guardians, giving his exact age. He must also produce a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits, and likely in *every* respect to prove creditable to the Department if a commission be granted; and also a certificate of moral character from the parochial clergyman, if possible.

2. The candidate must sign a declaration upon honour that both his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor has any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of

a Medical Officer in any climate; also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. The Board must also certify that he is free from organic or other disease, and from constitutional weakness, or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate.

3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned.

4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—*a*. Anatomy and Physiology, 1000 marks; *b*. Surgery, 1000; *c*. Medicine, including Therapeutics, the Diseases of Women and Children, 1000; *d*. Chemistry and Pharmacy, and a practical knowledge of drugs, 100 marks. N.B.—The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The eligibility of each candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximum number of marks will be—French and German (150 each), 300 marks; Natural Sciences, 300 marks. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The natural sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

5. After passing this examination, every candidate will be required to attend one entire course of practical instruction at the Army Medical School on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service.

The following extracts from the Royal Warrant of April 28, 1876 (Clause 58, Army Circulars, 1876), are republished for the information of candidates for commissions in the Army Medical Department:—

1. The ranks and rates of pay of the officers of the Army Medical Department shall be as follows:—Daily pay: Surgeon-General £2, after twenty-five years' service £2 5s., after thirty years' service £2 7s., after thirty-five years' service £2 10s.; Deputy Surgeon-General £1 10s., after twenty-five years' service £1 12s., after thirty years' service £1 15s., after thirty-five years' service £1 17s.; Surgeon-Major, on appointment £1, after five years' service as such £1 5s.; Surgeon, on appointment £250 a year, after ten years' service 17s. 6d. daily. Charge pay: The Principal Medical Officer of an army in the field consisting of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. Or the Principal Medical Officer of a colony where the number of commissioned officers and enlisted men is 1500 and upwards, 5s. daily.

2. The pay of officers shall be issued monthly in arrear.

3. The relative rank of the officers of the Army Medical Department shall be as follows:—(1.) A Surgeon-General shall rank as Major-General, according to the date of his commission. (2.) A Deputy Surgeon-General shall rank as Colonel, according to the date of his commission. (3). A Surgeon-Major shall rank as Major, according to the date of his commission; after twenty years' full-pay service as Surgeon and Surgeon-Major, he shall rank as Lieutenant-Colonel, but junior of the latter rank. (4.) A Surgeon shall rank as Lieutenant, according to the date of his commission; and, after six years' full-pay service, as Captain, according to the date of the completion of such service.

4. The relative rank of these officers shall regulate choice of quarters, rates of lodging-money, servants, fuel and light, or allowances in their stead, detention and prize-money, as well as allowances granted on account of wounds or injuries received in action, and pensions and allowances to widows and families.

5. Forage shall be granted to officers of the Army Medical Department for such number of horses as are necessarily kept by them for duty.

6. Admission to the Army Medical Department shall be by public competition.

7. Every candidate for appointment to the Army Medical Department shall possess two diplomas or licences, one to practise Medicine, and the other Surgery, in Great Britain or Ireland, and be registered under the Medical Act in force at the time of his appointment.

8. A successful candidate, who, having passed through a course of instruction at the Army Medical School at Netley, in Military Medicine, Surgery, Hygiene, and Pathology, shall have proved, after examination, that he possesses a competent knowledge of those subjects, shall receive a commission as Surgeon for a limited period of ten years' service on full pay. From the date of joining at Netley, and up to that of passing his final examination, a candidate shall receive 5s. a day.

9. On the completion of ten years' commissioned service, unless the Surgeon be specially selected for further employment in the Medical Department of our Army, or if he be unwilling to continue to serve therein, his services shall be dispensed with, and he shall be entitled to receive, in lieu of all pension or retirement, pension for wounds excepted, the sum of £1000.

10. A Surgeon of less than ten years' service, disqualified for duty by ill-health, certified by a Board of Medical Officers to have been contracted in and by the Service, may, at the discretion of our Secretary of State for War, be granted half-pay at a rate not exceeding 8s. a day if he have served five years or more, or 6s. a day if he have served less than five years, for a period not exceeding six months at one time.

11. At the expiration of that period of six months, if the Surgeon be able to resume his duties, he shall be entitled to complete his term of ten years' service. If he be unable to resume duty, as certified by a Board of Medical Officers, he shall be allowed, if he have not served five years, a further period of six months, without half-pay; at the expiration of which period, if still unable to resume duty, his services shall be dispensed with.

12. If the Surgeon have served five years on full pay, and be unable to resume duty as certified by a Board of Medical Officers, his services shall be dispensed with, and he shall be entitled to receive, in lieu of all further pension or pay, pension for wounds excepted, a gratuity at one of the following rates, viz.:—If he shall have completed nine years' full-pay service, £800; eight years' full-pay service, £700; seven years' full-pay service, £600; six years' full-pay service, £500; five years' full-pay service, £400.

13. If a Surgeon be unable to complete his ten years' service from any cause other than wounds or ill-health, certified by a Board of Medical Officers to have been caused in and by the service, or reduction of establishment, he shall be allowed not more than six months' leave without pay, after which, if unable to resume duty, his services shall be at once dispensed with, and he shall have no further claim on the Department.

14. If the service of an officer be temporarily dispensed with in consequence of a reduction of establishment, he shall be granted the rates of half-pay fixed by Article 10 until there be an opportunity of re-employing him, or if he have served five years, he may retire from the service with a gratuity according to the rates specified in Article 12.

15. Every year it shall be competent for our Commander-in-Chief, on the recommendation of the Director-General of the Army Medical Department, to select, with the approval of our Secretary of State, a number of Surgeons not exceeding six, who shall be retained in the service, and shall be promoted after twelve years' service on full pay to the rank of Surgeon-Major.

16. All promotion from the rank of Surgeon-Major to that of Deputy Surgeon-General, and from the rank of Deputy Surgeon-General to that of Surgeon-General, shall be given for ability and merit upon the selection of our Commander-in-Chief, with the approval of our Secretary of State; and the grounds of such selection shall be stated to us in writing, and recorded in the Department. In all such cases the amount of foreign service shall be expressly stated.

17. A Medical Officer retiring after full-pay service of twenty-five years and upwards, may, if recommended for the same by the head of his department, receive a step of honorary rank, but without any consequent increase of half-pay.

18. Good-service pensions shall be awarded to the most meritorious officers of the Army Medical Department, under such regulations as shall be from time to time determined by us, with the advice of our Secretary of State.

19. Six of the most meritorious officers of the Army Medical Department shall be named our Honorary Physicians, and six our Honorary Surgeons.

20. Medical Officers shall have a right to retire on half-pay after twenty-years' service. Medical Officers of the rank of Surgeon-Major or Surgeon shall be placed on the retired list at the age of fifty-five, and all Surgeons-General and Deputy Surgeons-General at the age of sixty years.

21. Our Secretary of State may, when he shall deem it fit, employ Medical Officers on the half-pay list in special situations at such rates of pay, in addition to half-pay, as he shall from time to time determine; but such officers shall vacate their appointments on attaining the age of sixty-five years.

22. A Medical Officer who, having voluntarily resigned his commission, has subsequently been permitted to re-enter the Department, shall not, except under very special circumstances to be approved by our Secretary of State, be allowed to reckon his former service.

SERVICE ON THE WEST COAST OF AFRICA.

23. Service of Medical Officers upon the West Coast of Africa shall be voluntary.

24. Each year or portion of a year shall be allowed to reckon double towards retirement or towards the gratuities fixed by Articles 9 and 12, but not towards increased pay, provided that the officer shall serve at least twelve months on the West Coast of Africa.

25. For each year's service on the Coast, a Medical Officer shall be entitled to a year's leave at home, and for every additional period beyond a year he shall have an equivalent extension of leave.

26. Officers who may volunteer for service on the West Coast of Africa shall receive double pay while actually serving on the Coast.

NON-EFFECTIVE PAY.

27. A Medical Officer of more than ten years' service placed on half-pay by reduction of establishment, or on the report of a Medical Board in consequence of wounds or ill health, caused in and by the discharge of his duties, or on account of age (under Article 20), shall be entitled to half-pay in accordance with the following scale:—Daily pay: Surgeon-General, after thirty years' service, £1 17s. 6d.; after twenty-five years' service, £1 13s 6d.; after twenty years' service, £1 10s. Deputy Surgeon-General, after thirty years' service, £1 5s. 6d.; after twenty-five years' service, £1 2s. 6d.; after twenty years' service, £1 1s. Surgeon-Major, after twenty-five years' service, £1; after twenty years' service, 16s. 6d.; after fifteen years' service, 13s. 6d.; after twelve years' service, 11s. Surgeon, after ten years' service, 10s.

28. The rate of half-pay awarded to officers retiring for their own convenience, after twenty years' service on full pay, under Article 20, shall not exceed one-half of their full pay at the time of retirement.

29. Every Medical Officer who shall retire after a service upon full pay of twenty-five years, shall be granted a rate of half-pay equal to seven-tenths of the daily pay he may have been in receipt of when thus retiring on half-pay, provided he shall have served three years in his rank, or shall have served abroad for ten years in all ranks, or for five years with an army in the field. An officer of twenty-five years' full-pay service, whose service falls within neither of these conditions, shall be entitled to only seven-tenths of the daily pay he was in receipt of prior to his last promotion.

30. A Medical Officer of twenty years' full-pay service, placed temporarily on half-pay on account of ill-health, may, however, be allowed to retire on permanent half-pay, at the rates fixed by Article 27, if after one year on half-pay he shall be reported by a Medical Board to be permanently unfit for further service.

31. In all matters not specially provided for in our present Warrant, the officers of the Medical Department of our Army shall be subject to the general regulations for the departments of our Army.

N.B.—The rates of pay, including allowances, while serving in India, will range from 317 rupees (£31 14s.) to 433 rupees (£43 6s.) per month, according to length of service.

DECLARATION.

Recommended by _____, I _____,
_____ years of age on _____ last (*vide* accompanying Certificate), a Candidate for a commission in the Medical Department of the Army, do hereby engage for general service, under the conditions detailed in the Schedule of Qualifications, and attest my readiness to proceed on duty abroad whenever required to do so.

I declare upon my honour—(1st) That both my parents are of unmixed European blood; (2nd) that I am not at present suffering from, nor have I any tendency to, any form of disease or mental and bodily infirmity, nor have I any hereditary tendency or predisposition to mental or constitutional disease, or labour under any imperfection or disability that can or is likely to interfere with the efficient discharge of the duties of a Medical Officer in any climate; (3rd) that I will fully reveal to the Medical Board, when physically examined, all circumstances within my knowledge that concern my past and present health; (4th) that I do not now hold, nor have I ever held, any commission or appointment in the public services (if the contrary, specify here).

N.B.—A mis-statement by a candidate will invalidate any subsequent appointment, and cause forfeiture of all privileges for services rendered.

I forward the Certificate of Registration under the Medical Act, shewing that I possess the following Degrees, Diplomas, and other Qualifications in Medicine and Surgery, which I will produce when called up for examination, viz.:—

Medicine _____

Surgery _____

I also possess a degree in Arts } _____
(or, if others, state particulars) }

I wish to be examined in the voluntary subjects, viz.:—

French, _____. German, _____. Natural Sciences, _____.

Date, _____. Signature, _____

Address, _____

[When this Declaration is returned, it must be accompanied by an extract from the Register of Birth (not of Baptism), or in default a Declaration made by one of the parents or guardians before a magistrate, giving the exact age, also the Certificate of Registration under Medical Act, etc., and by a recommendation from some person of standing in society, not a member of the candidate's family, to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the Department, if an appointment be granted, as well as a Certificate of moral character from the parochial clergyman, if possible. Any omission of the particulars set forth will render this application void.]

TO BE FILLED IN BY THE EXAMINING MEDICAL OFFICERS AT THE ARMY MEDICAL DEPARTMENT.

The Diplomas and Qualifications produced by _____
have been examined and are found to be in accordance with regulations.

General health _____

Hearing _____

Vision _____

Opinion of Medical Board as to fitness _____

Date _____

ARMY MEDICAL SCHOOL.

President of the Senate.—Sir William M. Muir, K.C.B., M.D., Director-General of the Army Medical Department.

Members of the Senate.—Surgeon-General Sir Joseph Fayrer, M.D., K.C.B., C.S.I., Physician to the Council of India; Sir Alexander Armstrong, M.D., K.C.B., F.R.S.; The Principal Medical Officer Royal Victoria Hospital; Surgeon-General T. Longmore, C.B., Professor of Military Surgery; Inspectors-General W. C. Maclean, M.D., C.B., Professor of Military Medicine; William Aitken, M.D., F.R.S., Professor of Pathology; F. S. B. F. De Chaumont, M.D., Conjoint Professor of Military Hygiene.

Assistant-Professors.—Surgeons-Major J. H. Porter, W. H. Webb, F. H. Welch, F.R.C.S.; and Deputy Inspector-General J. D. McDonald, M.D., F.R.S.

Candidates for commissions in the Army and Navy and in the Queen's Indian Service proceed to Netley after passing the examination in London. At Netley they attend the medical and surgical practice of the Royal Victoria Hospital, and learn the system and arrangements of naval and military hospitals. During four months they attend the lectures given by the professors and assistant-professors, and go through a course of practical instruction in the hygienic laboratory and microscopical room.

INDIAN MEDICAL SERVICE.

The regulations relating to the Indian Medical Service may be said to be identical with the Queen's. The rules as to service are now, however, different.

The candidate for the Indian Medical Service may be either married or unmarried, and must not exceed twenty-eight years of age. After passing the final examination, pay is granted at the rate of ten shillings a day. Indian pay and allowances only come into force after landing in India.

NAVAL MEDICAL DEPARTMENT, ADMIRALTY.

QUALIFICATIONS AND REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL SERVICE OF THE ROYAL NAVY.

The Lords Commissioners of the Admiralty are pleased to direct that the following regulations, relative to the examination of candidates for the appointment of Surgeon in the Royal Navy, shall in future be adopted:—

1. Every candidate desirous of presenting himself for admission to the Naval Medical Service must be not under twenty-one nor over twenty-eight years of age. He must produce a certificate from the District Registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character, signed by a clergyman or a magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated.

2. He must be free from organic disease, and will be required to make a declaration that he labours under no mental or constitutional disease or weakness, nor any other imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical Officer in any climate. His physical fitness will be determined by a Board of Medical Officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test types. He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. He must be registered under the Medical Act in force at the time of his appointment as licensed to practise Medicine and Surgery in Great Britain or Ireland.

4. Certificates of registration, character, and age must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Naval Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica, also in French and German; and the number of Marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley on—(1) Hygiene, (2) Clinical and Naval and Military Medicine, (3) Clinical and Naval and Military Surgery, (4) Pathology of Diseases and Injuries incident to Naval and Military Service.

7. At its conclusion the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of a Naval Medical Officer, he will be eligible for a commission as Surgeon.

8. During the period of his residence at the Netley Medical School each candidate will receive an allowance of 5s. per diem with quarters, or 7s. per diem without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a Surgeon, but without the sword).

9. All candidates will be required while at Netley to conform to such rules of discipline as the Senate may from time to time enact.

10. After completing three years' full-pay service, Surgeons will be allowed to be examined for the rank of Staff Surgeon, but no Surgeon can be promoted to the rank of Staff Surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.

RANK, PAY, AND POSITION OF NAVAL MEDICAL OFFICERS.

1. Promotion to the rank of Fleet Surgeon is open to officers for distinguished or special service, although twenty years on full pay may not have been completed; such Fleet Surgeons will have 16s. a day half-pay.

2. Fleet Surgeons rank with Commanders, according to date of commission.

3. The whole time served on full pay as a Surgeon to be allowed to Staff Surgeons to qualify for the rank of Fleet Surgeon, provided the examination for Staff Surgeon is passed before the officer completes ten years' service, otherwise only ten years served as Surgeon will be allowed to count.

4. Fleet Surgeons are appointed to the flag ships of commanders-in-chief on foreign stations, with an allowance of 5s. a day in addition to their established pay.

5. The hospital allowances for Naval Medical Officers at home and abroad in lieu of provisions, for themselves and servants, and for fuel and light are as follows:—Inspectors General of Hospitals, £85 at home, £130 abroad; Deputy Inspectors-General, £65 at home, £112 abroad; Fleet-Surgeons and Staff-Surgeons, £53 at home, £112 abroad; Surgeons, £39 at home, £108 abroad. In cases where Medical Officers draw provisions or fuel from public stores, they will be charged for the same at cost price.

6. The travelling allowances, extra pay, lodging money, and compensation for losses are fixed for Naval Medical Officers according to their relative rank in the service.

7. Medical Officers have cabins according to their relative rank in the service, excepting always that the Senior Executive Officer of whatever rank has the one most suitable for his duties.

8. The full and half-pay of Naval Medical Officers is in accordance with the following scale:—

Full-pay: Surgeon—Under five years' service (except during the session at Netley) [see Regulations], 11s.; under eight years' service, 12s. 6d.; under eleven years' service, 14s.; under fourteen years' service, provided he passed his examination for Staff Surgeon while under ten years' service, 15s. 6d.; above fourteen years' service, ditto, 17s. Staff Surgeon—On promotion, or under fourteen years' service, 18s.; ditto, or under seventeen years' service, £1; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 2s. Fleet Surgeon—On promotion, or under twenty years' service, £1 3s.; ditto, or above twenty years' service, £1 4s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 10s. Deputy Inspector-General of Hospitals and Fleets—On promotion, or under twenty-two years' service, £1 11s.; ditto, or above twenty-two years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s. Inspector-General of Hospitals and Fleets—On promotion, or under twenty-five years' service, £2 5s.; ditto, or above twenty-five years' service, £2 8s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £2 10s. Half-pay: Surgeon—Under five years' service, 6s.; under eight years' service, 8s.; under eleven years' service, 10s.; above eleven years' service, provided he passed his examination for Staff Surgeon while under ten years' service, 17s. Staff Surgeon—On promotion, or under fourteen years' service, 11s.; ditto, or under seventeen years' service, 13s.; ditto, or above seventeen years' service, 14s. Fleet Surgeon—On promotion, or under twenty years' service, 14s.; ditto, or above twenty years' service, 16s. 6d.; and for each additional year of service 6d. a day more until the maximum is reached—namely, 18s. 6d. Deputy Inspector-General of Hospitals and Fleets—On promotion, or under twenty-two years' service, £1 1s.; ditto, or above twenty-two years' service, £1 2s.; and for each additional year of service 1s. a day more until the maximum is reached—namely £1 7s. Inspector-General of Hospitals and Fleets—On promotion, or under twenty-five years' service, £1 11s.; ditto, or above twenty-five years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s.

9. Retirement is provided for according to age and service, under special regulations.

10. My Lords will consider, and publish hereafter, the manner in which it may be found most advisable to assist Naval Medical Officers in their professional education after examination and admission into the Navy.

DECLARATION.

Recommended by _____, I, _____ _____ years of age in _____ last (*vide* accompanying Certificate), a candidate for appointment as a Medical Officer in the Royal Navy, do hereby engage for general service, and attest my readiness to proceed on duty abroad whenever required to do so.

I declare that I labour under no mental or constitutional disease or weakness, nor any other imperfection or disability which can interfere with the most efficient discharge of the duties of a Medical Officer in any climate.

Signature, _____

Date, _____

Place of residence, _____

SCHEDULE OF QUALIFICATIONS.

I have in my possession the following Degrees, Diplomas, and other Qualifications in Medicine, Surgery, and in Arts :—

I wish to be examined in the following voluntary subjects, viz. :—

Signature, ____

CIRCULAR No. 12, C.W.

Admiralty, March 6th, 1875.

(Medical Officers of the Navy.)

My Lords Commissioners of the Admiralty having had under their consideration the position of the Medical Officers of the Navy, are pleased, under the authority of Her Majesty's Order in Council of February 4, 1875, to establish the following regulations :—

1. Surgeons on entry to have the same relative rank as Paymasters, Chief Engineers, and Naval Instructors—namely, to rank with Lieutenants under eight years' seniority, and to wear uniform corresponding to such relative rank.

2. Staff Surgeons to be denominated "Fleet Surgeons," and Staff Surgeons second-class simply "Staff Surgeons"; the distinction in rank between these two grades to be denoted by a small difference in the uniform of the Staff Surgeon, who instead of three stripes of gold lace round the sleeve of the coat, which the Fleet Surgeon will wear, will wear two stripes of gold lace, with a stripe of narrow gold braid between them.

3. Inspectors-General to be compulsorily retired at the age of sixty; to be allowed £2 per day, provided they shall have completed the period of service now required to entitle them to the maximum half-pay of their rank; should they not have completed such period of service, they will be retired at the rate of half, or retired pay, specified in the Order in Council of February 22, 1870.

4. Deputy Inspectors-General to be compulsorily retired at sixty; if in the first six of their rank, to be allowed 33s., others 30s. per diem, provided that they shall have completed the period of service now required to entitle them to the maximum half-pay of their rank; should they not have completed such period of service, they will be retired at the rate of half, or retired pay, specified in the Order in Council of February 22, 1870.

5. Fleet Surgeons and Staff Surgeons to be placed on the same scale of retirement as chaplains and naval instructors, secretaries and paymasters; that is, the maximum to be £150 per year instead of £100.

6. Fleet Surgeons to have the option of retiring after twenty years' full-pay service in all ranks at 15s. per day, and after twenty-five years' full-pay service 21s., subject in each case to their Lordships' approval; but of those now on the list, not more than ten to retire under this clause in each year (the Officers having the option according to seniority) unless their Lordships should approve (with the consent of the Treasury) of a larger number so retiring. Applications from Officers wishing to retire under this clause should be lodged at the Admiralty before November 30 in each year, in order that they may be dealt with, according to seniority, before the end of the year.

7. All Medical Officers hereafter entered to have the option of so retiring, subject to the approval of their Lordships in each case. By command of their Lordships,

ROBERT HALL.

To all Commanders-in-Chief, Captains, Commanders, and Commanding Officers of Her Majesty's Ships and Vessels.

DEATH OF DR. SIBSON.

WE greatly regret to announce the sudden death of one of our best-known physicians—Dr. Sibson, formerly of St. Mary's Hospital. He died at Geneva, on the 7th, after sending home a telegram that he would return on the following day. Dr. Sibson had been engaged in many things, but from a professional point of view his Medical Anatomy, and more especially his work on the Anatomy of the Heart, constitute the most lasting basis of his reputation. Dr. Sibson was an intense medical politician. Especially he took a keen interest in the welfare of the British Medical Association and all that belonged to it. Dr. Sibson was also strongly artistic: his collection of Wedgewood was almost unrivalled. We trust to be able to supplement this brief sketch on a subsequent opportunity.

TO CORRESPONDENTS.

WE beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

As this number is almost entirely devoted to matter mainly concerning Students, many most important communications and contributions unavoidably stand over.

We have here given everything of importance for the entering Student to know; for any further details he should apply for a prospectus to the authorities of the School he may select.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 9, 1876.

BIRTHS.

Births of Boys, 1266; Girls, 1118; Total, 2384.
Average of 10 corresponding years 1866-75, 2091·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	667	564	1231
Average of the ten years 1866-75	689·7	664·1	1353·8
Average corrected to increased population ...	...	...	1449
Deaths of people aged 80 and upwards ...	...	...	43

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 9, 1876, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Sept. 9.	Deaths Registered during the week ending Sept. 9.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2384	1231	71·6	44·1	57·5	14·17	0·99	2·51
Brighton	100632	42·7	48	29	69·0	46·0	58·2	14·55	1·64	4·17
Portsmouth ...	124867	27·8	65	64	68·0	49·5	57·4	14·11	2·10	5·33
Norwich	83430	11·2	37	39	70·0	46·2	55·6	13·12	2·81	7·14
Plymouth	72230	51·8	50	33	67·0	49·0	57·6	14·23	1·75	4·44
Bristol	193539	44·8	114	66	68·9	44·3	57·6	14·23	1·72	4·37
Wolverhampton ...	72540	21·4	64	27	69·7	44·2	55·8	13·23	1·14	2·90
Birmingham ...	371839	41·3	303	182	...	...	...	...	...	...
Leicester	113581	35·5	90	55	...	...	...	...	...	...
Nottingham ...	93627	46·9	54	29	71·8	43·9	55·7	13·17	1·62	4·11
Liverpool	521544	109·1	421	237	65·0	49·5	54·8	12·67	1·09	2·77
Manchester ...	357917	83·4	257	176	69·0	39·5	55·5	13·06	1·27	3·23
Salford	138425	25·8	153	102	67·1	44·0	54·2	12·33	1·57	3·99
Oldham	88609	19·0	88	44	...	...	...	...	...	...
Bradford	173723	21·1	126	66	64·0	47·0	54·2	12·33	1·53	3·89
Leeds	291580	13·5	216	139	66·0	46·0	55·1	12·84	1·13	2·87
Sheffield	274914	14·0	202	122	70·4	41·5	55·9	13·28	1·19	3·02
Hull	136933	37·7	114	66	69·0	42·0	55·2	12·89	1·01	2·57
Sunderland ...	108343	32·8	83	41	71·0	45·0	55·7	13·17	1·16	2·95
Newcastle-on-Tyne	139929	26·1	114	68	...	...	...	...	...	...
Edinburgh	215146	51·3	128	69	...	...	...	...	...	...
Glasgow	545144	90·4	391	224	...	...	...	...	...	...
Dublin	314666	31·3	205	118	69·2	44·0	57·4	14·11	1·07	2·72
Total of 23 Towns in United Kingdm	8028595	37·7	5708	3222	71·8	39·5	56·1	13·39	1·46	3·71

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·55 in. The highest reading was 29·82 in. on Sunday evening, and the lowest 29·37 in. on Wednesday and Thursday mornings.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON OPHTHALMOLOGY.

DELIVERED AT GUY'S HOSPITAL.

By CHARLES HIGGENS, F.R.C.S.E.,
Assistant Ophthalmic Surgeon to the Hospital, and Lecturer on Ophthalmology in the Medical School.

LECTURE II.

(*Concluded from page* 280.)

Indirect Ophthalmoscopic Examination.

In this method of examination we see an inverted aërial image of the fundus oculi, which is formed by the interposition of a bi-convex lens between the observer and the observed eye.

The position of the patient and observer should be the same as for the direct examination. The same lamp also can be used, but should be placed rather further back, and may be kept on the patient's left side during the examination of either eye.

The ophthalmoscope should be held in the same manner, and the light reflected through the pupil as in direct examination; but having obtained the red reflection, we do not approach the eye, but remain at a distance of about eighteen inches. We next direct the patient to look at some distant object so situated that the axis of the observed eye is turned somewhat inwards; this will bring the optic disc (which lies somewhat to the inner side of the optic axis) to stand opposite the ophthalmoscope, and its peculiar whitish reflection will be at once observed.

We then hold the bi-convex lens in front of the observed eye, at a distance about equal to its own focal length from the cornea, and steady it by resting the ring and little fingers on the patient's brow.

If the examination is properly conducted, an inverted image of the optic disc and vessels of the retina is immediately seen, which, although apparently within the eye, is in reality formed in the air between the observer and the bi-convex lens, and (in emmetropia) at a distance from the latter corresponding to its focal length.

If the image of the disc appear indistinct, we may be sure that our own eye is not accommodated for the distance at which the image is situated, which is in reality shorter by some inches than it appears to be. Should this be the case, we must increase the tension of our accommodation, or withdraw somewhat further from the observed eye.

A better method, however, than either of these is to employ habitually behind the sight-hole of the ophthalmoscope a convex ocular lens of about ten or twelve inches focal length. If this be done, a clear and well-defined image will always be obtained without tension of accommodation, provided that we take care that the distance between our own eye and the image corresponds to, or is somewhat less than, the focal length of the convex ocular lens. We find that the employment of a convex ocular lens considerably magnifies the inverted image.

The disc and parts immediately surrounding having been examined, the patient should be directed to look straight forwards; by so doing the region of the yellow spot is brought opposite the ophthalmoscope. This having been carefully examined, the eye should be turned upwards, downwards, to the right, and left, so that all parts of the fundus may be examined in turn.

In the indirect method of examination the right eye should be used, and the ophthalmoscope held in the right hand; and the bi-convex lens in the left in examination of the right eye, and *vice versâ* in examination of the left.

Difficulties of Ophthalmoscopic Examination.

Considerable practice is required in order to become proficient in the use of the ophthalmoscope, and as beginners you will be frequently much disheartened at your want of success.

Some of the difficulties are only to be overcome by practice; others are easily remedied. Reflections of the mirror from the two surfaces of the object-lens often prove very troublesome; the inconvenience arising from this source is obviated by holding the lens somewhat obliquely, when the two images will recede from each other and leave a clear space between them. Reflection from the surface of the cornea is also troublesome, but can usually be overcome by a little manœuvring.

Contraction of the pupil is a great obstacle to the beginner, but this can be removed by dilatation with atropine; for this purpose a drop or two of a solution of one grain of sulphate of atropine to one ounce of water should be dropped into the eye about half an hour before the examination is to be made, or the patient may be ordered to use a solution of one-eighth of a grain to one ounce of water two or three times on the day previous to his visit. When experience has been gained, atropine can be dispensed with, except in some few cases, or in those in which it is desirable to make a careful examination by lateral illumination.

We generally find that directing the patient to look at a distant object, and so relax his accommodation, will cause quite sufficient increase in the size of the pupil. Beginners often experience great difficulty in keeping the pupil illuminated, more especially should the patient be unsteady; but as experience is gained, difficulties from this source will diminish.

Every ophthalmoscopic examination should be conducted on a certain definite system. The first step should be to examine the condition of the refractive media by lateral illumination. Next, the condition of refraction of the eye should be ascertained by direct examination. (I shall show how this can be done when we come to anomalies of refraction.) Thirdly, a general survey of the fundus oculi should be made by the indirect method. And fourthly, any abnormalities having been discovered by the indirect method should, if possible, be fully studied in detail by the direct method. If this systematic plan of examination be carefully carried out, few mistakes will be made, and no important morbid change is likely to be overlooked. I will now describe to you the normal appearances of the parts seen by the ophthalmoscope. The refractive media—cornea, aqueous humour, lens, and vitreous—as stated, under the lateral illumination are transparent.

The retina is transparent, practically colourless, although in dark eyes it may appear as a faintly grey cloud, covering the choroid. Its position is marked by that of its bloodvessels. The bright red reflection previously mentioned is due to the blood in the choroid. The colour of the reflection varies with the amount of pigmentation of this vascular tunic. In blue or grey eyes it is bright red; in dark ones of a much deeper tint; and in the negro it appears to be dark blue. The parts of the fundus oculi requiring special attention are the optic disc and parts immediately surrounding it and the region of the yellow spot.

The disc appears at first sight to be of a uniform pale pink colour, but on closer examination different portions are found to present different shades. Its centre is pale, or even white. Next to this succeeds a zone of pink; this being again bounded by an apparently double border of lighter colour. The pale appearance of the central portion of the disc is caused by connective tissue surrounding the bloodvessels in this situation.

The succeeding pink zone consists entirely of nerve-fibres and delicate capillaries. The outer pale double border is formed by the margins of the sclerotic and choroidal rings, which do not accurately cover each other, the choroidal ring being somewhat greater in diameter than the sclerotic opening, the margin of which, being left uncovered by pigment, shines dimly through the nearly transparent nerve-fibres.

Both the white central portion and the outer ring are in some cases extremely well defined, but both conditions are, as a rule, consistent with health. Nevertheless, a very marked plainness of the sclerotic ring may be one of the earliest visible signs of atrophy of the optic nerve, and should therefore be looked upon with suspicion when it exists with impaired vision. From the pale central portion of the disc proceed the retinal bloodvessels; these appear upon its surface usually at the same point, but may emerge separately, or in groups of two or three. As a rule, about eight large branches are seen upon the nerve-surface, four of these being arteries, with a corresponding number of veins; two of each pass upwards, and a like number downwards, to be distributed over the retina. The lateral branches are insignificant, and are given off from the principal trunks, either upon the nerve-surface, or in the retina near its margin.

The veins can be distinguished from the arteries by their greater calibre—the proportion being about three to two—and by their darker colour; besides, the arteries are marked by a double contour, and their central portion is much lighter than their borders. Certain phenomena may be discovered by the ophthalmoscope, which, although differing from the conditions

usually met with, are perfectly consistent with a normal state of the parts. Thus, a dark spot may be noticed in one of the vessels at its origin or termination in the disc: this might be taken for a clot, but the appearance is caused by a peculiar arrangement of the vessel, which at this point is passing backwards through transparent nerve-fibres, and is seen as it were on end and foreshortened.

Spontaneous pulsation of some of the retinal veins may be observed; the occurrence of venous pulsation is, however, perfectly consistent with health. In any eye we can produce pulsation, both venous and arterial, by pressing gently upon the globe with the finger; but should it occur spontaneously in the arteries, it may have the gravest significance, as its existence often shows increased tension of the eyeball. Arterial pulsation may, however, occur in cases of regurgitant aortic disease; but such cases do not come before us as ophthalmologists. In some eyes the large choroidal vessels come rather plainly into view as a number of pink bands, which, as it were, map out the fundus; the spaces between the bands being darker than the bands themselves, the whole presents a somewhat mottled appearance. The appearance is caused by some deficiency of the choroidal pigment, which allows the colour of the blood in the larger vessels to show more distinctly than usual. Should it, however, exist in an extremely marked degree, some atrophic change has probably taken place in the choroid. A dark crescentic figure may be met with bordering some part of the margin of the optic disc; this is caused by a peculiar arrangement of pigment, which is in this situation collected into a mass; it is congenital. Variations in depth of colour of the disc are frequently met with; due regard must be had to the colour of the surrounding fundus in forming an opinion as to whether the tint is so much deepened or lessened as to constitute a diseased condition. In light eyes the disc appears much redder than in dark, the difference being due more to contrast with the surrounding parts than to actual change in colour. Not unfrequently a sloping, or even abrupt-edged, excavation is met with, occupying the centre of the disc, but usually extending somewhat further towards the yellow spot than in other directions; the whole nerve-surface, however, is never included in the cup, the vessels do not bend under its edge, their calibre is not altered, neither is spontaneous arterial pulsation observed,—any or all of which conditions may be observed in excavation dependent on disease.

The occurrence of this cup depends upon the manner in which the optic nerve-fibres branch out into the retina. Should they commence to divide near the lamina cribrosa, a funnel-shaped depression will result; but should the whole bundle of fibres be continued up flush with the retinal surface, no such depression will occur—on the contrary, a small elevation may be met with.

Occasionally a small whitish cord may be seen extending from the disc towards the back of the crystalline lens; it is the remains of the hyaloid artery, a vessel which in fœtal life carried blood to the lens. White wisp-like patches may be seen extending from the margin of the disc into the surrounding retina; these patches have irregular jagged borders, are intensely white, and are often of considerable size; the retinal vessels pass through and are obscured by them.

The patches are caused by the opaque nerve-sheaths, which should end at the lamina cribrosa, being accidentally continued beyond this point into the transparent retina; the condition is congenital, and does not interfere with sight. White lines of a similar nature are sometimes seen bordering the larger retinal vessels. As old age comes on, the refractive media become less transparent, the retina grows somewhat hazy, and the disc becomes whiter and more opaque than in youth.

The region of the yellow spot presents in health no very marked ophthalmoscopic appearances, but requires to be specially examined, as it is very frequently the seat of pathological lesions, and is, moreover, the most important part of the retina.

In the normal condition the region of the yellow spot is marked by the absence of bloodvessels, which appear to avoid this part of the retina, passing above and below it; there is some deepening of colour, and in some cases an indistinct, transversely oval figure can be detected.

4. Examination by Manipulation.

The fourth method of examination, by manipulation, consists simply in ascertaining the tension of the globe by digital pressure. We conduct the examination thus: having directed the patient to look downwards and close the eyes gently, but with the forefinger of each hand placed upon the closed upper lid; the pressure should be made in a direction backwards, and somewhat downwards, so as to compress the globe against the floor of the orbit.

In health the eyeball is firm, tense, and semi-fluctuating; not to screw up the lids, we make gentle alternate pressure in disease the tension may deviate in the direction of increase or decrease. The degree of tension may be arbitrarily expressed by nine Ts. If normal, as Tn; if above par, as T + 1, T + 2, T + 3, according to the amount of increase; if below par, as T − 1, T − 2, T − 3; if a doubt exist, as T + ?, or T − ?, according as the doubt is on the side of increase or decrease.

Field of Vision.

By the field of vision we understand the area over which objects situated in the same vertical plain can be distinguished, whilst the eye is kept fixed on some one point. The limits of the field of vision are marked by the most excentrically placed points of objects, which can still be distinguished, the direction of the visual axis of the eye being unaltered.

The extent of the visual field is easily measured by one of the two following methods:—

1. We place our patient at a distance of twelve inches from a black board about two feet square, having a white cross in its centre. Direct him to look steadily at the cross, which must be situated on a level with the eyes. One eye being closed, we test the sensibility of the retina of the other, thus: we move a piece of chalk, fixed on a dark handle, from all directions towards the cross, and make a mark at the point where the chalk first becomes visible.

The portion of the visual field limited excentrically by a line joining the points at which the chalk is first seen when approaching from every direction is known as the *quantitative field of vision*, in contradistinction to an area bounded excentrically by much narrower limits, over which objects are distinctly defined and letters can be read, etc.—known as the *qualitative field of vision*.

2. Another very simple and effectual method of investigating the condition of the visual field is conducted as follows:—Having placed our patient in a convenient position, we stand opposite to him, at a distance of about two feet, and, supposing his left eye to be examined, direct him to look steadily at our own right eye, which is opposite to his left, the patient's right eye and our own left being kept closed. We then move the hand in various directions of the peripheral parts of the field, and notice if its movements are perceived by the patient at the same distance from the centre as by our own presumably healthy retina. We must take care that the hand is moved in a vertical plain, situated midway between our own and the patient's eye, and not nearer one than the other; and also see that he keeps his eye fixed.

Supposing that the eye under examination distinguishes all movements of the hand at the same distance from the centre as our own, we decide that the field of vision is normal; but if a falling-off is noticed in any particular direction, we infer that the sensibility of the corresponding portion of retina is impaired.

It must be remembered that each part of the visual field corresponds to a part of the retina opposite to and not on the same side as the object seen—*e.g.*, suppose that the movements of the hand are not perceived in the outer half of the field, the inner half of the retina is defective, and *vice versâ*.

It must also be borne in mind that the height of the bridge of the nose has a considerable influence in limiting the inner half of the visual field. Certain instruments, known as perimeters, have been made for ascertaining the extent of the visual field; they are useful when great accuracy is desired, but are of no practical worth.

Limitation or contraction of the visual field is a very constant accompaniment of retinal changes; it is also one of the earliest symptoms of glaucoma, and occurs as a physiological condition with advancing age.

Acuteness of Vision = V.

When we speak of the acuteness of vision we refer to the perceptive and conductive power of the nervous structures concerned in sight.

In order to ascertain the acuteness of vision, we use "test types," which are letters made of certain definite proportions, and which can be recognised by a standard eye at certain distances.

Here is a book of test types by Dr. Snellen. Each set of letters should be recognised at a distance corresponding to

the number marked over each. In the former editions of this book the distances were marked in Paris feet, but now the metrical system has been adopted, the size of the letters, however, being unaltered.

The distances are so arranged that the letters present themselves at an angle of 5′, which is the smallest visual angle under which a standard eye can recognise objects distinctly. We can express the acuteness of vision by the formula $V = \frac{d}{D}$, in which D = the distance at which the letters are presented under an angle of 5′, and can be recognised by a standard eye, *d* the distance at which they are recognised by the eye under examination. If D and *d* be equal, *e.g.*, if xx. can be read at 20 feet, $V = \frac{20}{20} = 1$, *i.e.*, normal acuteness of vision is present; but if xx. can be made out only at 10 feet or 5 feet, then $V = \frac{10}{20} = \frac{1}{2}$, or $\frac{5}{20} = \frac{1}{4}$.

We shall, however, in hospital practice find it more convenient to alter the formula thus:—Let $d = 20$ feet in all cases, and D the number of the letters that can be made out at that distance. Suppose that xx. can be read at 20 feet, the formula will be $\frac{20}{20} = 1$, as in the previous case; but if xx. cannot be made out, we may ascertain what letters can be read, and place the number of them for D, *e.g.*, if 40 can be read at 20 feet we write $V = \frac{20}{40} = \frac{1}{2}$, or if 100 only can be made out at 20 feet we write $V = \frac{20}{100} = \frac{1}{10}$, so that you see we can obtain the same results as before without the necessity of altering our patient's position.

In testing the acuteness of vision we must be careful to ascertain the same value for all the different types, *i.e.*, all should be recognised at their proper distances—1½ at 18 inches, 2 at 2 feet, 20 at 20 feet, etc.

If in any case we find that the small types, *e.g.*, 1½ at 18 inches, can be read easily, while more distant ones cannot be made out, or that the distant ones can be seen clearly, while those at short distances cannot be read, we may at once assume that we are dealing with some anomaly of refraction; and we shall probably find on correcting the ametropia by suitable glasses that the proper values will be obtained for all the types. Perfectly normal acuteness of vision may exist with very considerable ametropia.

The acuteness of vision is considerably modified by age, being above the standard in youth, and often much below it in old age.

The failure in the latter is due to natural senile changes, as loss of transparency of the media, or degenerative changes in the nervous structures concerned in vision. Such changes can hardly be looked upon as morbid, and we should expect to find them in all old people.

In any case in which we find abnormal want of sight we may always attribute the failure to some of the following causes: opacity of the media, anomalies of refraction or accommodation, and affections which have been classed together under the names amblyopia and amaurosis. A single glance with the ophthalmoscope will tell us if the first of these causes be in operation; and it will be my endeavour in a portion of these lectures to show you how to diagnose and treat anomalies of refraction and accommodation, and to explain to you the meaning of the now almost obsolete terms, "amblyopia" and "amaurosis," and point out what are the morbid changes on which they depend.

Movements of the Eyeball.

As I told you in my last lecture, the eyeball moves around a central point. To ascertain that the movements are normal we need only to take a pen or other object, and move it in front of the eyes, upwards and downwards, to the right and left. If both eyes follow the movements accurately, the muscular apparatus is in proper working order.

Laxative Tonic Pills.—Prof. Bouchardat recommends the following formula:—Barbadoes aloes, alcoholic extract of nux vomica, lactate of iron, of each fifteen grains; sulphate of quinine thirty grains: make into forty pills. Three to be administered to diabetic patients at their evening meal.—*Union Méd.*, September 9.

ORIGINAL COMMUNICATIONS.

ON HEREDITARY SYPHILIS AND THE CONTAGIOUS DISEASES ACT.

By GEORGE BARRACLOUGH, M.A. Cantab., M.R.C.S.

Whereas the characters of acquired syphilis are carefully studied and widely known, it can hardly be affirmed that this holds good of hereditary syphilis, at least with the larger portion of the profession. It is this consideration which has urged me to put on paper the observations and suggestions which follow, with a view to excite more interest in the subject, even though the common fund of knowledge may not be much increased thereby. Certainly, a rather extensive acquaintance with general practitioners has led me to observe a remarkable absence of information on the subject, and not seldom a considerable lack of interest in it.

In the present state of our knowledge, such questions as the following, although relating to matters of the highest practical importance, are not easily answered:—

What phenomena should we expect to find in the offspring of infected progenitors, in the second and third generations, and so on in the descending scale?

Is a man hereditarily infected capable of tainting the blood of his wife?

Are persons tainted with inherited syphilis more, or less, obnoxious to direct infection than untainted persons, or have they a quite equal susceptibility?

If an inherited taint neither prevents nor mitigates infection, is it not reasonable to presume that the hereditary cachexia would render the subjects of it liable to greater havoc from acquired syphilis?

Is any syphilitic influence communicable to an infant through the agency of vaccine lymph taken from an hereditarily tainted person?

Is hereditary syphilis a source of sterility and barrenness?

The few observations I have to record may not throw much light on the above questions, but the suggestions thrown out, if acted on by those who possess the necessary opportunities, may go far to achieve the end desired.

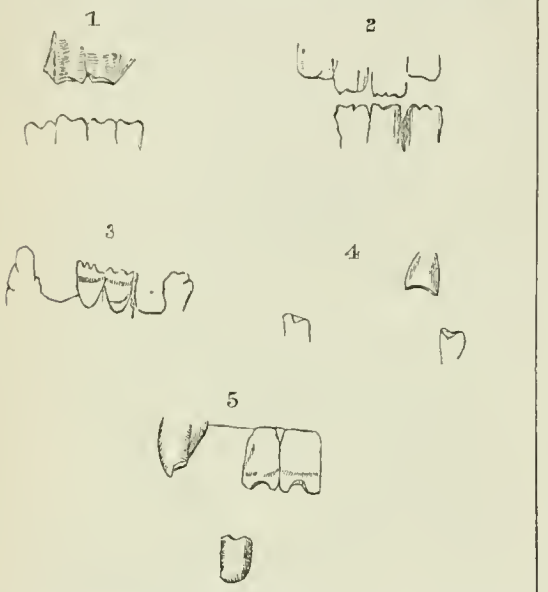
There are symptoms of hereditary syphilis which are only too familiar to all of us. The subjects of them present, at or soon after birth, skin eruption, snuffles, ophthalmia, maculæ, and many other disorders. These symptoms are obvious enough, and the infants afflicted with them appear, so far as I have been able to ascertain, to be conceived when their parent or parents are suffering from secondaries. But then, on the other hand, we meet with a class of cases in which the phenomena are very different indeed. There are, in these cases, no symptoms nor appearances at birth by which, in the present state of our knowledge, we can discern a syphilitic taint. The indications of this manifest themselves at a later period. I have generally ascertained that children of this class are conceived when the active symptoms of disease have been subdued in their parents by treatment, or by lapse of time, a syphilitic taint remaining in the blood of these latter.

Everyone can recall some case indicative of the length of time syphilis may lurk in the blood. I remember a case in my own practice which is worthy of mention. An artisan, sixty years of age, called upon me, and exhibited a very large ulcer on the inner side of the upper arm. There was something so evidently syphilitic about this sore that I immediately inquired of the patient whether he had ever been infected with syphilis. "Yes," he replied, "I had the disease more than thirty years ago, before I was married. But during the thirty years of my married life I have known no woman but my own wife." He professed to have enjoyed average health till the last four years, during which period he had become feeble and incapable of working with regularity at his occupation. He had also experienced, during this time, wasting of the testicles and loss of sexual power. Here, after the lapse of thirty years, the poison was re-asserting itself.

Being recently in attendance on a little boy suffering from croup, my attention was arrested by the character of the child's teeth: they are depicted in drawing No. 3.(a) The appear-

(a) These drawings, though made to no particular scale, are strictly accurate, and to be relied upon so far as the form of the teeth is concerned. I have only slightly diagrammatised them by flattening out the jaw so as to present the teeth in the same vertical plane. In No. 4 the teeth are

ances they presented led me to examine the teeth of the other children of the family. No. 2 represents the teeth of the eldest girl, aged ten years. These teeth were in nowise discoloured nor carious, and the reader will see the circular notching tending to become angular. No. 4 presents the teeth of a little girl, aged seven years. Here the serration of two of the teeth is chiefly angular and cut down on the front surface. The upper incisor inclines to the circular form of notch. There was an infant, one year and seven months old, whose milk teeth were quite white, and neither notched nor discoloured. The incisors of the boy (No. 3), who was eight years and a half old, were discoloured a deep yellow below the irregular line indicated nearly in the centre; above this line



they were white. There was no caries, but one of the canines was enormously large. These peculiarities about the teeth led me to suspect a syphilitic taint. Accordingly, the mother, a delicate woman, much younger, possibly, than she looked, at my request allowed me to make an examination of her mouth. Such of her teeth as were notched are depicted in drawing No. 1. The upper incisors were of enormous magnitude, and possessed that angular slope laterally which is seen in the sketch. The notching was of that semicircular form which, I believe, is now universally deemed indicative of a syphilitic origin. This woman's teeth were excessively irregular, and in size most disproportionate to each other. I had no opportunity of scrutinising the father. The little girl (No. 4) presented a very remarkable hypertrophy, or prominence, of the tuberosities of the carpal ends of the ulnæ. This promiuence was nearly three times greater than is usually the case, and was, I presume, morbid. There was no corresponding development of the tuberosities of the tibiæ about the ankles. Quite the reverse of any superfluous vitality was manifested by these children as a family; and about this little girl there were the same oldness of demeanour, the same listlessness and languor, that I had often before known to characterise children having their teeth even more slightly serrated than this one. These teeth are sometimes only serrated, having nothing else noticeable about them; sometimes, in addition, they have that peculiar horizontal line separating a white portion of tooth from another portion discoloured merely, or carious, or honeycombed. There is always an oldness and sedateness about these children, and frequently a characteristic languor. They laugh, but their laughter is like that of grown-up people; it is not the free, happy laughter of childhood. They play as if they were playing at play, like old people who play with their grandchildren. This state may well be designated the cachexia of hereditary syphilis.

Drawing No. 5 was made under the following circumstances. A patient I happened to be attending for heart disease was nursed by his wife and her sister. There was about this latter all the languor which I have noticed above. She manifested a frequent tendency to lounge against a bedpost, a mantelshelf, or to seek the repose of a chair. There was nothing remarkable about her skin beyond a general sickly hue pervading it; but I observed she was becoming bald—a noteworthy circumstance in a woman only forty years of age. These phenomena led me to surmise a syphilitic taint. I examined her teeth: they were large, but not abnormally so; quite regular, and neither notched nor discoloured. "Are you married?" I inquired. "I have been married, but my husband is dead." "Have you any children?" "Yes, four." "Are they healthy?" "Yes, I believe so." "Then they do not complain of ill-health?" "They do not complain of being ill, but they all complain of their hair falling off." This was omiuous, so I requested to see her sister. On that lady making her appearance, I carefully examined her mouth, and found that well-marked notching of the teeth which I have delineated in No. 5. How very much these teeth resemble those in No. 1! The notching is even more perfect, and there is the same teudency to abnormal size. There was also that same horizontal line dividing the surface of the incisors, as is seen in No. 3. This woman's hair was dark, abundant, and showing no inclination to baldness. Her skin was coarse in texture, and of a dull whitey-brown hue. She was fifty years of age, and married, but never had any children. Her sister (the widow) made no complaint of ill-health, but affirmed that she was very easily fatigued. As a rule, people of this kind make little account of their own deficent energy. They only heed some departure from their general standard, and that is a very low one, as their languid demeanour proves. I had no opportunity of examining the widow's children, as they resided at a distance—a circumstance I much regretted.

I may note, in passing, that persons tainted with hereditary syphilis sometimes possess one or more teeth of such magnitude as rather to resemble the tusks of a lower animal than the teeth of a human being. Idiots often show a somewhat similar tooth. Does syphilis ever develope idiocy? If drink does this, as some authorities aver, why should not another poison—viz., syphilis—do the same? There is another kind of syphilitic tooth which is possibly well known to many. The tooth may appear healthy with the exception of one or more circular holes—dental ulcers, in fact—having a dark base, and looking as though a portion of the enamel had been removed by a punch. When this quasi-ulcerative action is situated at the lower margin of the tooth, it of course assumes the semicircular form. I remember a little girl, three or four years of age, on whose teeth a single spot of this kind was the only vestige imprinted by syphilis. There was a history of secondary skin eruption soon after birth—which had disappeared when I saw the child—and the mother informed me that she herself was infected by the father some time after conception. Of course she made no allowance for the incubatory stage of the disease.

That depressed form of vitality which I have endeavoured

represented independently of their local relations. I attach so much importance to affections of the teeth in enabling us to ascertain the existence of hereditary taint, because of all syphilitic lesions they are the most constant. Neither affections of the eye, nor flattening of the nose, nor markings about the angles of the mouth, nor even affections of the bones, are so constant as are those of the teeth. That this constancy should exist, and the affection be so well marked, need not excite surprise when we consider that the teeth stand, as it were, structurally, half-way between the endo- and exo-skeletons. And standing, as they do, at the very portal of the alimentary canal, and having for their function the act of mastication, which plays such an early and important part in the digestive process, it is readily seen how any serious injury to them must impair digestion, and ultimately the nutrition of the whole body. The condition of the teeth, then, affords us important aid in determining the question whether the effects of the primary virus are mitigated by the existence of hereditary taint. However, up to the present time, my own experience on this point is ambiguous. Whether the gapping to be seen in some of my drawings has any essential connexion with syphilis is hard to say; I have seen it so often that I am almost constrained to regard it as something more than a coincidence. Amongst other cases of the kind, I have a drawing in my desk from the teeth of a brother and sister, exhibiting in both instances the characteristic notching and also this peculiar gapping; the boy is blind from syphilitic keratitis. Whilst writing this, I have under my observation a family of three children whose teeth exhibit nearly all the traits of hereditary taint. One, a boy, has this gap between the central upper incisors, so large as almost to admit the passage of a goose-quill, the incisors which flank this opening being disproportionately large. If this increased magnitude, which resembles the hypertrophy, or rather morbid increase, of the long bones is due to the disease, it is not a little remarkable that the opposite condition, viz., diminution of size, which often exists, should also be due to it, as really appears to be the case. Having little doubt as to the syphilitic origin of the black lining mentioned in the course of this essay, I attach much importance to it, because this line—which may well be designated the sepia line (as though drawn with this fluid),—with the exception of yellowish discoloration, is not unfrequently the only sign of inherited taint as regards the teeth. This is sometimes manifested in comparing the teeth of children born of tainted parents, some of them having the notching well marked, and one or two, perhaps, showing only this line and some discoloration.

to describe above is one of the gravest facts we have to deal with in considering the spread of syphilis. It demands the serious attention of the statesman quite as much as it does that of the physician. If foreign nations devise stringent measures for checking the ravages of syphilis, and we neglect such measures, not all our iron-clads, not all our big guns, will enable us to cope with those nations, when our soldiers and sailors and the civilian classes from which they are drawn have become universally affected with that depressed type of physique which I have indicated. And this type is becoming rapidly developed, thanks to the railway system which spreads the primary disease all over the land.

One thing is certain—there is no time to lose. Whilst we are discussing on platforms and writing in newspapers the mischief is being done. It is true, syphilis has been endemic amongst us for more than three hundred years. Then why, some one may ask, is it more incumbent on us, as a nation, to act now than in times past? Is it necessary to point how different the conditions are at the present hour from what they were two centuries, or even fifty years, ago? Then there were fewer canals, no railways, no steamships, and the disease was, for the most part, confined to seaports, military stations, and a few large towns. Now, military stations, camps, and route-marchings have spread all over the land; and railways, in addition to their annual slaughters, convey the disease into remote hamlets where hitherto the malady was unknown. The experienced eye can literally trace the line of march between one military station and another by the syphilitic character of the inhabitants dwelling along it.

Less than two years ago I happened to be residing, for a short time, in a provincial town situated between Aldershot and several other military posts, and could not help being struck with the syphilitic character of the inhabitants. Amongst other indications, I observed that nearly two-thirds of the people I came in contact with possessed rotten teeth of the syphilitic type. Here it was that a woman brought me for treatment her infant, about four months old. It required very little examination to discern in it the evidences of acute syphilis. And it is not a little important, in the interests of vaccination, that this woman affirmed that, so far as she could see, the child was quite healthy up to three months of age. This affirmation was probably due to her want of discernment; but I just mention it. Notwithstanding careful treatment the child rapidly sank and died. I inquired of the mother whether she had ever, to her knowledge, been infected. "Yes, sir," she replied, "I was seduced by a soldier in London, and he gave me the disease. He wanted me to take lodgings and receive him, but I refused, and went into the Magdalen. Then I came down here and married my present husband, a farm servant, a few miles out. The soldier was a sergeant in his regiment, and ought to have known better. These soldiers," she continued, "would get the better of any poor girl. The very last time that they were billeted here they seduced two poor girls, both under seventeen, and left them both in the family-way, and eaten up with the disease." "What became of them?" I inquired. "They went on the parish, sir." I wonder how the parish authorities relished this needless burden on their rates! When the mother came for the certificate of her infant's death, I inquired whether she had informed her husband as to the nature of the child's complaint. "Yes," she replied, "I informed him of the nature of the complaint, and told him how you said he had taken it from me." "What did he say then?" "Why, he said, 'Well, my girl, then we are both alike, for I had the same disease before we were married.'" I was somewhat puzzled to understand how a farm servant in a sequestered village should contract the disease. But, on making inquiries, I found the village was situated only three or four miles from a military station. The mystery was thus cleared up.

Once, when visiting some small and secluded villages in the Midlands, I attended many children there, and was not a little surprised to find syphilis terribly prevalent amongst them. Even on isolated farms I found the labourers' children in a frightful state of suffering from the same cause. But my surprise abated when I discovered that these villages were in close proximity to a canal, and situated only twelve miles from a military barracks. The soldiers go on furlough to the rural homes from which they are drawn, and carry the disease with them. An inhabitant likewise informed me that the country girls were in the habit of hanging about the barracks in order to walk with the soldiers. These girls return to their villages, and at the same time bring the disease with them. This is how the malady is spread throughout the land. A more imprudent measure never was contemplated—at least in a sanitary point of view—than the construction of barracks in the immediate vicinity of Oxford. The site was pointed out to me when resident there, and I reflected that unless the Contagious Diseases Act were strictly enforced in that city, the fell disease would be conveyed into the bosom of many of the best families in the land that are now exempt from its ravages.

In the name of household decency and cleanliness, let this Act, or some better one, be put in force throughout the country. As matters now are, the very cup we drink from, the pipe we borrow, may be sources of infection. Only the other day, I was praising the quality of some household bread made on the premises, when, the very next morning, who should be the first to consult me but the cook who had made that same bread—the wife of a sailor. She begged me to prescribe for an eruption she was suffering from on her legs. I found her lower extremities covered with syphilitic sores, some encrusted, some moist and discharging, others cicatrising. And as if that were not enough, she expanded her finger, and displayed several sores at the roots of them. "Goodness gracious!" I mentally exclaimed, "the *débris* from those sores must actually have mingled with the dough which made the bread!" How that bread did rise on my stomach! I straightway had this cook relegated to her own mansion. And this woman had recently been engaged as nurse to a family of children! Again, a butcher's apprentice came to me straight from his master's shop, where he had handled meat all the day long, and showed me the backs of his hands covered with syphilitic pustules discharging quite streams of matter. It would be uncharitable to wish that some of the anti-actionists were supplied with meat by that youth—but really they try one's patience. One more example: I formerly attended a lady, infected by her own husband, whose mouth was thickly studded with syphilitic ulcers. Having no children of her own, she took a great fancy to mine—not a little to my inconvenience, for she was constantly endeavouring to salute them with kisses. This obliged me to put a watch over her movements in order to prevent that mode of endearment, and ward off the probable danger. For until the non-contagiousness of secondary sores has been demonstrated beyond all doubt—which has not been done up to the present time—I deemed a wholesome scepticism the best policy.

(*To be continued.*)

CASES OF PNEUMATOCELE.—II.

By CHARLES ALLEN FOX, M.R.C.S. Eng.

In a paper which appeared in a former number (January 22) I called attention to those cases of this lesion with which I had been able to meet in the records of our art, and to their respective distinguishing features. I quoted these which have been given by a previous and better-known writer in two papers of his on "Intermittent Cervical Hernia of the Lung," and which were all, he believed, of that affection to be found recorded. Since then two cases have fallen under my immediate notice, of which the following are the chief characteristics:—

Case 1.—The first case is of a girl, the child of scrofulous parents, but of a family free from this or other herniæ. At the age of six months, on the occurrence of an attack on the chest, a pneumatocele extruded, which intermitted with the cough at first, but after a time remained out, the cough being very frequent. Much wheezing accompanied the cough, and the protrusion was visibly affected by expiratory movements. The chest-weakness being cured, however, about four years ago, the hernia disappeared, and has never since returned. She is now six years old, somewhat full in the chest, and, indeed, generally fat. One sister has a rather large neck (anteriorly). In this case the hernia appeared as an elastic tumour, regular and smooth, apparently making its exit just under the clavicle at its sternal end, and extending for about three inches longitudinally over the middle part of the upper limit of the thorax.

Case 2.—The second case is of an infant (also a girl) of six months, very healthy and well-conditioned. The father has an ordinary enterocele, and the grandfather another (of large size), that of each having existed previous to the birth of his offspring. During gestation the mother's attention was

drawn much to two rabbits which had (she says) swellings at the right side of the neck exactly like her child's. They were the offspring of one mother, unaffected herself, and the condition (which proved fatal) was not congenital. This child's head was for five minutes in the world, and the mother walking about, before obstetrical assistance was afforded her. When born, the infant was found to have a cough, and the pulmonary herniæ which it has ever since exhibited. The cough has since recurred at different times, and always with much wheezing. The appearance presented is at first blush much as though violence had been used in the birth (which is, indeed, denied) in the management of the right arm. The protuberances are found above and below this member, which is also a little larger than its fellow, though otherwise not different from it. Of the two ruptures, the one is cervical, appearing like a fold of the neck, to which all along its right side it is in a manner joined. It projects above the clavicular margin, entirely buries the clavicle, and extends more than an inch upwards and half-way towards the tip of the shoulder. The other reaches from the axilla to the mammillary level, and is attached rather to the side than to the front of the thorax. It extends outwards from the chest for half an inch. Both, in an antero-posterior direction, occupy the whole width of the thorax, and thus have their longest diameters from before backwards. Both are smooth, regular, elastic, and with no unhealthy or lobulated appearance, disappearing entirely (to rebound) under steady pressure, occasioning no pain, and giving a resonant note on percussion. I could not, however, succeed in hearing crepitation. The upper, or cervial, hernia may be seen to have a clear impulse on the child's crying, and it is at once *felt* in both. The veins on the right side of the front of the chest are apparent. There is no communication between the protuberances. Thus, in this case, besides being a double pneumatocele (yet on one side only), the lesion has never been an intermittent one; and the interesting *history* of hernia suggests for its origin such a weakness as produces in all men at some period of uterine life the external abdominal ring.

Such cases as the second would argue the possibility in the muscular system of a *predisposition* to hernia—if the expression be a fair one; in connexion with which it may be allowed to mention another case—that of a strong man, under my care, in whom a scrotal hernia came on suddenly a fortnight after a severe muscular contusion over the tuber ischii, and whose brother, uncle, and father had been formerly ruptured from very trivial causes. Cases similar to this may, perhaps, be not uncommon in the experience of others; if so, it would be interesting and practically useful to know.

Stoke Newington, N.

Sulphite of Soda as a Dressing.—Dr. Minnich, of the Venice Hospital, prefers the employment of the sulphite of soda to carbolic or salicylic acid, not only as a dressing for wounds, but also in erysipelas. It is much less inconvenient to use, and much cheaper. He applies it in the same way as Prof. Lister does the carbolic acid, and the solution employed consists of one part of the sulphite and one of glycerine to nine parts of water. Its beneficial effects have been proved in a great number of cases.—*Gaz. des Hôp.*, September 7.

Ranula treated by Injection of Chloride of Zinc.—Prof. Panas has repeatedly met with marked success from this method of treatment, employing from three or four to seven or eight drops of a solution of from one-tenth to one-fifth in strength. One very remarkable case recently occurred, in which excision, suture, drainage, etc., had in vain been tried, the liquid always reaccumulating; so that at last punctures were only made from time to time in order to ward off dangerous paroxysms of suffocation. Eight or ten drops of the solution (one-tenth) were injected without drawing off the contents of the cyst, and this after a while was repeated with a solution of one-fifth. The cure was very rapid, for in less than five weeks after the commencement of the treatment it was complete. The method is applicable to all kinds of mucous or serous cysts, for which Dr. Panas has made it a general means of treatment since his first case occurred, now two years ago. This was a case of subhyoidean cyst which had resisted cauterisation and iodine injections, but yielded to a single injection of the chloride made without removing the contents of the cyst.—*Rév. Méd.*, August 21.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF PROGRESSIVE BULBAR PARALYSIS, COMPLICATED WITH MALIGNANT GROWTHS IN THE POSTERIOR MEDIASTINUM, LIVER, MAMMARY GLANDS, AND INNER PLATE OF THE CALVARIA.

(Under the care of Dr. ANDREW.)

[For notes of the following case we are indebted to R. Wharry, M.B., House-Physician.]

This was a case of true "bulbar paralysis," or, as it was previously called by French physicians, "glosso-labio-laryngeal paralysis." The patient dated her illness from a cold. She had paralysis and eversion of the lower lip, with weakness and quivering of the upper lip. The motor power of the tongue was completely paralysed. The saliva ran out from the mouth, and appeared to be unduly copious. There was complete dysphagia. There was also laryngeal paralysis, illustrated by the inability of the patient to prevent fluid food from getting into the larynx. There was loss of power of articulation, while power of phonation was retained. There was lowness of spirits, and, towards the end, numbness in the limbs. The urine was examined repeatedly for sugar and albumen, but always with a negative result. After several warnings, the patient died suddenly from asphyxia, due to paralysis of the vagus. These symptoms, together with the negative results of post-mortem examination, render it impossible to take any other view of the case. The presence of the rapidly growing and widely scattered sarcomata, especially the fact of their being found within the cranium, raises a serious objection to the diagnosis of "bulbar paralysis." But the positive evidence in favour of this view is sufficient to thoroughly outweigh the negative evidence.

The case presents many other unusual features. The wide spread and the rapid development of malignant growths probably commenced in the posterior mediastinum, and was disseminated by means of the blood-channels. The presence of three centres of growth in the breasts may be explained by the increase of their vascularity after confinement. The physical signs presented by the left side of the thorax were highly suggestive of pleuritic effusion. The limiting of the dulness to the left margin of the sternum, and the absence of any cardiac displacement, with the presence of loud bronchial breathing, considered with the absoluteness of the dulness from base to apex, led to the diagnosis of a solid mass; and the presence of tumours in the liver and mammæ supported that view.

M. D., aged thirty-six, married, admitted to St. Bartholomew's Hospital on April 22, 1876. She is emaciated and generally anæmic, and the skin can readily be pinched up. She lies on her right side, with an expression of utter helplessness on her face. The face is flushed. The alæ nasi dilate on inspiration. There is a peculiar tremulousness of the upper lip, which is almost constantly quivering. The lower lip is everted; the saliva dribbles from her mouth. The tongue lies quite passively in its bed, and is small and looks atrophied; she cannot in the least raise the tip or protrude it, but when she makes the effort the base is pushed upwards by the raising of the larynx and hyoid bone. The cavity of the mouth is clogged with secretion; the walls are covered with aphthous patches, and very sore. The uvula does not deviate laterally; the soft palate is mobile. The patient is totally unable to swallow anything but a little fluid, and a large part of that finds its way into the larynx, exciting very distressing attacks of coughing. Temperature 99·1°; pulse 66, unsustained, and very irregular in rhythm; respirations 20 per minute. Thorax is narrow and flattened. Two firm nodular tumours, about the size of a small walnut, may be felt in the substance of the left mamma; another also in the right mamma. The tumours are nodular, freely movable, not implicating the skin; they are quite painless. Over the tumour in the right breast there is a small scar, and the skin is mottled. (The patient states that an abscess occurred here before the tumour began to appear.) The axillary glands are enlarged. The respiratory movements on the left side are entirely absent.

Deep inspiration is painful. Palpation is painful. The vocal vibrations on the left side are absent. The position of the heart's apex-beat is natural. The cardiac impulse is very irregular and forcible. There is no distinct cardiac murmur. Percussion is absolutely dull throughout the left side; resonant throughout the right, both anteriorly and posteriorly. Inspiration is wheeked; loud mucous râles may be heard over the trachea. General rhonchus and sibilus throughout right lung. In the left lung the dulness ends at the left border of the sternum. There is bronchial breathing throughout the left side, becoming more distant and faint towards the axilla. Abdomen: Tenderness on palpation. The liver is very much enlarged, and it extends as low as the right iliac region; it moves with respiration. Upon the surface of the liver several rounded elevations can be felt through the parietes. The spleen can also be felt enlarged below the ribs; it is quite fixed, and does not move with respiration. The lower extremities are slightly œdematous. The patient is troubled much with cough, and expectorates a brownish frothy sputa. Her appetite is very bad. She complains of great thirst. She has taken no solid food for three weeks, on account of her inability to swallow it, having lived on milk and a little brandy. Her bowels were open this morning, but are constipated. Her urine is scanty; contains a mucous cloud; acid reaction; specific gravity 1025; it contains no albumen and no sugar. Her catamenia have always been regular till she last became pregnant, eleven months ago. She gave birth to a child two months ago. She is the mother of five children, and has had no miscarriages. She cannot sleep at night on account of intra-thoracic and abdominal pain. She cannot articulate, but retains the power of phonation.

History.—Three weeks before her last confinement she caught cold, and since that her cough has come on. Three weeks after her last confinement she had severe flooding, and then her chest became sore. Her tongue became enlarged and useless. She has emaciated since her cough began. The mammary tumours all began about the same time (three weeks ago); she does not think they are increasing in size.

Ordered milk diet, two ounces of brandy, and two bottles of lemonade; also enemata three times a day, consisting of eggs, brandy, beef-tea, with five grains of iodide of potassium.

April 25.—Yesterday the temperature was 97·2°; the pulse 100. To-day the temperature 99°; pulse 114, quite regular. The tongue possesses sense of taste and touch. The urine again examined contained no albumen and no sugar. There is reduplication of the first sound of the heart. The œdema of the lower extremities has disappeared. She often experiences a sense of choking at the throat. The enemata were not retained.

April 27.—The patient is fed with the stomach-pump twice daily, each injection consisting of two eggs, two ounces of brandy, one pint of milk, and five grains of iodide of potassium. Temperature 97·2°; pulse 110.

28th.—Temperature 98°; pulse 110, small and weak. She has great difficulty in expectorating; she cannot sleep at night owing to a choking sensation. A sense of numbness in the arms and legs. Appears somewhat brighter since the injections have been given.

30th.—This morning about 7.30 a.m. she became very much worse, and died from asphyxia in about twenty minutes after the change was first noticed.

Post-mortem Examination.—The tumours occupying the mammary glands were rapidly growing sarcomata. A large tumour was found in the posterior mediastinum, involving the root of the left lung and occluding the left bronchus, compressing the vessels and causing congestion and consolidation of the lung. The substance of the lung was disintegrating in various places, producing circumscribed cavities. The bronchial tubes were dilated and filled with cords of thickened mucus. The liver weighed six pounds and a half, and was studded with nodules of rapidly growing sarcoma, varying in size from a marble to a large walnut. The spleen was somewhat enlarged, and unduly firm. The mucous membrane of the uterus was roughened and fungous in a circumscribed extent. Upon opening the skull, several sarcomatous growths of one or two lines thickness were found on the inner surface of the bone, involving the bone tissue, but only pressing upon the dura mater. The dura mater was studded with ecchymoses. No lesion nor any growths were found in the medulla oblongata or in the floor of the fourth ventricle. The trunks of the hypoglossal nerves were free from any malignant growth.

OTITIS INTERNA FOLLOWING POSSIBLE SCARLET FEVER—EXTENSIVE NECROSIS OF TEMPORAL BONE—SECONDARY CIRCUMSCRIBED MENINGITIS, ABSCESSES IN LUNGS, EMPYEMA, AND PERICARDITIS.

(Under the care of Dr. SOUTHEY.)

W. J., aged fourteen, was admitted into Luke ward on July 17, 1876. He is described in the note in the following manner:—A fairly nourished boy, pale, intelligent, decidedly rickety. The bridge of his nose is flattened, but he presented no pegged teeth or keratitis, which would lead one to call him a subject of hereditary syphilis. Expression not of pain, but anxious. Answers questions correctly, but with difficulty and much thought. Rather myopic. Respirations 28; temperature 99°; pulse 120, irregular. Can walk, but with some exertion. Complains of sore throat; on the posterior wall of pharynx are some dirty yellowish follicular granulations. Has been deaf for some years. His mother says that his illness began with frontal headache and sore throat nine days ago; is not certain that there was a rash, but believes so, and states that his skin came off. There is no desquamation to be found now. Chest fairly well formed, and presenting no abnormal physical signs. Movements of head restricted in the antero-posterior direction; rotation not so much affected. Refers pain to back of head and to the glands on either side, which are enlarged.

July 19.—Lies on the right side; deafer. Temperature 101·8°; pulse 120; respirations 36. Complains of great pain behind left ear; parts red, boggy, and very tender. Did not sleep much; was restless, and in part delirious. Bowels open; tongue furred; no paralysis; rational. Evening: Pulse 144; respirations 44; temperature 102·2°. Ordered tinct. opii ℳx.

20th.—Sweating; less pain. Slept after tincture of opium. Pulse 84; temperature 98°; respirations 28. Tongue inclined to be dry. Bowels not open; no sickness. More œdema of parts surrounding left ear, and less tenderness. Evening temperature 101·6°. Repeat tincture of opium.

21st.—Morning: Temperature 100°; pulse 92; respirations 24. The swelling behind the ear was incised yesterday, and much pus evacuated since. Evening: Temperature 101·6°. Easier. Free discharge from wound.

22nd.—Morning: Temperature 100°; pulse 100; respirations 36. Very little discharge. Throat less sore. Was sick this morning. Evening temperature 101·2°.

23rd.—Had a good night. Some rather offensive discharge from wound. Less deaf. Temperature 101·8°. Not sick. Pulse very frequent, 144(?). Evening temperature 102·2°.

24th.—Pulse 144; temperature 101·6°; respirations 64. Throat red, rather swollen, with some thick mucus on right side; tongue dry and brown. Discharge from wound free. Spits up viscid and very offensive mucus; breath offensive. Complains of pain in left side. A distinct fulness at left side of neck. Evening temperature 101·2°.

25th.—Temperature 102·6°; pulse 144. More discharge. Dulness on percussion at the apex of right lung, with bronchial breathing; a pleural friction-sound at angle of right scapula, and a patch of dulness at base of right lung, with crepitation; a pericardial friction-sound too. Evening temperature 100·8°.

27th.—No material change; physical signs as before.

31st.—A very large discharge from wound. Breath very offensive. Does not take his nourishment so well; breathes rapidly, and supports himself in bed. Respirations 64; temperature 103·6°; pulse 174. Complains of a lump in his throat. The left side of the neck is very full and tender; the fulness extends downwards for some distance from the ear. There is a considerable lump in the mouth on left side corresponding to the external fulness. Physical signs in lungs as before.

August 1.—Pulse 160; respirations 72; temperature 103°. Seems much weaker and duller. Very offensive breath. Veins about temples very large and full. Sick several times; bowels confined.

2nd.—Cough worse; sputum purulent. Pulse 144; respirations 66; temperature 99·6°. Evening: Temperature 101·6°; pulse 172; respirations 84.

3rd.—Breathing very rough on both sides of chest. No more dulness anteriorly; back not examined. Abscess inside mouth coming forwards. Pulse 172; temperature 100·7; respirations 71. Evening: Temperature 100·4°; respirations 72; pulse 168.

4th.—Died quietly about 9 a.m. No convulsions or paralysis.

Post-mortem Examination.—The autopsy took place three

days and a half after death. Body not much decomposed. Little subcutaneous fat. Veins over the left temple enlarged. A fulness beneath the pinna of the left ear. On cutting into this, a large abscess-cavity was exposed, in which was a quantity of decomposed pus, and at the bottom was a considerable portion of the squamous, and less of the petrous portion of the left temporal bone quite bare and exposed. About the internal auditory meatus was some thicker pus. The abscess-cavity was very large, and extended widely in various directions—forwards and inwards to the back of the pharynx, downwards beneath sterno-mastoid in the neck. The pinna of the left ear was almost entirely undermined from the connexions. On removing the skull-cap, the vessels, especially the middle meningeal, appeared to be distended. There was no diffused meningitis, but the dura mater over the petrous portion of the temporal bone was injected and roughened slightly, and the layer of bone between it and the abscess-cavity was very thin. The mastoid part of the bone was filled with a thick yellowish exudation, and in the jugular fossa, beneath the mucous membrane, was a quantity of apparently similar material, something like putty. There was nothing abnormal in the brain. There was a circumscribed empyema on the right side of the chest, extending from the third rib to the sixth. This communicated with a superficial abscess on the lung. In both lungs at their surfaces were several distinct abscesses, not very large, but filled with thick creamy pus. The pericardium was universally adherent from inflammation of apparently not very recent date. The heart, liver, spleen, kidneys, and intestines presented no marked departure from the normal structure.

PARALYSIS OF THE THIRD CRANIAL NERVE OF LEFT SIDE, WITH OTHER PARALYSES FROM SYPHILITIC DEPOSIT, RAPIDLY DISAPPEARING UNDER TREATMENT.

(Under the care of Dr. DUCKWORTH.)

J. O., aged forty-one, a native of Trowbridge, Wiltshire, was admitted in Mary ward on July 12, 1876. Has had pains about her, which she calls rheumatic, for some years. Was under treatment for them several years ago at the Bath Mineral Water Hospital, and was very greatly improved there. For three or four months has had a fixed pain constantly on the left side of the head (about the left parietal and temporal bones). The pain has always been in the same place, but has varied in intensity,—generally worse at night. Sometimes the pain has extended to the back, and occasionally has affected the right side of the head, and often down left side of neck into shoulder and arm, which were tender after. On June 29 last, about one o'clock in the morning, had a slight convulsive fit and lost consciousness; did not bite her tongue. Woke up at 5.30 a.m., very giddy; found she could not open the left eye, and had lost the power partially of the left side, both in the arm and leg.

As regards her past history, she says that she has been married two and twenty years. About two years after her marriage she had a sore throat, a lump on the left side of her head, which was painful as well as tender, and her hair came out, but she has had no rash. Since then her throat has been several times sore, and her tongue has also given her trouble. Has recently been affected somewhat with hoarseness.

On admission, patient is a fairly healthy-looking, somewhat stout woman; complexion sallow. There is complete dropping of the left eyelid; the left pupil is contracted (probably from old iritis), and there is well-marked, but not excessive, external squint with the left eye; with this eye there is bare perception of light. By ophthalmoscopic examination the optic disc is seen to be pale, indistinct, and pigmented at apparent inner border, a blotch of pigment lying near one of the retinal arteries just above yellow spot (syphilitic choroiditis); yellow spot healthy. Right eye: vessels enlarged and tortuous; optic disc not so distinct as it ought to be. No sign of choroiditis. There is decided facial paralysis on the left side, with depression of left angle of mouth and drawing towards right side. Can frown and wrinkle forehead, and shut eyes tightly. Tongue is protruded towards sound side(?); is scarred somewhat, but not markedly. Throat is not sore. Teeth decayed. Voice somewhat hoarse. There is weakness in the left arm and leg, but not absolute loss of power. Can use the limbs fairly well. Sensation unimpaired. No abnormality about retention of excretions. In other respects the patient says she is quite well and healthy, and complains only of a pain in the head on the left side, at the same point as she has had it all along. Ordered potass. iodidi ammoniatus (pot. iod. gr. v.) ter die, and half meat diet with arrowroot.

July 13.—Ordered pot. iod. gr. x. ter die.

16th.—Complains of sore throat. Ordered gargle of hydrochloric acid.

18th.—Ordered a blister to left temple, and pot. iod. gr. xv. ter die.

25th.—Ordered pot. iod. gr. xx.

August 1.—Nearly all the signs of paralysis are diminished. To-day there is less ptosis and less squint, but not much more power in internal rectus. Diplopia. Facial paralysis disappearing.

2nd.—Can look outwards well with both eyes, but internal rectus on left side is yet weak. Less ptosis daily. Left pupil still contracted. Takes twenty grains of iodide of potassium three times a day.

4th.—Paralyses disappearing.

Note.—When last seen there remained only the slightest possible droop of the left eyelid and external squint. Ordered to continue the medicine for some months.

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SATURDAY, SEPTEMBER 23, 1876.

ANTI-VIVISECTION LITERATURE.

The recent literature of anti-vivisection has been issued in so continuous a manner, and has been of such a peculiar nature, that, even though it had been prudent, it would have been impossible to make specific comments on it. But if a scientific man is desirous of a morning's entertainment, he will in no way secure it more cheaply than by asking some of his friends to procure for him a bundle of tracts on vivisection published by the various societies for the prevention of cruelty to animals. If, in addition, he can obtain a few specimens of the unsolicited letters sent to men who have appeared before the world as prominent supporters of, or participators in, vivisection, he will have a very good collection of evidence bearing on the determination how far zeal and ignorance, coupled with a knowledge of admissible synonyms for English oaths, and an addiction to the abuse of interjections, can carry women—and even men. The intemperance of language, which in individual

instances is beneath the notice of journalism, comes to be worthy of comment when in the aggregate it constitutes a psychological phenomenon; and in such cases it is a saving condition that if some misrepresentation is so dishonest as to be most suitably treated with contempt, it generally in the mass assumes so distinctly the features of special pleading that none but the ignorant and fanatical are misled by it. Recent agitations on various subjects show that amongst our population there is a large class, the members of which are always ready to explode into frantic paroxysms when any red rag of sentiment is hung up before them; and when, in place of a healthy fervour, their emotions are made to boil by the fiery utterances of one who has been acted upon earlier than themselves, they emit ebullitions of wrath possessing all the heat, but none of the force, of the declamations and lamentations of the ancient prophets. Their hobby becomes to them the measure of the universe and the standard of morality. Participation in it makes a man noble in principle, unerring in action, and eminent in his profession; and renunciation of it is itself the gauge of degradation and the stamp of error. On the subject of vivisection, for instance, a peer in addressing an Irish newspaper asks in eloquent strains:

"Are thousands and tens of thousands of our household pets to be given up to diabolical torture? Even were we certain of the utility, even to save human life, could we agree that this torture should go on? I am speaking merely on human grounds; *of course no Christian could ever be a vivisectionist, much less a vivisector. Neither, I think, could any woman;* and, though no one can have a greater horror than I have of woman encroaching on man's domain, I do firmly believe and hope that if—God forbid it should be so!—but if vivisection gains ground, and becomes the general practice of medical men, we may have recourse to medical women, and cease to laugh at lady doctors. I believe myself that vivisection, to some extent, has its origin in the innate cruelty of man—the still remaining drops of the cruel old Norman blood—which, in the great majority of cases, exists till quenched by the light of the Holy Spirit. In boyhood the persecution of cats is the order of the day. 'The boy is father to the man,' and, in the case of vivisectors, the cat is father to the dog, the latter seeming to be the favourite animal for experimenting on. Will you not come forward and put down vivisection? You, Christians, who serve the God of love, will you not rescue the meanest of His creatures? You, fathers and mothers of little ones, who may in future be degraded in the laboratories of a so-called science. You, sisters and friends of the medical students of our day, who would not see them brutalised. You, our loved and honoured medical men, who have 'seen the folly of it.' You, ladies, who love your Blenheims and King Charleses. You, sportsmen, who delight in your hounds, your pointers, and your setters. [Hares, grouse, and partridges might have been added.] You, householders, who put faith in your mastiffs. You, farmers, who value your sheep-dogs and your terriers. You, young folks, who rejoice in the faithful devotion of your Newfoundlands—will you not all come forward and do what you can to crush this crying evil, this foul blot on God's fair earth, this cowardly, horrible vivisection?"

We venture to draw attention to the sentence which we have printed in italics. We have no pretensions to an extensive knowledge of the peerage, but surely this specimen must belong to an Irish family. "No Christian could be a vivisectionist." . . . "Neither, I think, could any woman." His lordship is endowed with a healthy horror, which we fully share with him, but neither on that nor any other account have we ever had the presumption to exclude even medical women from the category of Christians. With this remark we quit the criticism of this sample of patrician literature for the purpose of observing that, independently of the narrowness which always characterises fanaticism, there are several features which, stamped on the often incoherent and frequently mis-spelt utterances of anti-vivisectionists, present themselves for purposes of classification. First, there is the expression of absolute untruth which in most cases seems to be employed because it is necessary to the writer's rhetoric. Thus, one prophet, after quoting Claude Bernard and Nélatou's remarks on scientific medicine, adds:—

"Shame! Shame! Shame! Shame! Shame! Shame! Shame! *Sevenfold Shame* on every English surgeon, young or older, who dares to torture animals to gratify his love of witnessing suffering. They pooh-pooh the facts which *God wills it* shall be published, but the truth cannot be hidden away, though the fiendish *cruelties* are *performed* in secret, as well as in hospitals. *The facts are not exaggerated!*"

The charge against surgeons of torturing animals to gratify their love of witnessing suffering would surely be withdrawn if anyone were to take the trouble to suggest such a course We notice such things, however, only as matters of scientific curiosity.

Exaggeration is only a milder but a more frequently employed instance of the same form of dishonesty. A circular from a female secretary of a society for the prevention of cruelty to animals is urgent in calling upon provincial clergymen to get up a deputation to the Home Secretary, "to protest against the legalisation of torture by special Act of Parliament," and "an appeal to the people of Ireland" contains the following clause:—

"A Royal Commission has just published its report and evidence, 400 closely printed pages, from which the following is extracted, a small sample of what the thousands and tens of thousands of operations on the poor, dumb, defenceless creatures of God have been. Who can estimate the number of victims thus ruthlessly sacrificed?" The estimation would no doubt be a matter of difficulty, but it is to be hoped, in the interests of science, that the Irish appellant will not be appealed to on the subject.

Another direction which the agitation takes is that of coercion both towards individuals and charitable institutions. Thus the woman (could it possibly be a man?) who waxes furious on "sevenfold shame" also indulges in the following Christian recommendation:—"Do not give your money to hospitals, nor to the Sunday Fund, until vivisection is *wholly abolished*. You will only add torture to torture, both to animals and to the poor people who go to hospitals." "Behold, how these Christians love each other!" It reads as if a violent fanatic would not scruple to shoot a vivisecting physician or surgeon, even through the body of a hospital patient. What better illustration of narrowness and attempted coercion could be found than is contained in the following circular—which, we need scarcely say, no medical man could read without a feeling of contempt for the writer:—

"*Aid from Medical Anti-Vivisectionists only.*

"To disconnect ourselves individually with any form of wrong-doing, is a duty which we owe to Society, to ourselves, and to God. The ghastly practice of Vivisection is wrong-doing of a terrible character. It has been carried on so long, carried on with such detestable cruelty, such persistence, such intensity of purpose, and with such an insatiable thirst for discovering the secrets of Nature, that the proposed restriction of this practice will not deter the Vivisectors. It will act as an opiate on the National Conscience, and leading the way to evasion, to falsehood, and to bribery, will leave the horrors of vivisection undiminished, save, it may possibly be, in the number and 'class' of the poor State-victims. 'Torture is Torture still,' whether inflicted upon 'few or many'—whether upon this animal or that. We, the undersigned Total Abolitionists, do therefore pledge ourselves to use our 'utmost exertions' in our surrounding neighbourhoods to ascertain what medical gentlemen would not object to declare themselves Anti-Vivisectionists. By employing these gentlemen, and influencing our friends to do the same, we should experience a moral relief in thus refusing to be 'necessary' [*sic*] to the crime of Vivisection. It is almost needless to add that whatever aid they could give us would be accepted not only with gratitude to them, but with thankfulness to God."

A less culpable but equally entertaining mode of opposition

is that indulged in apparently by Welsh preachers, and is one evidently adapted to the capabilities of hearers who have a taste for a weak dose of physiology in their sermons. "Professor Huxley," says one of these masters of the art of communicating nothing, "produces artificial blushing in a rabbit by cutting the sympathetic nerve. It is possible that even vivisecters themselves might be made to blush thus: assuredly no such artificial means need be used to make others blush for them. And what a discovery has science presented us with here! Maiden, that delicate tinge with which Nature has taught you, consciously yet involuntarily, to mantle your cheek with even superadded loveliness—a loveliness which has hitherto been accounted too exquisite to be gazed on profanely, is found to be, after all, but a vulgar thing, capable of being produced mechanically! But, truly, what sacred mystery of your being will not these magicians of science disclose next? Yet let them beware! It was such a culling of forbidden spoil from the fair tree of knowledge that, in the world's infancy, provoked the dire rebuke from the Creator, 'Behold, the man has become like one of us, to know good and evil; and now, lest he put forth his hand and take and eat of the tree of life, and live for ever—!' We know the rest: the part performed by the cherubim with the flaming sword. And shall the tree of life for which *we* look be less jealously guarded?" And so on, till the writer, or orator, reaches a peroration worthy of his exordium. After a final blast from his brazen trumpet, he shouts: "'Up, guards, and at them!' and wrest the cruel knife from their grasp. Let the prohibition be complete, and the penalty swift and ample—no quarter, and short shrift. If you divide your forces, the enemy will steal a march upon you; and, *once ensconced in a position of legal security*, regrets and protests will be alike vain, and will be drowned in a burst of hoarse laughter from Pandemonium itself, as the demon of cruelty is let loose upon the earth, and the torture-chamber, which is its own representative and type in this world, is accorded a recognised place among the institutions of Christendom."

After all this, nothing is wanting but the quotation of cant as an element employed by the anti-vivisectionists in the struggle which they regard as such a noble one. Instances of this weapon are readily accessible, and are not unworthy of a place in the literature devoted by the "unco' guid" to the expression of their thankfulness "that they are not as other men are.

"Lord God Almighty," says this descendant of Holy Willie, "Thou art merciful; in the name of our merciful, risen interceding [*sic*] Saviour, we pray Thee to give Thy light and life to the dark dead souls of those learned scientific professors of medicine and surgery, who in their laboratories at the hospitals delight to inflict dreadful cruelties and tortures, wholly needless, on unoffending, innocent, affectionate animals. O Lord! we pray Thee lead these apparently atheistic men to repent of their cruel crimes; show them that Thy all-piercing eye penetrates those secret corners of untold agony; show them their sins, and bring them into the happy state of being born again unto righteousness; to that entire change from death to life, that they may no longer dare to demoralise and more than brutalise the young surgeon-students, whose often rude, rough, coarse treatment of *poor* patients is proverbial—those who have no long purse to pay large sums for *job* operations, nor tender, loving friends around them to shield them in the sufferings of dressing wounds. O Lord! we pray Thee convert these poor young men from the love of cruel practices, to that of mercy and real compassion."

How touching it is to find in the conclusion of this earnest cry and prayer that the author of it has cause for thankfulness. He says: "In the name and for the sake of Jesus Christ hear our prayers, dear merciful and heavenly Father, and give thy sustaining aid and support to those noble Christian medical gentlemen who have come forth to vindicate Thy suffering animals. Amen and Amen."

"Those noble Christian medical gentlemen" leave no room for doubt as to where "sustaining aid and support" are to be sent, as it is almost always observed that when they write to the newspapers they give their full name, address, and qualifications. We desire every man to have the opportunity of a free and full expression of his opinions, but when discussion and agitation merge into misrepresentation, scurrility, and cant, they pass beyond the range of all but the most contemptuous criticism.

HEALTH-RESORTS OF EUROPE AND AFRICA.(a)

The time is soon coming in which invalids, following the instincts of their animal fellow-creatures, will migrate in shoals to a Southern climate, in order to avoid the horrors of a Northern winter.

Such of these as have not already fixed on their winter quarters will gladly consult the new book by Dr. More Madden, of which the title is given at foot. This differs from the numerous books published about some one favourite health-resort, inasmuch as it is the work of a skilled critic, and not of an eulogist. The account which he gives of the chief Southern and Oriental winter asylums is the result of his own observations during several years of health-travel in many lands. It is very much less flattering than many of the descriptions drawn up by persons permanently resident at the places described, and we think is a little too hard on some places; still, it is something to have an opinion altogether unbiased.

Let us suppose an invalid or his medical attendant having made up his mind that a winter abroad is the right thing, and consulting Dr. Madden's pages in order to fix on the right place. Dr. Madden begins by considering the places on the Mediterranean coast of Spain, and shows that they may be reached by steamer from Marseillet, or by rail from Paris, The first place noticed is Barcelona, which we may dismiss as "humid and variable," with "cold northerly winds, alternating with a hot sun and warm southerly winds"—the very place to breed pulmonary disease. The next place is Valencia; too variable in climate, and not worth considering. Alicante and Carthagena the same.

Dr. Madden next transports us from Southampton to Cadiz, a place subject to fierce east winds and great alterations of temperature; thence to Seville, where the winter is by no means so "warm or equable" as on the sea-coast; but, though unsuitable for pulmonary maladies, it is pronounced worth trial in chronic gastric disorders and the relaxation which follows residence in hot climates. Gibraltar is condemned as "prejudicial to all invalids," and especially to the consumptive. Then we come to Malaga, which is well known to be Dr. Madden's place of choice. Its climate is "warm, dry, and tonic," and equable in the winter; hotel expenses moderate; meat bad; fish abundant; drainage, none; beautiful walks and drives; rainfall, small; mean temperature of winter 55°, or 16° higher than London, exactly the same as Algiers, 13° higher than Pau, and 5° lower than Cairo; liable to the wind called *terral*, which blows for three days at a time intensely cold, dry, and sandy (patients must keep indoors whilst this wind rages); an unfit place for cerebral disease, chronic rheumatism or neuralgia, and for the "irritative" class of maladies generally. Lisbon (a place whose sanitary arrangements are evident from the fact that in back streets the foot-passengers may hear the sound, once so common in Edinburgh, of *agoa vai*, followed by an unsavoury deluge from some upper storey) is described as moist and variable, with cold

(a) "The Principal Health-Resorts of Europe and Africa for the Treatment of Chronic Diseases." By Thomas More Madden, M.D., M.R.I.A., etc., etc. London: J. and A. Churchill. 1876. Pp. 280.

winds in the spring, and not so even in winter as Algiers. Madeira is warm and equable, but relaxing. Algiers, easily reached from Marseilles, well supplied with hotels and other means of civilisation; green peas and fresh strawberries every day at dinner in December. Tangiers seems to be placed by Dr. Madden nearly on an equality with Malaga—the meat, too, is good; but the place, we suspect, is windy and destitute of resources for those who cannot ride well. Of Cintra and Tetuan there is little to be said as regards comforts for the invalid.

Dr. Madden next takes us back to Pau, which, with one exception, is the most frequented health-resort in Europe, but which Dr. Madden does his best to strip of a reputation it does not deserve. He condemns it as stinking for want of drainage, and "essentially cold, damp, variable, and dreary during the winter." He went from Algiers to Pau in the beginning of January, expecting to find a mild, equable, and genial climate; but the change was like that from midsummer to midwinter in London. The evenings were foggy and the mornings misty, and there were few days in January during which a pulmonary invalid could venture out. The mean winter temperature is only 3° above that of Dublin, and 13° below that of Malaga. It is, besides, very variable. The one point of excellence of Pau—and a very great one it is—is the stillness of the air and freedom from harsh winds, especially during the spring. This, in our judgment, much more than compensates for a low average temperature. It is a good place for the asthmatic, and probably for some cases of incipient phthisis, but bad for chronic bronchitis, heart disease, and confirmed phthisis.

Arcachon, which is next mentioned, is well known as a sheltered, pine-clad series of sand-hills on the sea-coast below Bordeaux; a salubrious and genial place, whose winter may be described by the fact that it seldom freezes. Biarritz is too windy.

Montpellier, once so famous that its name was given to any place supposed to be good for the consumptive, is described as dry and moderately warm, but exposed to sudden variations and violent winds.

We are next taken to that chain of towns which are built on the edge of the sea, beginning at Hyères, thence to Cannes, Nice, Mentone, and St. Remo. "In fact, the whole Riviera," says Dr. Madden, "from Nice to Spezzia, is studded with small towns—such as Bordighera, Savona, Voltri, Nervi, and many others—which, having the same mild climate and picturesque position as Mentone," require only improved accommodation, and "well-written, roseate, medico-descriptive eulogy from some resident physician," to attract the wealthy valetudinarians who seek a refuge from the leaden climate of England. Hyères is dry and sunny, and "it only snows there once in three years"; like Cannes, it is equable, warm, dry, and stimulating. Nice, dry, warm, tonic, and exciting, but scourged with cold, dry winds in spring. Mentone is not spoken of with partiality, and is bitterly complained of for its want of space, so that turning a corner may be changing a climate.

Pisa and Rome are described as warm and sedative, yet Rome is especially subject to cold winds. Naples, the place *par excellence* for invalids who are not consumptive. Palermo is described in nearly similar terms. Malta, windy, variable, and unfit for the consumptive.

The last series of climates noticed by Dr. Madden are those of Egypt; but we must continue the subject in another article. Here we would merely say that the Englishman need not always consider the absolute qualities of any given climate so much as whether it is not better than the climate he lives in. Thus, many a Manchester man, or resident in high, bleak, searching windy districts, may find a purer, softer, and better air at Bournemouth, Torquay, or Ventnor, which will suit him just as well as a more distant place abroad.

CHANGES AT THE METROPOLITAN HOSPITALS AND MEDICAL SCHOOLS.

In accordance with custom, before the commencement of the winter session, it is our duty to notice the changes which have taken place on the hospital staffs and among the teachers at the various medical schools. As usual, death has claimed a few victims, and other changes have been necessary in consequence of removals and retirement.

At St. Bartholomew's the changes have been very unimportant. Dr. F. J. Farre having finally retired, Dr. Lauder Brunton is now sole Lecturer on Materia Medica. The only other change to notice is the appointment of Dr. James Shuter as teacher of Practical Physiology, in place of Mr. Symons.

At Charing-cross the changes have been more numerous. The appointment of Dr. Vivian Poore to an Assistant-Physicianship at University College Hospital created a vacancy on the junior medical staff, which has been filled up by the appointment of Dr. T. Barlow, Assistant-Physician to the Hospital for Sick Children. Dr. Poore's migration left the lectureship on Forensic Medicine vacant. To this post Dr. Pearson Irvine has been appointed, and he also takes the joint-lectureship on Public Health. Through ill-health, Dr. E. Sparks has been compelled to resign the post of Physician to the Department for Skin Diseases, and Dr. A. Sangster has been appointed in his stead. Dr. Lyttleton Forbes Winslow is now Lecturer on Psychological Medicine, in place of the late Dr. W. J. Hunt, who filled that post with great credit for many years. Dr. Barlow will give instruction in Diseases of Children, in place of Dr. Irvine, to whom, as already mentioned, other duties have been assigned. The only change on the surgical staff of the Hospital is the appointment of Mr. R. J. Godlee as Assistant-Surgeon, in place of Mr. W. Fairlie Clarke, who has left London to settle in private practice in the country. Mr. Godlee will continue to demonstrate Practical Anatomy, and, in addition, will teach Practical Bandaging, formerly taught by Mr. Clarke.

Only minor changes have taken place in St. George's Medical School, Mr. Wadham having been appointed one of the Demonstrators of Anatomy, and Mr. Turner teacher of Osteology, both in place of Mr. Dunbar.

Guy's has been fortunate in having no change during the year except the appointment of Mr. W. H. A. Jacobson as an additional Assistant-Surgeon. At King's College there have been several important changes. Dr. George Johnson has resigned the Professorship of Medicine and been appointed Professor of Clinical Medicine. To the former chair Dr. Lionel Beale has succeeded, thus necessitating his retirement from the Professorship of Pathological Anatomy, to which Dr. Duffin has been appointed. Dr. J. Burney Yeo has been promoted to full Physicianship, with charge of out-patients, and the surgical staff has been strengthened by the appointment of Mr. William Rose as Assistant-Surgeon. Dr. Urban Pritchard will teach Aural Surgery, and Dr. Ferrier takes the place of Dr. Yeo in teaching Diseases of the Throat and demonstrating the use of the Laryngoscope.

At the London Hospital, additions have been made to the staff by the appointment of Dr. F. C. Turner, late Resident Assistant-Physician at St. Thomas's Hospital, as Assistant-Physician, and of Dr. Herman as Assistant Obstetric Physician. Dr. Fenwick has been raised to the rank of full Physician, and Mr. James Adams, Mr. Waren Tay, and Mr. McCarthy take rank as full Surgeons, having filled their respective offices as Assistant-Physicians and Assistant-Surgeons for seven years. In addition to his other duties as Assistant-Physician, Dr. Stephen Mackenzie takes charge of the department for Diseases of the Skin. In consequence of the death of Dr. Letheby, Dr. Tidy is now sole Lecturer on Chemistry and teacher of Practical Chemistry.

At St. Mary's, through the lamented death of Mr. George Gascoyen an Assistant-Surgeoney became vacant, to which Mr. Herbert Page, who has already done good work as surgeon to public institutions, has been appointed. Mr. Norton has vacated the lectureship on Anatomy, having been selected to lecture on Surgery with Mr. James R. Lane, and Mr. Edmund Owen succeeds him. Mr. Hemsley lectures on Botany in place of Dr. Trimen, and Mr. G. H. Hetherington is the newly appointed Assistant-Demonstrator of Anatomy.

At the Middlesex Hospital, Dr. Cayley has been promoted to the rank of Physician, to fill the vacancy caused by the retirement of Dr. Robert Liveing, who, we understand, resigned in order to devote more time to the study of dermatology. Dr. Sidney Coupland has been appointed Assistant-Physician, in place of Dr. Cayley; and Dr. G. H. Evans, Lecturer on Diseases of the Skin, in place of Dr. Liveing. In consequence of the death of Mr. Campbell de Morgan, Mr. Nunn takes rank as Senior Surgeon, and Mr. Hulke becomes sole Lecturer on Surgery; the latter gentleman has retired from the Surgeoney to the Eye Department of the Hospital, and has been succeeded by Mr. George Critchett, who will also lecture on Diseases of the Eye. The only other change to notice is the appointment of Mr. J. Hartley as Junior Demonstrator of Anatomy.

At St. Thomas's, Mr. A. O. MacKellar has been appointed to the Assistant-Surgeoney vacated by Mr. Henry Arnott, who has retired from the active practice of his profession. Dr. Bristowe has succeeded Dr. Peacock as the colleague of Dr. Murchison in the lectureship on Medicine; and Dr. Payne has been appointed Lecturer on General Pathology. A new lectureship has been created in State Medicine, to which Dr. A. Carpenter has been appointed. Some minor changes have also taken place in the registrarships and resident appointments.

At University College Hospital the changes have been unimportant. Dr. Crocker takes charge of the Skin Department, vacated by Mr. J. Tweedy; and Dr. Poore and Mr. Barker have been appointed to superintend the newly instituted departments for Diseases of the Throat and Diseases of the Ear respectively.

At Westminster Hospital, changes have taken place both on the medical and surgical staffs. By the retirement of Dr. Gibb (since deceased), to which reference was made in these columns at the commencement of last winter session, a Physicianship became vacant, which was filled up by the promotion of Dr. Sturges, late Senior Assistant-Physician. The late Medical Registrar succeeds Dr. Sturges as Assistant-Physician, and Dr. A. H. Bennett has been appointed Medical Registrar. The only change on the surgical staff has been the appointment of Mr. C. Macnamara to the full Surgeoney vacated by Mr. Holthouse.

It will thus be seen that although the ranks of hospital physicians and surgeons and teachers of medical science in the metropolis have sustained many losses during the academical year just closed, the vacant places have been taken by men of ability, eager to display their talents and win laurels. We trust that all will meet with success, and that of none will it be said hereafter, He has mistaken his vocation.

THE WEEK.

TOPICS OF THE DAY.

Since July last the village of Hanwell has been suffering from an epidemic of typhoid fever, and up to the present time at least sixty-four cases have come under the notice of the parish medical officer, six of which have terminated fatally. This outbreak is attributed to three causes—bad water, inadequate drainage, and impure air. Dr. Burton, the medical officer, has, at the request of the Local Government Board, reported to the Local Sanitary Authority as follows:—"I have the honour to report that since July 11 last there have been sixty-four cases of enteric fever, all of which were among the poor. Six cases have proved fatal, twenty-two cases are under treatment, and thirty-seven have been cured. Considering the small population of Hanwell—less than 4000—the above figures show what a serious outbreak of fever this has been. In letters addressed by me to the Sanitary Authority of the Brentford Union, under date June 2 and 25, 1873, I pointed out many sanitary defects in Hanwell, which at that time gave rise to an outbreak of scarlet fever, and also to some cases of enteric fever, one of which proved fatal. Cesspools exist in Hanwell to a great extent—badly constructed, not ventilated; and in many of them the contents are allowed to accumulate and ferment. The soil, being gravel or clay, readily absorbs sewage matter from cesspools. Thus the water in the surface-wells becomes polluted and poisonous. The water-supply of the Company, though good, has been polluted by sewage-gases in cisterns having direct communication with closets by means of their waste-pipes. During the late hot weather these poisonous gases, and those arising from the Brent, were rapidly generated, and found their way into the houses of the poor; and from the above it will be seen, I consider, that impure air, bad water, and want of drainage are the causes of the present outbreak of fever. In conclusion, I feel happy in being able to report that enteric fever is now on the decline." Dr. Burton, however, adds that a fresh case has been observed since this report was prepared. From our last reports the fever has now abated.

At a meeting of the Richmond Select Vestry, recently, a letter was read from Messrs. Russ and Minns, of 9, Victoria Chambers, Victoria-street, engineers, stating that having submitted to the Thames Conservancy an offer for the water-power obtainable on the river for lifting the sewage of various towns and districts, they had received an answer informing them that the Conservators had fully considered the subject, and that they approved of the principle. The writers were, therefore, preparing at their own risk and expense detailed plans for dealing with the sewage, which they would shortly submit to the various local authorities of towns and places from the metropolitan boundary to Molesey.

That portion of the Keighley Board of Guardians which has not been locked up have held a meeting, at which Mr. Clough, one of the pro-vaccinators, moved—"That directions be given to the vaccination officer of the Keighley district to institute and conduct the necessary proceedings against persons in default under the Vaccination Acts." Mr. Bland, another of the vaccinating Guardians, seconded it, and it was carried, three voting for it and none against. Mr. Crabtree, one of the anti-vaccinating Guardians, remained neutral; and Mr. Johnson, an anti-vaccinator, voted for it. The seven recalcitrant members of this Board have been released from York Castle on giving bail, each in £1000 with a surety for the same sum, to surrender in November, in the Queen's Bench Division of the High Court of Justice.

The difficulty which we recorded as existing between the parishes of St. Pancras and St. James's, Piccadilly, on the subject of the disused burying-ground of the latter in the Hampstead-road, has been amicably disposed of. The sanitary officer of St. James's inspected the locality, and the unseemly collection of dead cats, dogs, and rubbish has been removed, whilst gardeners have been set to work to bring the ground into a decent condition. At a meeting of the St. Pancras Vestry, at which the subject was discussed, it was admitted that the nuisance was doubtless caused by the inmates of the houses in Little George-street, St. Pancras, whose houses back close to the southern wall of the cemetery, and who are in the habit of disposing of their rubbish and filth by

throwing it over the railing—a practice which, it was feared, it would be difficult to stop. After a statement by the Clerk as to the powers of the St. Pancras Vestry, in reference to the half-dozen extra-parochial burying-grounds not closed in the parish, and expressions of satisfaction at the present state of things in regard to the St. James's ground, the report of the Medical Officer of Health, which had been read, was adopted.

Dr. Bernays, of St. Thomas's Hospital, the Public Analyst for Southwark, has issued an interesting report on the operation of the Adulteration Act during the past year. He calls attention to the fact that butter is largely adulterated, and preserves he found to be unsatisfactory. The fruit had been smashed up and boiled down in a careless manner, and was of inferior quality. At his request, two vendors of this article were cautioned, as the samples contained a marked quantity of copper, the effects of which are cumulative, so that these jams might prove very dangerous to children. Since the total abolition of the duty upon sugar, so-called sweetstuffs had improved beyond all belief. Alcoholic drinks were examined, and he found the ales contained very little hops, but they were alcoholically stronger than they used to be, and kept badly. It used to be said that much salt was used in beers and porters, but he did not find this to be the case. With reference to porters, they differed very much in quality; one sample contained no bitter principle soluble in alcohol. Of spirits, he had examined two samples of gin and two of whisky. The former contained 66 and 67 per cent. respectively of proof spirit, and were free from every deleterious admixture. The whiskies contained 90 per cent. of proof spirit, and the only objection to them was that they were new.

A rather important sanitary case was heard last week at Marlborough-street Police-court. William Briden, a broker, was summoned before Mr. Knox by Mr. Hopkins, sanitary inspector, for exhibiting certain articles of bedding and other things which had been exposed to scarlet fever without having had them previously disinfected. Mr. Ricketts, who appeared to support the complaint, said he believed the present proceedings were the first of the kind taken under the Act at that Court. The defendant was a broker; he was employed by the landlady of the house, 117, Whitfield-street, to get rid of a tenant. A seizure was made notwithstanding that the defendant was told a child of the tenant was suffering at the time from scarlet fever, and was sleeping in the bed in the room. The defendant took away bed, bedding, and goods, and placed them in a van; but, on being paid 8s., he put all the goods on the step of the door, left them there, and, after placing a padlock on the room-door, went away. Defendant denied being told the child was suffering from scarlet fever or any infectious disease. Mr. Knox considered the penalty fixed by the law inadequate to the offence. The defendant would have to pay a fine of £4 10s., and 12s. 6d. costs, or go to prison for one month. Mrs. Kenwood, the landlady of the house was next summoned for allowing the room in question to be occupied without previous disinfection. Evidence was given that, after Hopkins left, the defendant's daughter was allowed to live in the room. Mr. Knox hardly thought that the defendant intended to commit a breach of the law. Mr. Ricketts said no doubt the defendant was ignorant of the law, but these proceedings were taken not so much for punishment, as for a warning to her and others; the defendant was then fined 5s. and 2s. costs.

The Royal Commission appointed to inquire into the effect of Noxious Vapours commences its sittings in Warrington and Widnes the first week in next month, under the presidency of Lord Aberdare. Dr. Richardson has been collecting evidence throughout the locality for the Commission, and in order that their case may be fully and completely laid before the Commission the landed proprietors of the district, among whom are Lord Winmarleigh, Sir Richard Brooke, Colonel Blackburn, M.P., and the Rev. Canon Hopwood, have subscribed a fund of over £1500 to obtain evidence and to defray the legal expenses incidental to the inquiry. Sir Richard Brooke's estate is a lamentable instance of the injurious effects of noxious vapours, as it is almost ruined. The Warrington Town Council having resolved to obtain an injunction against the Bank Quay Spelter Works for emitting effluvia, the proprietors have asked the Council for six months' extension of time to remove the nuisance, which has been granted on the distinct understanding that during that time objectionable manufactures must entirely cease.

A fresh case of small-pox in Derby has alarmed the inhabitants of that town, and the small-pox hospital recently constructed has just been publicly opened. Of the twenty-five or twenty-six reported cases (two of which were from the country), two have resulted fatally. One of these was that of a girl, unvaccinated, the other of a man aged forty, also unvaccinated.

The total amount received towards this year's Hospital Saturday Fund up to Saturday evening last was only £3903 10s. The total amount of this year's collection will be made known, it is stated, at a public meeting to be held at Exeter Hall on the 21st proximo. Unless the total is largely to exceed the amount now published, it would appear that the promoters of the movement must have been greatly deceived in their anticipations of its excess over what was collected last year.

A letter has been addressed to the Chairman of the Banbury Board of Guardians, Colonel North, M.P., threatening to shoot Mr. Edward Bolton, the Vaccination Officer, if he persists in serving notices on people to vaccinate their children. The letter says that several persons are determined to let Mr. Bolton have the contents of their guns if he visits their houses, and further that if the Guardians do not want a riot they must do something in the matter. The letter has been placed in the hands of the police. The Vaccination Officer has also received threatening letters. It is sincerely to be hoped that the writers of these letters will be traced by the police, and that severe punishment will be dealt out to them for this cowardly and un-English method of expressing their opinions.

THE LATE DR. SIBSON.

The following resolution was passed by the Weekly Board of St. Mary's Hospital at their meeting on September 15, 1876:—"That this Board have heard with extreme sorrow and deep regret of the death of Dr. Sibson, Consulting Physician to the Hospital. The Board desire to record their appreciation of the valuable services rendered by Dr. Sibson to this Hospital since its establishment in 1851, first as Physician, and subsequently as Consulting Physician. His energy and skill, which had placed him in the foremost rank of his profession, have been of immense advantage to the Governors, the students, and, above all, to the numerous patients who came under his care, while his uniform urbanity and constant cheerfulness endeared him alike to all connected with the institution. The Board of Governors of St. Mary's Hospital beg to express their deepest sympathy with Mrs. Sibson in the irreparable loss which she has so suddenly and so unexpectedly sustained."

CROUP AND DIPHTHERIA.

The Secretary to the Sub-Committee of the Royal Medical and Chirurgical Society, appointed to investigate the relations of Membranous Croup and Diphtheria, requests us to state that the Committee are desirous of receiving, as soon as possible, all replies to the circulars of queries which have been issued, in order that no information may be lacking to make their report as full and complete as possible. All replies are to be addressed to Dr. Greenfield, the Secretary of the Sub-Committee, at the Society's Rooms, 53, Berners-street, W.

SMALL-POX IN ISLINGTON.

An epidemic of small-pox has broken out in Islington. During the last few days great alarm has been caused by the simultaneous occurrence of several cases in some of the most crowded streets on the west of Caledonian-road. The Local Board of Guardians has given instructions to the Vaccination Officer to see that the Vaccination Acts are enforced, and has directed Dr. Tidy, the Medical Officer of Health, to give his attention to the sanitary condition of the streets where the disease prevails.

DEATH FROM CHLOROFORM.

A death from chloroform is reported from St. Thomas's Hospital. The patient, a labourer, aged forty-five, was admitted as an in-patient suffering from some disease about the trochanter of the right femur, and in order to make a thorough examination, and open up some old sinuses, he was placed on the operating-table and chloroform administered. Before complete anæsthesia had been induced, the pulse suddenly stopped. The breathing continued for some two or three minutes afterwards, during which every available method was tried to restore the heart's action, but without success. At the post-mortem examination, fatty degeneration of the heart was found, but all the other organs were healthy.

HEALTH OF CAMBRIDGE.

At a recent meeting of the Cambridge Improvement Board, the Medical Officer of Health reported that the death-rate during the quarter ending June last was 16·8 per annum per 1000, against an average death-rate of 21·1 for the fifty large towns of England. The deaths from the seven principal zymotic diseases gave a rate of 8. Mr. Annington further reported that there were in Crispin-street, Compasses-yard, East-road, and Brown's-yard tenements quite unfit for human habitation. In one instance he found seven persons sleeping in a room containing only 469 cubic feet of space. He recommended that these unhealthy and dilapidated premises should be treated under the Artisans' and Labourers' Dwellings Act or Torrens's Act, as in the interests of health and morality a clean sweep should be made of them. The subject was referred to a committee. With reference to the treatment of the town's sewage, more than one process has lately been under the notice of the Board, and a communication has been received from the Phosphate Sewage Company, offering to enter into an arrangement for the treatment and disposal of the town's sewage upon the same plan as that in operation at Hertford; this has been referred to the Sanitary Committee, it being remarked that the only difficulty in the way was an engineering one.

UNHEALTHY AREAS IN DUBLIN.

The Consulting Sanitary Medical Officer, Dr. Mapother, has reported to the Public Health Committee of the Corporation of Dublin on several "unhealthy areas" in that city, within the meaning of the Artisans' Dwellings Act, 1875; and there is reason to believe that the Corporation will at last move in the matter. It is stated that the Local Government Board for Ireland have sent forward a recommendation to the Board of Public Works for a loan of £1000 to the Corporation, for the purpose of defraying the preliminary expenses which may be incurred in carrying into effect the provisions of the Artisans' Dwellings Act. In the meantime, the Dublin Artisans' Dwellings Company has been making most satisfactory progress, and of the proposed capital of £50,000 nearly £30,000 has been already promised or subscribed. At least one site for building has been selected, and plans are being designed, and will shortly, it is expected, be carried into execution.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

At the first meeting of this Society for session 1876-77, the following office-bearers were elected:—*President:* Dr. Eben. Watson. *Vice-Presidents:* Dr. Robert Perry and Dr. G. H. B. Macleod. *Council:* Dr. A. Patterson, Dr. H. Miller, Dr. D. Taylor (Paisley), Dr. T. McCall Anderson, Dr. Thomas Reid, Dr. T. Graham (Paisley), and Dr. Wm. Macgill. *Secretaries:* Dr. Joseph Coats and Dr. G. P. Tennent. *Treasurer:* Dr. Hugh Thomson.

SUBCUTANEOUS SECTION OF THE FEMUR.

Our professional brethren will be interested to know that the two patients operated upon by Mr. Maunder in the London Hospital on July 15 with chisel and mallet have shown no symptom of suppuration; bony union has occurred, the thighs are parallel, and the lordosis has disappeared. The operation on these patients is described fully in the *Medical Times and Gazette* of July 22, page 92.

THE REGISTRAR-GENERAL OF IRELAND.

Mr. Donelly, C.B., who had for many years occupied this important post, has retired; and has been succeeded by Dr. William Malachi Burke, originally Medical Superintendent of Statistics and late Deputy Registrar-General for Ireland. This appointment cannot fail to give universal satisfaction, and is a recognition on the part of the authorities of the position which the medical profession should occupy at the head of a bureau of vital statistics. The gentleman who has been appointed to this high office is in every way entitled to his promotion. A Fellow of the King and Queen's College of Physicians, for several years physician to a large general hospital, Dr. Burke unites the highest professional qualifications and experience with an ardent love for statistical research. This happy combination must surely advance the science of statistics, and indirectly tend to promote the public health in the sister-country.

SINGULAR DEATH DURING SURGICAL ANÆSTHESIA.

On September 5, a man, aged twenty-eight years, was admitted into Guy's Hospital with compound fracture of the right leg, the result of a railway accident. Amputation being necessary, chloroform was administered by the House-Surgeon, and the operation proceeded with by Mr. Howse. As soon as complete anæsthesia had been induced, ether was substituted for chloroform, and this agent was continued to the close of the operation. As the effects of the anæsthetic began to pass away, retching came on, and the pulse became very feeble. A little brandy was given, which was swallowed with difficulty. Almost immediately afterwards the patient began to vomit and became blue in the face. Observing that there was some obstruction to the entrance of air into the lungs, the house-surgeon put his finger to the back of the mouth, and removed a large piece of undigested meat. Still no air entered the lungs. Other pieces of meat were then removed from the entrance to the larynx, but with no better results. As it was evident that the patient was dying of suffocation, Mr. Howse performed tracheotomy, and an unsuccessful attempt was made to keep up artificial respiration. It being clear that an obstruction existed below the wound, Mr. Howse endeavoured to clear the trachea by means of forceps, but without success. A post-mortem examination was made, when the larynx and trachea were found full of partially digested food. There is no doubt that the patient, immediately after rejecting the food from the stomach into the mouth and pharynx, took a strong inspiration, which drew a large portion of the food into the trachea. No blame whatever rests with Mr. Howse or his assistants on account of the unfortunate termination of the case; indeed, they deserve great credit for the prompt measures they adopted to prevent the fatal issue.

THE HEALTH OF THE CITY OF LONDON.

The Medical Officer of Health for the City of London, Dr. Sedgwick Saunders, reports that during the past seven weeks the public health of the district under his supervision has been unusually good, and that the death-rate for the period—viz., 125—compares most favourably with the similar period of last year, when it was 168, and the year 1874, when it was 199. This circumstance is the more remarkable, since the extreme heat of the weather during the first few weeks of the period under notice gave rise to much anxiety, and demanded increased vigilance to counteract the ill-effects likely to accrue therefrom. Diseases of the zymotic and contagious classes appear to have been constantly present in the more unhealthy districts, and will continue to hover over certain plague-spots in which poverty, crime, and disease seem indigenous until such localities have been exterminated by the provisions of the Artisans' Dwellings Act. But, Dr. Saunders remarks, the type of such diseases had been of a mild nature, and the deaths resulting therefrom were fewer than might have been expected; nor had these diseases been confined to the condemned districts, for the only case of small-pox recorded occurred in a house of modern construction and good sanitary condition, and three cases of fever happened in Great St. Helen's. Dr. Saunders recommended that several persons should be prosecuted for disobedience of sanitary orders, and he reports that two persons had been sent to prison for knowingly sending bad meat to the markets for sale, whilst other prosecutions were pending. The water from the Bartholomew-lane pump was found to be heavily charged with sewage products, most dangerous for domestic use, and he suggested that it should be closed at once; there was also an impure private well in Pudding-lane, but the owner had promised to close it.

NEW METHOD OF MEAT-PRESERVATION.

The high price of meat in France has induced our neighbours across the water to turn their attention to the same sources of supply from which experimentalists in this country hope eventually to draw supplies at a greatly reduced cost. M. Tellier has invented a system of refrigeration for the purpose of preserving meat and other food fresh for an almost indefinite period, and this system is now about to be put to a practical test in bringing from La Plata to France 150,000 kilogrammes of freshly killed meat. The vessel fitted with the apparatus is capable of transporting a cargo of 250,000 kilogrammes in from thirty-five to forty days. The apparatus is placed aft, and generates cold in five reservoirs, each holding 100 litres of methylic ether. This ether vaporises and boils at 30° below zero, and is then, under steam pressure, condensed in cast-iron boxes wherein it liquefies, in order to refrigerate afresh, and indefinitely, the cylinders of water stowed in the hold. The water subjected to this intensely cold current, containing chloride of calcium, does not freeze, but conducts the cold into reservoirs in the meat-hold. The supply of ether for the voyage is only 500 litres. The temperature of the meat-hold, which is twenty-eight metres long, is so very low as to necessitate thick clothing for those going down to it, and the immense reservoirs contained in it are covered with frost. From a social and commercial point of view, the interest attached to this experiment is very great, inasmuch as whilst an average of 2 francs per kilogramme is paid for meat in France, only 10 centimes is paid in La Plata. It is estimated, therefore, that, in the event of success, fresh meat from South America may be sold in Paris at 1 franc per kilogramme, or 9½d. per 2·105 lbs. On the arrival of the first cargo, M. Tellier purposes distributing portions among the butchers of Rouen for survey and report, and he is confident that the meat will present the same appearance, and have the same flavour, as that of cattle just slaughtered.

THE VALUE OF A "BOGUS" DIPLOMA.

The Medical Defence Association lately took into the Hammersmith Police-court a case which is worthy of notice on more grounds than one. A man residing in Kensal-green was proceeded against for falsely assuming the title of Doctor of Medicine; and Mr. Pridham, who conducted the prosecution, proved that the defendant practised as a medical man; that he had on his door-plate the inscription "Dr. So-and-so, Accoucheur," and that his name was not on the Medical Register of the present year. Mr. Keith Frith, the counsel for the defence, did not dispute the facts of the case, but he displayed in court an *imposing* document, which conferred on his client the degree of Doctor of Medicine of the University of Philadelphia; and this, he contended, gave his client a perfect right to call himself "Dr." The diploma had been obtained, it was added, at a cost of £31, with an assurance that by virtue of it the purchaser could assume the title of "Dr." and practise in this country, though he would not be able to recover his charges in a court of law. Mr. Paget, the sitting magistrate, declined, however, to admit the defence, and inflicted a fine of £5, in addition to costs. This decision forms, we believe, one of the by no means rare cases in which lawyers differ; as (unless our memory betrays us) in a similar case, in the same police-court, some two years ago, the summons was dismissed. But we will not say anything on this point, as we understand that the correctness of Mr. Paget's decision is disputed, and notice given of appeal to one of the superior courts. One subject, however, in connexion with the case we are bound to notice. Unless we are strangely misinformed, it was stated in open court that the Philadelphia diploma of the defendant was obtained through the agency of Dr. Baxter Langley; and that it was on his assurances as to the value and utility of the document that the defendant had relied. This is one side of a story, and till the other side is heard it bears—to speak mildly—a rather objectionable aspect. We feel quite sure, therefore, that Dr. Baxter Langley, who holds such an important and confidential position with regard to the profession, will thank us for offering him the opportunity of telling the other side of the story told in the Hammersmith Police-court of the purchase of a Philadelphia M.D. degree.

THE CARLISLE-PLACE CONVENT, WESTMINSTER.

The report of the mortality returns presented to the Westminster District Board of Works last week showed a very healthy condition of the district. In reference to the deaths in the Carlisle-place Convent, the report stated that during the month a return had been forwarded to the St. George's authorities of the deaths during the last six months at the Convent. The infant mortality was certainly large, and a considerable portion of the deaths were recorded from want of proper breast-milk. It appeared to be a serious evil that any institution should adopt infants if the supply of the natural nourishment was deficient, especially to an extent that destroyed life. This latter part of the report was sent to the Coroner for his information.

HEALTH STATISTICS FOR SCOTLAND.

From the monthly report of the Registrar-General we learn that 2132 deaths were registered in the eight principal towns of Scotland during the month of August last. This number was 381 under the average for the corresponding month of the last ten years, allowing for increase of population, and was in fact the lowest number returned for the month of August for the last nine years. The deaths of children under five years of age were 44 per cent. of the whole mortality of August, 1876. Diarrhœa, the most fatal epidemic of the month, caused 210 deaths, or nearly 10 per cent. of the whole

mortality, and 173 of these were deaths of children. Scarlatina caused 51 deaths, of which 21 occurred in Greenock. There were 43 deaths from fever (28 enteric), 41 from whooping-cough, 25 from measles, 17 from croup, 12 from diphtheria, 9 from cholera, and none from small-pox. The whole number of deaths from the zymotic class of diseases was 436, or 20·4 per cent. of the total mortality. Not quite 29 per cent. were the result of inflammatory affections of the respiratory organs, consumption, whooping-cough, and croup. There were also 49 deaths from apoplexy, 49 from paralysis, 105 from diseases of the heart, 59 from hydrocephalus, and 145 from premature birth debility. There were two suicides, one death from delirium tremens, and eight from intemperance. In Glasgow, a boy, four years old, died from sunstroke. The births registered during the same month in the eight principal towns numbered 3583, being 143 above the highest August number in the last ten years.

THE UNIVERSITIES OF ABERDEEN AND GLASGOW.

The seat for these two Scottish Universities is, or is about to be, vacant, the present representative, Mr. Gordon, having accepted a position on the Scottish judicial bench. The constituents are to a large extent medical, and we should be glad to see a good medical candidate in the field, for he should have a fair chance of being returned. It is quite clear, however, that the candidate must be one who would command unanimity among the medical graduates, or the result would be disastrous in every way. But to this we must again return when matters are a little more advanced. We cannot, however, allow Mr. Gordon's retirement to pass without a word in praise of his kindness and urbanity to those of his constituents who had occasion to seek his services.

MUSCULAR DEFORMITY.

A curious deformity of the gastrocnemius muscle is described in the *Centralblatt für Chirurgie*, No. 35. It consists in a double condition of the inner head at its origin from the femur. The vessels and nerves passed into the leg between the two parts of this bifurcated inner head, instead of in their usual position between the two heads, so that the artery might have been easily missed in an attempt to put a ligature round it. The observer (Gillette) draws attention to a somewhat similar case described by Ferrier in 1873, in which the artery only passed in the abnormal position. The deformity is probably the same as that mentioned in Quain's "Anatomy" as a separate bundle of muscular fibres arising from the femur above one of the condyles. This bundle has been observed passing between the artery and vein, in which case one of the vessels (probably the vein) must have occupied the abnormal position.

REPORT ON THE TYPHOID EPIDEMIC IN RUGBY.

Dr. Wilson, M.D., F.S.A., Medical Officer of Health for the Warwickshire Combined Sanitary Authorities, has completed his voluminous report, prepared at the request of the Local Government Board, on the cause of the outbreak of typhoid fever which occurred in the Rugby urban sanitary district during the quarter ending June 30 last, together with a statement of "any relations which the fever may exhibit to defects in drainage and other means of filth disposable, or to impurities in the water service of the district." The report speaks of the number of cases since 1874; as to those which proved non-fatal, many had not come to Dr. Wilson's knowledge. The fever during the last three years was to a limited extent endemic, but not in any sense epidemic. There were no grounds for believing a general pollution of the public water-supply had any share in the cause of the fever. Nor could it reasonably be inferred that it had been due to any large extent to sewer-air which had been tainted by the poison of typhoid fever. At the same time, there could be little doubt that the influx of sewer-gas not specially tainted was the cause of the majority of the cases which occurred during 1874 and the first half of 1875, and this was owing to imperfectly flushed and badly ventilated drains. The majority of the more recent cases he attributed to polluted well-water and filth-polluted air or water. An intermittent water-supply was always liable to risks of local contamination; the local board had therefore decided to adopt a constant supply. According to recent experience, the liability to the recurrence of fever in Rugby depended upon the risk of pollution of private wells, and the report, in pointing out the danger of using well-water in towns, with drains ramifying in all directions, recommends that every well should be closed where a public supply of water is provided or can be obtained. The report further states that no death from fever had occurred at Rugby School, or at the boarding-houses attached thereto, nor had any case of the kind come to his knowledge since the date of his appointment. For weeks past the town of Rugby had been exceptionally free from fever or other diseases of the zymotic class

EXTIRPATION OF GLANDS IN LYMPHADENOMA.

The proposal to extirpate the first enlarged glands in lymphadenoma, which formed the subject of an interesting discussion at the Clinical Society last session, is not likely to meet with much encouragement from the following case, which the *Centralblatt für Chirurgie*, No. 35, takes from the *Gaz. Méd. de Strasbourg*, 1876, No. 6:—A child, three years and a half old, came under the care of J. Boekel with a considerable enlargement of the glands between the angle of the jaw and the clavicle on the right side, which failed to subside under the energetic use of iodine. He made a long incision at the posterior border of the sterno-mastoid, and extirpated seventy-five glands. The wound healed under Lister's antiseptic dressing in a fortnight, but in another fortnight others were already perceptible. Three weeks after the first operation, forty-five glands were removed, which lay close to the subclavian vein and the transverse processes of the vertebræ, and the wound healed in fourteen weeks. But five weeks later it was necessary to remove four glands; and again, after seven weeks, eight others by a fourth operation. Seven months later the child was brought back with enormous tumours occupying exactly the position from which the original glands had been removed, while there were similar tumours in the right axilla, and distinct swelling of the occipital glands, and the patient in the meantime had become much emaciated. Notwithstanding the unsatisfactory nature of the result, the writer is still of opinion that in very early stages of the disease extirpation is good practice, because, in the first place, the diagnosis of "lymphoma malignum" is not always certain, and, besides, he considers that the life of the patient may be prolonged. We fail to see the bearing of the first argument, for if the case is not one of lymphadenoma, removal of the glands is surely an unnecessarily heroic treatment; but if, on the other hand, the diagnosis is confirmed, the result of the operation is not likely to be beneficial, unless, indeed, the disease is to a certain extent retarded, which must be still considered doubtful. In this particular case recurrence seems to have taken place with extreme virulence and rapidity.

THE REGISTRATION OF PULSE AND TEMPERATURE BY PHOTOGRAPHY.

Dr. S. Stein, of Frankfort-on-the-Maine, has recently invented a method of registering the pulse-waves by means of photography, as well as of taking continuous observations of the temperature of the body by the same means. The pulse apparatus is a simplified arrangement of Marey's sphygmograph, and consists of a square metal frame, which is fixed to the supinated forearm, and carries a flat spring, whose free end

rests upon the radial artery, and rises and falls with its pulsations. The spring carries a vertical rod about one decimetre long, to the top of which is attached a circular piece of card about two centimetres in diameter, and having a small opening in the centre. On one side of the card the source of light (either reflected sunlight or a magnesium lamp) is arranged so that its rays are condensed by means of a lens upon the card, without ever escaping beyond its edge during any of its movements. On the opposite side of the card a small photographic apparatus is placed, so that the bright opening in the disc is thrown on a prepared paper in the focus of the camera as a small, sharply defined circle, magnified from three to five times. The prepared paper moves at a fixed rate by means of clockwork, and the small point of light traces upon it with its own movements a curve corresponding to the movements of the artery, and, of course, magnified from three to five times. The advantage of the photographic over the ordinary sphygmograph consists in the absence of any complication due to the resistance or vibrations of a lever; the objection to it is the necessity for a dark room and for tedious chemical manipulations. For registering the temperature of the body Dr. Stein uses a thermo-electric pile instead of a thermometer. He places one end of the compound elements in the patient's axilla, and the other in a medium of constant temperature—*e.g.*, melting ice—and then connects the poles by insulated wires, with a galvanometer placed at a convenient distance, the needle of which will naturally be carried to either side of its position of rest, according as the temperature rises or falls. To one end of this needle is affixed a tiny mirror, which is illuminated from a chemically active source of light in such a way that the rays reflected from it fall as a minute luminous point on a vertical drum, whose surface is covered with prepared paper, and which revolves on its axis once in twenty-four hours. In this way a continuous curve is traced, which corresponds to the movements of the needle, and which, when the extent of its divergence corresponding to each degree of temperature is known, exactly represents the fluctuations of the patient's temperature.

TREATMENT OF ACUTE RHEUMATISM BY THE INDUCED CURRENT. We published last year (vol. i., p. 608) an account of some observations on the above subject by Dr. Drosdoff, of St. Petersburg. Quite lately (*Berl. Klin. Wochenschrift*, 1876, No. 7) another observer, Dr. Abramowski, has controlled Drosdoff's experiments with somewhat discordant results. In fourteen cases of acute rheumatism which he examined in Professor Frerichs's clinic, Dr. Drosdoff's statement as to the diminution of electro-cutaneous sensibility over the affected joints was not confirmed, although care was taken to select the most painful joints, and also to previously mark with a black line those spots which were most tender on pressure. Abramowski's results were almost exactly the opposite of Drosdoff's, and in some cases he was able to discover, not only that there was an increased sensitiveness to the induced current over certain parts of the rheumatic joints, but also that at these same spots there was increased sensitiveness to pressure. It should be remarked, however, that the method of examination used did not entirely correspond to that recommended by Drosdoff; but that, instead of moist sponges, the electrical brush was applied to the skin, a bathode being connected with the brush, and the anode placed over the sternum. As to the therapeutic value of the induced current in acute rheumatism, Abramowski is in complete agreement with Drosdoff. He states that frequently quite startling results were obtained by this method in a single sitting, so that patients who previously were afraid to make the least movement could make free use of their arms and legs immediately after the faradisation; and although a permanent improvement in the symptoms generally only occurred after several sittings, yet the diminution of pain which almost invariably succeeded even the first faradisation lasted several hours—a success by no means to be underrated. The treatment only affected the fever in so far that it generally rose and fell side by side with the increase or diminution of the local symptoms. Temperatures over 40° centigrade (104° Fahr.) were not observed in any of the cases. The faradisation of the joints was generally performed between ten and eleven o'clock in the morning, allowing a sitting of from ten minutes to a quarter of an hour to each patient. At four o'clock in the afternoon a note was taken. The average length of the treatment in the fourteen cases was ten days, which, all things considered, is a result not to be despised. Dr. Abramowski's paper contains a short account of each of the cases to which the method was applied.

THE CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.

In our list of the Irish Schools in the Students' Number the Carmichael School of Medicine was not included. That omission we now supply. Everything is done by us to insure accuracy in the Students' Number, and returns, to be corrected or filled up, were sent to all bodies teaching or examining. We will not, therefore, be responsible for any omissions due to the carelessness of the officers of these bodies in not supplying us with the proper information. When such is the case one or other of two courses is open to us—either to insert the notice as it stood last year, or to omit it altogether. In several instances we have deliberately selected the latter course.

CARMICHAEL SCHOOL OF MEDICINE.

(IN IMMEDIATE PROXIMITY TO THE RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS).

Lecturers.—Surgery—Anthony H. Corley, M.D., F.R.C.S.I., Surgeon to the Richmond, Whitworth, and Hardwicke Hospitals; Examiner in Surgery, Queen's University. Practice of Medicine—Samuel Gordon, M.A., M.B., President King and Queen's College of Physicians, Physician to the Richmond, Whitworth, and Hardwicke Hospitals; John William Moore, M.D., Fellow and Censor K. & Q.C.P., Physician to the Meath Hospital, and Assistant-Physician to Cork-street Fever Hospital. Anatomy—G. M. Foy, F.R.C.S.I.; Christopher Gunn, M.D., M.Ch. Physiology—Reuben J. Harvey, M.D., M.R.I.A., Assistant-Physician to the Richmond, Whitworth, and Hardwicke Hospitals, and to Cork-street Fever Hospital. Institutes of Medicine—Stewart Woodhouse, M.D., Fellow, and formerly Examiner, Royal College of Surgeons, Ireland. Midwifery—Wensley B. Jennings, B.A., F.K. & Q.C.P., late Assistant-Master Rotunda Hospital. Chemistry—C. R. C. Tichborne, Ph.D., F.C.S., M.R.I.A., Chemist to the Apothecaries' Hall, and Examiner in Chemistry University of Dublin. Ophthalmic Surgery—C. E. Fitzgerald, M.D., Surgeon-Oculist to the Queen in Ireland, Ophthalmic Surgeon to the Richmond, Whitworth, and Hardwicke Hospitals. Botany—E. B. Blakeley, L.R.C.S., L.R.C.P.E. Materia Medica—George F. Duffey, M.D., F.K. & Q.C.P., Physician to Mercer's Hospital. Forensic Medicine—Hugh Auchinleck, L.R.C.S., L.R.C.P.E.

BENEFICENCE.—A park or recreation ground for the use of the public has been presented to the Mayor and Corporation of Jarrow by Sir Walter and Lady James.

REVULSIVE TREATMENT OF ERYTHEMA OF THE FACE.—In a case of chronic erythema of the face, in which the two cheeks were covered with large lurid-red patches, the nose was red and painful, and the face was disfigured, a blister two inches square was applied on the outer side of the arm, and when it had dried up another was applied above this—and so on for a month. Under the influence of this revulsive treatment the inflammation of the face and nose gradually diminished, and at last quite disappeared. Two months later a temporary return of the eruption occurred, but was immediately dispersed by resorting to the blisters again; and now for two years the disease has not reappeared.—*Révue Méd.*, August 21.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

APHASIA OR ALALIA: ITS VARIETIES.

Importance of Physiological Analysis in the Study of Disorders of Speech—Historical Remarks—Alalia and Dyslalia—Record of Four Patients presenting Four different Forms of Aphasia—Relation between the Tonal and the Visual Image of Objects—A Fifth Form of Aphasia—Deductions from this Clinical Study—Names and Description of the Five Varieties of Aphasia—Their Pathogeny—Aphasia in its Wide and in its Restricted Meaning.

GENTLEMEN,—There is certainly no subject which so thoroughly proves the imperative necessity of physiological analysis as that of disorders of speech in patients suffering from lesions of the brain. As a just and natural consequence, there is none which exposes to such great mistakes those who enter upon its study with insufficient anatomical and physiological knowledge. At the outset of its history, when disorder of speech was singled out from cerebral semeiology for special study as a distinct symptom—I speak of a hundred years ago and more,—the question was doubtless far from being thoroughly elucidated, but it was at least placed upon a scientific basis so firm as to be ventured upon without fear, and in the divisions then vaguely mapped out there was, as it were, a foreshadowing of, an instinctive attempt at, differential analysis. The classical works of Sauvages and the two Franks belong to this first period.

When, a little later, after thirty years of a silence to all intents and purposes absolute, amounting in fact to oblivion, it reappeared amongst the questions of the day, what was only a revival (*regain*) was regarded as a novelty:—mistake number one. Then, instead of following faithfully in the track already marked out, the subject was approached with a preconceived idea, incompatible with the least acquaintance with physiology. The error was precisely the same as that against which I warned you in the first lecture of this course. The faculty of articulate language was regarded as an indivisible entity, whence a single step led to the conclusion that this faculty must have a specific organ and instrument, in sole command of it; and this step was soon cleared. The mistake thus became twofold. The physiological error answered to the error in anatomy; and truly there was in this no occasion for surprise, inasmuch as physicians had been found ready to maintain in academical conclave (*séance*) that these problems needed no help from anatomy and physiology, and that observation alone must furnish their solution. These physicians, relying, as they did, exclusively on observation, ought, at the very least, to have observed carefully.

As a matter of fact the question stood thus: The variety dependent upon partial or complete paralysis of the tongue was distinguished, as it had been all along, as a special form; then, instead of following in detail that analytical method which could alone lead to a knowledge of the other specific forms of the kind, all the other varieties, however unlike one another, were brought together and united into a single group.

Whence, in the clinical history of alalia, two classes have come to be recognised: in the one all cases are included in which the disorder of speech depends upon a defective mobility of the tongue; in the second, all the other cases are mixed together indiscriminately. These instances of aphasia without motor paralysis of the tongue have been referred by some observers to a peculiar state of the intellect, while others have recognised in them the abolition of a faculty, called the faculty of articulate language. In the one of these facile theories as in the other, this premature synthesis has resulted in transferring to the ever obscure domain of psychology a morbid condition whose characters were asserted to be psychological, but not proved to be so.

The simplest comparison will suffice to enable you to appreciate the error contained in this twofold division, which pretends to exhaust the subject. Suppose a similar classification to be applied to the study of disorders of voluntary motion, and consider for a moment what the result will be. When you have formed a first group of akinesiæ, of cases in which the disorder depends upon the inertia of the muscles themselves, you will unite all the other cases into a second class; and in this class, a true Pandemonium, you will find thrown pell-mell—loss of motor power from lesions of the peripheral nerves, disorders due to defective co-ordination or ataxies, in addition to which you will also meet with paralyses of spinal origin and akinesiæ from brain disease. In such an amalgamation it will be impossible to know what one is about, and the confusion will be complete.

You have here in a few words the history of aphasia, and the comparison will, I hope, serve to convince you, as well as myself, of the mistake made. It is quite certain that so long as the question underwent this twofold division, it was far from making any progress; in proportion as observations were multiplied, the uncertainty and obscurity increased.

Such was the condition of matters when, in 1864, I attempted to bring to bear upon the subject the light of anatomical, physiological, and clinical analysis. Without ready-made theory or preconceived idea, I simply set myself to study the known facts, to compare their clinical characters with the data furnished by physiology and the results of pathological anatomy; and by that mode of procedure it was easy for me to show the inadequacy of the usual division, and the necessity for more numerous categories.(a) I have had reason to feel satisfied with the results of my work, for since then the anatomico-physiological method of analysis has always been more or less strictly applied to the study of aphasia. It was this method which characterised the publications of Parchappe,(b) of Benedikt,(c) and of my learned colleague and friend Proust; in the most complete monographs which science possesses on the subject, those of Bateman(d) and Bastian,(e) physiological analysis is still the basis of clinical classification and clinical estimate; nay more, the four fundamental divisions which Bateman arrived at only differ in their form from those which I myself proposed. I had, moreover, insisted in my paper that not only was the symptom itself well known to our predecessors, but that the terminology of the phenomenon had been clearly defined, in such a manner that the names recently proposed were but a fruitless multiplication (*superfétation stérile*), not to say an evidence of surprising forgetfulness. Sauvages used the word *alalia* (from α, *privative*, and λαλια, *speech*) to denote the abolition of speech, and he contrasted it with the term aphonia, which, then as now, expressed the abolition of voice. This distinction was so generally received, the expressions which recorded it so widely known, that J. P. Frank, in his chapter on aphonia and alalia, reproached Frederick Hoffmann with having fallen into the same error on this subject as Hippocrates did, and with having confused these two very different things. Moreover, as speech is not always actually abolished, as it may simply be disordered, Swediaur suggested the name dyslalia for these cases, rightly contrasting it with the term dysphonia, which also expresses alterations in the quality of the voice, and not complete loss of phonation. All these facts were forgotten, tradition was set aside, and new words were coined for an old thing: as when, for instance, the word aphemia, after being a short time in vogue, yielded to the more correct name, aphasia. Retain, if you like, this latter term, and let it replace the classic word alalia, but at least bear in mind that the phenomenon was known and named long ago.

In order to arrive at a proper understanding of the question of alalia, there is no need either of theoretical considerations or previous analysis; it is sufficient to watch carefully a certain number of patients, and to seek, in each case, for the mode of manifestation (*modalité*) of the anomaly in speech. The truth is soon elicited by this exclusively clinical comparison; that is to say, the necessity for a complete separation of the faculty spoken of as that of articulate language: whence also the further obligation of submitting to the same analytical

(a) S. Jaccoud, "De l'Alalie et de ses Diverses Formes" (*Gaz. Hebdom.*, 1864, Nos. 30, 32, 34, and 35).

(b) M. Parchappe: Discussion à l'Acad. de Méd., 1866.

(c) M. Benedikt, "Ueber Aphasie, Agraphie, und verwandte path. Zustände" (*Wiener Med. Presse*, 1865).

(d) F. Bateman, "On Aphasia or Loss of Speech in Cerebral Disease" (*Journal of Mental Science*, 1868-9, vol. xiii. p. 521, xiv. pp. 50, 345, 489, xv. pp. 102, 367); and separate work "On Aphasia," Lond., 1870.

(e) H. Charlton Bastian, "On the Various Forms of Loss of Speech in Cerebral Disease" (*Brit. and For. Med.-Chir. Rev.*, vol. xliii. 1869, pp. 209 and 470).

process the symptom, supposed to be indivisible (*univoque*), known as abolition of the faculty of speech, alalia, aphemia, or aphasia.

Now, chance has brought together under our care a certain number of patients, who, without actually presenting a complete clinical picture, do nevertheless exhibit the most interesting aspects of one.

There is to begin with a man of sixty, who was attacked several months ago with right hemiplegia; to-day the paralysis of the face and limbs has almost disappeared, but speech is confused and indistinct, because the right half of the tongue, seized with akinesia at the same time as the limbs, has not fully recovered its power of movement; he does not protrude the tongue in a straight line, but directs the tip plainly towards the right side, which is equivalent to saying that the right genio-glossal muscles are still in a condition of paresis, and that the contraction of the left genio-glossal, having their action insufficiently counterbalanced, causes a deviation of the organ to the opposite side; otherwise, there is no disturbance of the intellect or the memory, no disorder of deglutition; the relation between thought and expression is intact, speech is only interfered with in its ultimate manifestation, and the disorder only exists because the tongue is still paralysed on the right side. It would be useless to enlarge upon this very common class of cases; it has never been the source of any difficulty.

In the same ward, that of St. Jerome, is a man of thirty-three, of robust constitution, whose history and present condition are of very great interest. In the month of November, 1868, this person was seized with a slight attack of apoplexy, leaving behind it left hemiplegia, but not affecting the speech. In three months the symptoms had vanished, and for nearly a year health remained perfect. But in 1869, about the month of December, exactly two years ago, there was a fresh apoplectic seizure, followed by right hemiplegia of the face and limbs, and absolute loss of speech. After a year had elapsed without change in his condition, the hemiplegia improved, and speech re-appeared, but with an alteration which we must now describe. This man speaks, but to an unaccustomed ear his words are unintelligible—not that they are faulty or used in a wrong sense, but because they are pronounced with such an amount of sputtering and confusion that it is difficult to make them out; every word is rightly placed, the sentences are well formed, but the articulation of the sounds is so faulty that they become indistinguishable. In one sense the disorder is twofold: syllables and words are pronounced badly or indistinctly, besides which, his utterance of them is irregular; when a few words have followed each other regularly enough, the patient pours forth a string of them with a tumultuous precipitancy which adds to the defect. After a certain length of time the ear gets accustomed to these imperfect words, so that it cannot be said that the man has lost the faculty of communicating with his species—he has not lost speech, but the lesion in his brain has induced such an abnormal style of utterance that he cannot all at once make himself understood. The paralysis of his right arm is sufficiently better to enable him to write, and he does so with correctness and unimpeachable orthography; consequently, the intellect is intact, and the memory for words is not weakened. On the other hand, the mobility of the tongue is perfect; every movement of locomotion is executed with rapidity and precision. Lastly, there is distinct consciousness of the infirmity—the wish to speak is there, and, in fact, whenever the man wishes to speak, he speaks; all the mischief proceeds from faulty articulation of sounds. Then, seeing that the tongue and lips are intact, we are driven to the conclusion that the articulation of sounds is disturbed at its point of origin—that is to say, that the cause of the disorder is seated in that nerve-centre which controls the association and co-ordination of those complex movements whose harmony insures normal articulation.

The method of exclusion is not the only one which leads, in this instance, to this conclusion. It is proved directly by a very interesting phenomenon, to which I desire to call your attention. Amongst the various symptoms produced in our patient by his second attack of apoplexy may be noted complete paralysis of the soft palate and pharynx, which for a long time rendered normal deglutition impossible. This serious accident is now so far recovered from that the patient speaks of it as a thing gone by; and yet, for all that, minute observation shows that there is no doubt that some vestige of it remains. The ingestion of solid food takes place without inconvenience. That of liquids, it is true, does not lead to regurgitation through the nasal fossæ; but set the man to drink in your presence, and you will soon be struck with the deliberation with which he accomplishes that act. He does not drink freely, in one unbroken act of swallowing; he drinks in distinct gulps, and again goes on with a circumspection—the fruit, no doubt, of his experience. In spite of all these precautions, it often happens that after four or five gulps the fluid misses its way, and sets up a fit of coughing, but without regurgitation through the nose. It cannot be doubted that deglutition is still affected. Upon direct examination the soft palate is found fairly movable, though unusually flaccid; it yields readily to the pressure of the column of air at every breath the patient takes. Nevertheless, its sensibility is unaffected (as is the case also with the mucous membrane of the pharynx), and the movements of deglutition demanded of the patient are executed regularly. But artificial excitation applied to the region of the soft palate and pharynx by means of pricking or tickling reveals a remarkable anomaly; each excitation is followed by a movement, but it is a localised movement—a contraction *in situ*, which, at the most, extends to one lateral half of the organ. Neither the generalised and quasi-spasmodic movements of the soft palate, nor the combined movements of the pharynx and diaphragm, which simple touching of the palato-pharyngeal region excites in the ordinary state, are here produced; these muscles are still affected with a certain amount of paresis. Then, gentlemen, if you consider that the corresponding nerves take their origin precisely in that nervous centre which presides over the motor co-ordination of the articulation of sound, you will agree with me that there is, in that symptom, a positive confirmation of my pathogenic diagnosis.

Let us now turn our attention to this person's neighbour, the man of sixty-five years. The first two patients speak badly, but they speak; here the case is otherwise—he does not speak at all. Seized with apoplexy twenty-six months ago, a right hemiplegia has remained, which, though now decidedly improved in the lower extremity, is no better in the arm, which is affected with most violent secondary contraction. In this man the dumbness is almost absolute, and has been so from the moment of the attack of apoplexy; he only makes use of two monosyllables, *ta* and *na*, and in varying their number and intonation he endeavours to supply the place of the lost medium of communication. For the rest, this person's intellect is unimpaired, his memory of words perfect; tell him to hand you an object that you name,—he does so without ever making a blunder; call an object by its wrong name,—he soon testifies by an unmistakable expression of disapproval that he realises the incorrectness of your appellation. In this position you will not be astonished to learn that the patient has fully and completely preserved the faculty of mental reading; he has his favourite journal that he reads with interest, and if you give that paper a name not its own, the patient protests against your mistake by a play of feature not to be misunderstood. The will to speak is in his case unimpaired; every time you question him he tries to answer you, and the consciousness of his infirmity is as complete as possible. Lastly, the faculty of writing is not compromised; only the realisation of the act is very limited, because the patient is obliged to use his left hand, which has not yet completed its education. I ask you, What is it that is wanting to enable this man to speak? He thinks, and thinks correctly; he knows the exact value of words, he reads mentally; he is thus in possession of verbal formulæ, and if he does not speak, it is because he cannot transmit outwardly the suitably elaborated formula: internal speech is there, the projection outwards is at fault.

Amongst the phenomena which observation reveals in this man there is still one which deserves your attention for a moment. Hearing the name of an object, the patient recognises it at once, and hands it faithfully without ever making a mistake. Translate that fact into physiological language, it signifies that the tonal image or impression reaching the centre for the reception of auditory impressions calls up the visual image of the object—that is to say, the connexion between the sense of hearing and that of vision exists as in the normal condition. Is this equally true of the converse relation—that which connects the visual with the auditory impressions? In other words, does the visual image of the object call up the tonal image? The point is difficult to decide in a person who does not speak at all; nevertheless, I think that the question must here be answered in the affirmative; for if, without pronouncing its name, you show the patient an object, he does not name it aloud—that is out of

the question, because he cannot speak—but he writes down its name correctly; whence we must conclude that the visual image has called up the tonal image. I have taken pains to point out this fact on account of the proposition formulated on this subject by Griesinger and Sander;(f) according to whom, in aphasic persons belonging to the category in which our patient is included, the tonal image always calls up the visual, but the visual image does not call up the tonal. Now, if the first part of the proposition is undeniable, the second is not constantly true, for it is not verified in the instance before us.

There is a woman of seventy-one in St. Claire ward, who, three months ago, was seized in the following manner:—She left home in perfect health to make some purchase at a neighbouring coal merchant's. On her arrival she could not tell her errand—she no longer knew what was her motive in coming there; and this instantaneous abolition of speech was not accompanied with any symptom of paralysis, for the patient was able to return home alone and unsupported. This attack was followed by a marked disturbance of perception and idea, but it does not seem that there was actual unconsciousness. Soon after reaching home, this perfectly dumb woman was in a condition of mental depression, which rendered her indifferent to all that passed around her; but for all that she had a vague consciousness of external incidents—she was quite well aware of the arrival of a physician, and of that of a priest, and although she could not in any measure understand what was said, she heard a confused murmur of voices. Be that as it may, there was not, there never has been, paralysis, either of motion or sensation, and from the time of her coming under my care, on October 18 last, the patient, moving easily about, conscious of every sensory excitation, has been under the influence of an intellectual stupor, which took away all spontaneity of act and speech; but she quickly roused from this apathy when loudly addressed—that is to say, when influenced by auditory impressions playing the part of excitant to this benumbed brain. It could then be ascertained that the wish to speak was unaltered, that there was perfect movement of the tongue, that properly articulated words were pronounced, but that only a small number of them was employed, that their acceptation was incorrect, and that with the exception of these few words speech was abolished. There were, then, at the same time cerebral stupor, or hebetude, and loss of memory of words, or verbal amnesia. Some days passed without change, when the hebetude little by little disappeared; the patient began to take an interest in things around her, and especially in her own position; and when the intellectual faculties were restored, consciousness of the infirmity soon became very clear and distinct—only the memory of words still failed her, and at each new proof of her powerlessness this unhappy woman experienced such pain and humiliation as to leave no doubt as to the correctness of her estimate of her own state. Amnesia to this extent scarcely lasted above two or three weeks; then the patient could begin to give the correct name to objects shown to her; and this improvement, going on uninterruptedly, has led to the condition in which you now see her. Speech is so far re-established as to allow her to give an account of her past attack, but suddenly certain words are not forthcoming,—in vain the patient appeals again and again to her memory, she cannot recall them; but if you suggest one to her which is not suitable, she at once corrects you, while if, on the contrary, you repeat the right expression in her hearing, she recognises it, and immediately avails herself of it. The amnesia, complete at the outset, is not so now, but still it lasts in a sufficient degree to be readily recognised. For the rest, the woman, who, before her accident, was able to read and write, has not yet recovered the power to do either: she spells with difficulty, hesitates from time to time about a letter; in short, words, those representative delineators of thought, are for her as yet only dumb figures. It is, after all, of common occurrence in amnesic patients for the abolition of the ability to read and write to be the most persistent phenomenon.

The examination of our four patients shows us, gentlemen, that in each case the characters and the mechanism of the disorder of speech are different,—and so much so, that the only element of agreement in the four cases is the crude fact that speech is disordered. We have, then, here four clinically distinct categories, and unless we wish deliberately to set aside the teachings of observation, we are compelled to admit four forms or varieties of aphasia, inasmuch as four types are placed before us for clinical observation at the same moment. In the first case, speech is disturbed only because there is motor paralysis of the tongue; the aphasia or alalia depends upon *glossoplegia*. In the second case, the disorder altogether depends upon a defective co-ordination of the movements which produce articulation of sounds; the aphasia or alalia is due to *glossoataxy*—an abbreviated expression, by which I denote this disturbance of verbal co-ordination. In the third patient, the mobility of the tongue and the articulation of sounds are normal; speech can, moreover, be prepared, but it cannot be given forth to the outside world; the aphasia depends upon suspension of verbal transmission, or *logoplegia*. I employ that designation, which means literally "paralysis of speaking," in contrast with the two preceding terms, without losing sight of the fact that this acceptation is purely conventional. In our fourth patient the abolition of speech is the simple consequence of the loss of memory of words, or *verbal amnesia*. Lastly, a fifth case is conceivable, of which I have no example to bring before you, but the actual existence of which is fully established by the observations of our predecessors: I allude to mental depression, carried to such a point that the patient no longer speaks because he has no thought to formulate. This condition, which was pointed out by Frank, or perhaps by some one before his time, under the name of "hebetude," appears in the course of grave cerebral lesions, whether acute or chronic, and the abolition of speech then depends entirely upon abolition of thought, *hebetude*—whence the phrase "alalia from hebetude," employed by Joseph Frank.

Such are the facts, such the conclusions, arising out of clinical observation, prosecuted without theoretical bias, without preconceived ideas. These conclusions being collected together in a group, you will have the following table:—

Aphasia, or alalia
- I. From glossoplegia.
- II. From glossoataxy.
- III. From logoplegia.
- IV. From verbal amnesia.
- V. From hebetude.

Several writers have arbitrarily restricted the meaning of the word aphasia: they reserve it exclusively for the last three forms in this table, which they, moreover, confound; and, according to them, there is no aphasia where there is not dumbness. I cannot join with them in this interpretation, which, I strongly fear, has its source in a neglect of the older works. If I consult etymology, I can find no meaning in the word aphasia that is not contained in the term alalia; consequently, I regard them as perfectly synonymous, and I follow tradition faithfully by taking these names in the widest sense—that is to say, in their semeiological acceptation,—so that I use the words alalia and aphasia as generic expressions, which embrace pathological and non-congenital disorders of speech; and that genus, whose fundamental character is a disturbance of verbal communication, observation leads me to divide into the five species, a description of which I have laid before you.

(f) Sander, "Ueber Aphasie" (*Archiv für Psychiatrie*, vol. ii. 1869).

Early Blistering in Pleurisy.—At the Société d'Emulation, Dr. Lereboullet strongly opposed the conclusions of a paper recently read there by Dr. J. Besnier (*Medical Times and Gazette*, August 26, page 245), advocating the very early application of blisters in acute pleurisy. He observed that it is always excessively difficult to decide in the early days of a pleurisy whether the disease will be serious and of long duration, or whether it will terminate rapidly; and therefore, before any means of treatment can be pronounced as favourable, a very great many cases should be observed. From Laennec, all the great clinical observers have recommended that blisters should not be applied until towards the decline of the disease. Certainly it is impossible to prove that blisters are injurious at the early stage, but it is to be believed with former great observers that they are seldom useful then, and may be mischievous. Revulsives succeed well and very rapidly in mobile and superficial affections, and at the beginning of these, as in neuralgias, rheumatic flexions, and catarrhal affections—the respiratory or gastro-intestinal. They are far less active, and sometimes useless, in affections of the parenchyma; and at the commencement of a pneumonia or a pleurisy they may be positively mischievous. To prescribe them as a general rule under these circumstances is an error. All depends upon the extent of the disease, and the state of the economy. Dr. J. Besnier observed that although only five cases were detailed in his paper, he is in possession of many more, and has never met with a failure.—*Union Méd.*, September 9.

FROM ABROAD.

The Paris Hospital Mortality Returns.

In his report for the second quarter of 1876, Dr. E. Besnier observes (*Union Méd.*, August 3 to 29) that the atmospheric conditions of the quarter were characterised by great vicissitudes, with a low temperature. The affections of the respiratory organs were prolonged from the winter, and the general mortality rose above the mean of the quarter. Diphtheria prevailed with malignity, measles was of very frequent occurrence, and small-pox continued slowly progressive. The total deaths in the hospitals and hospices have exceeded the mean of this quarter for the four preceding years by 208—viz., 3071, as compared with 2863.

1. *Affections of the Respiratory Organs.*—The "superficial" affections, which are described under the general and vague term of "bronchitis," underwent a notable diminution, and lowered the total number of the affections of the respiratory organs as compared with the winter quarter; but the "deep-seated" affections, changes in the parenchyma and serous membrane—pneumonia, broncho-pneumonia, and pleurisy—attained their maximum; so that while there were 635 cases of pneumonia in the first quarter, these increased to 690 in the second, and the cases of pleurisy increased from 271 to 348. The percentages of deaths from phthisis, pneumonia, bronchitis, and pleurisy were 51·36, 36·81, 3·84, and 12·64, as compared with the averages of the same quarter during the preceding eight years, which were 55·06, 32·71, 4·16, and 9·25. Dr. Bucquoy found that his cases of pleurisy at the Cochin maintained their high temperature for a very long time, and that if the various energetic remedies employed perhaps prevented aggravation of the affection, they did little to abridge its duration. He cites a case in which paracentesis, performed only ten days after the origin of a pleurisy, discharged four litres and a half of serosity.

2. *Diphtheria and Croup.*—These affections have continued to exhibit their malignancy in the children's hospitals. Their contagiousness, which was at one time denied, has become but too evident; and placing children who have been admitted for other affections in wards in which such patients are, has been found to be a most dangerous practice. Of the twenty-six cases received by Dr. Bergeron at the St. Eugénie, twenty-two died, two recovered, and two are recovering. In Dr. Cadet de Gassicourt's wards twenty-three cases occurred, four of which contracted the disease in the hospital. In sixteen of the number tracheotomy was performed, fourteen of the patients dying within five days after the operation. Of the seven children in whom no indication for the operation existed, five recovered, and two died. There were 149 cases of these affections admitted into the Paris hospitals during these three months, of which 106, or 71·14 per cent., died.

3. *Small-pox.*—This continues to be slowly evolved in its annual progressive development, the law of which Dr. Besnier has expounded in several of his reports, to the effect that "it proceeds by series of years, in the course of which it presents an autumnal or æstival remission, and a hibernal or vernal exacerbation, the annual exacerbation exceeding each time that of the preceding year." The extraordinary remission of the year 1873 (when small-pox almost entirely disappeared from Paris) allowed of the recurrence of the ascensional movement being very exactly observed and followed step by step—showing that "the study of past epidemics allows of their progress at the present time to be, to some extent, predicted. May such monotonous and laborious investigations, by which are accumulated proofs and authentic documents, arouse attention to neglected studies, the practical importance of which is considerable in relation to the general idea of epidemics and their exact interpretation." During the second quarter of 1874 the total number of deaths from variola in Paris was only fifteen. It rose to 102 in the same quarter of 1875, and to 120 in 1876; and if prophylactic measures are not extended, the number will be still higher in 1877. Variola is a disease that remains *en permanence*, and temporary and partial provisions will not meet the case. In illustration of the necessity of establishing separate hospitals, a statement of Prof. Vallin, of the Val-de-Grâce, is inserted, showing that of 141 soldiers of the Paris garrison who were admitted, as many as sixty-two (or 37 per cent.) contracted the disease within its walls, although every possible precaution was taken to isolate the small-pox cases. The Assistance Publique has succeeded far better than this, notwithstanding the partial and temporary character of its measures, for it has extirpated small-pox from the common wards by prohibiting the admission of cases of it, which were not only a great danger to other patients, but to the numerous visitors who crowd the wards twice a week. The consequence of the various measures taken is that while during this second quarter there has been an increase of deaths from variola, there has been a notable diminution in the hospitals. Of 283 cases admitted into the temporary small-pox hospitals, only six were affected by the disease in the hospitals themselves.

4. *Measles.*—This disease has been both severe and frequent, and has proved especially fatal when contracted within the hospitals themselves. Of forty-four cases occurring in Dr. Labric's wards, thirteen contracted the disease in the hospital itself, and six of these died. Dr. Archambault states that of nine cases in his wards, in six the disease was taken in the hospital by children admitted for complaints of no great gravity, three of the number dying owing to this complication.

5. *Scarlatina.*—"As I have already pointed out several years since, this disease, which commits such cruel ravages on the other side of the Channel, does not find in our atmosphere, or in the conditions of our population, material suitable for its considerable development."

6. *Typhoid Fever.*—This, during this quarter, has attained the lowest point of its annual and regular curve, and has also descended below its mean level of the period of the year. There have been but 165 cases, with thirty-three deaths, or 20 per cent., during the quarter, while the mean number for the preceding seven years was 245 cases, with 50 deaths, or 20·4 per cent. Dr. Laveran, of the Val-de-Grâce, states that it has all but disappeared from the hospital during the quarter, the chief cause of death having been tuberculosis.

"Must we," he observes, "renounce the attempt to explain this regular balancing which we observe, especially in the army, between zymotic diseases and tuberculosis? Do we see in it the effect of an unknown force, an *antagonism* between certain diseases? On the contrary, I believe that the explanation is easy and simple. In November and December the arrival of the contingents gives rise to a considerable development of contagious diseases, for then there is overcrowding of the barracks and all kinds of contagions find among the young soldiers arriving from the country a soil very suitable for their development. Hence the epidemics of typhoid, small-pox, measles, mumps, etc. Gradually the morbid predispositions become exhausted, and the zymotic diseases disappear, and tuberculosis, which is of slower germination, then becomes predominant. Amongst a military population the arrival of recruits exerts a considerable influence on prevailing diseases, an influence which must not be confounded with that of the seasons."

Professor H. C. Wood on Sunstroke.

In the *Philadelphia Medical Times* for August 5, Prof. H. C. Wood contributes an article on "Sunstroke, or Thermal Fever," which is supplementary to and confirmatory of the views contained in an essay on the subject which he published some years since. He has had ample opportunity of studying the subject anew, being one of the physicians attached to the Centennial Exhibition at Philadelphia (where we are informed the thermometer stood in the shade in June at 100° Fahr.), besides being in attendance on other hospitals. Recent post-mortems and German researches have, he says, confirmed the observation first made by himself in 1863 concerning the characteristic hardening or contraction of the heart found after death from *coup de soleil*.

"The results of experiments show that the early coagulation of the cardiac myosin, to which the hardening of the heart is due, is dependent upon the high temperature. The 'cardiac spasm,' therefore, is not to be expected when the patient dies from the *after-results* of the heightened temperature, the excessive heat having been artificially removed from the body during life, whether by the use of external cold or by free venesection. Moreover, putrefactive changes occur so rapidly after death from thermic fever, that, unless the post-mortem is made very soon, the heart which has been contracted may be found relaxed. In these two factors, rather than in incorrect observation, probably exists the reason that the heart in the accounts of autopsies has so often been reported as relaxed."

In his monograph Prof. Wood showed that there are two distinct classes of cases, which have been confounded together. In the one the patient is collapsed, while in the other the temperature is excessive. In the present paper he refers to two recent typical cases of this opposite character. The first of these was one among several men working in excessively hot rooms at the Exhibition, who suddenly fell into a state of collapse. Brought to the hospital in twenty minutes, unconscious and in a state of muttering delirium, his skin was very wet, his pulse rapid and feeble, while his breath was strikingly cold,—the temperature in the mouth being 95¼° Fahr. In contrast with him was the other patient, who, with muttering delirium and rapid, feeble pulse, had a dry skin and a temperature in the mouth of 108°. In true sunstroke the direct action of the heat is the cause of the unconsciousness; and in this case the patient being placed in a bath of nearly equal parts of ice and water, with great hunks of ice placed around his head and neck, his consciousness returned *pari passu* with the reduction of his temperature. There is, however, a source of fallacy in relation to this action of heat, for in some cases the consciousness does not return although the temperature of the patient has been reduced. The immediate and the secondary effects of excessive heat have to be kept in view. It at once produces unconsciousness, but if its operation continues for long it causes changes in the nerve-centre which are sufficient of themselves to prevent consciousness, however much the temperature may be reduced.

Prof. Wood's experiments having shown him that every degree of fever may be produced by external heat, he was surprised that he was unable to find any accounts of mild cases of sunstroke. He afterwards found that these were distinctly recognised by the practitioners in India, who described cases in which there was only more or less fever, without loss of consciousness—cases which may terminate in health or in sudden *coup de soleil*. He has this year had ample opportunities of witnessing such cases, exhibited by headache, a feeling of wretchedness, a rapid pulse, and a temperature from 102° to 105°. Such patients were at once relieved by the cold bath. He believes that these cases are frequent during excessive heat, and that their true nature is overlooked. This is especially the case with children, many of the cases of cholera infantum, etc., with determination to the head, being really cases of thermic fever, curable by the cold bath.

With regard to treatment, all cases of collapse which have come under Dr. Wood's care have been at once relieved by the *hot* bath, combined with moderate doses of whisky and ammonia. Of especial use also is the hypodermic injection of from ten to fifteen minims of the tincture of digitalis in restoring the action of the heart. Friction with warm cloths dipped in tincture of capsicum, followed by dry heat and covering by blankets, may replace the hot bath, but it is not so efficacious. In thermic fever, success depends upon the early and efficient use of the ice-water bath, this being continued just long enough to reduce the temperature in the mouth or rectum to 100°, and no longer. The rising of this again seems greatly prevented by the hypodermic injection of sulphate of quinine after the bath.

"There is one further point to which I desire to call special attention. After the subsidence of the first symptoms, headache, slight elevation of temperature, general distress, and sometimes decided mental hebetude, come on. These I believe to be due to a low grade of meningeal or even cerebral inflammation. Certainly I have found them yield—in some cases very rapidly—to free blistering at the back of the neck and head, aided by repeated small doses of mercurials. In some cases a disordered condition of the abdominal viscera follows sunstroke: in this also small doses of mercury are of great service. One great cause of the excessive mortality from sunstroke in hospital practice is the length of time that elapses between the onset of the disease and the use of the bath. In the Philadelphia Hospital this has been in some measure remedied by supplying the ambulance with ice, and causing the patient to be stripped as soon as placed in it, and, under the superintendence of the physician, rubbed with ice."

The annual Exhibition of Sanitary, Domestic, and Educational Appliances and Apparatus held in connexion with the Social Science Congress will take place at the Drill-hall of the 1st Lancashire Rifle Volunteers, St. Anne-street, Liverpool, from October 11 to 21.

GENERAL CORRESPONDENCE.

THE RED CROSS SOCIETY.

Letter from Mr. C. F. Maunder.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the *Times* of Wednesday, Captain Nolan states that the symbol of this Society is not respected by the Turkish soldiers at the seat of war. With a view to protect our professional brethren, and others mercifully engaged there, from ignorance and fanaticism, I suggest that the Society should add the *crescent* to the existing badge during the present war. This double emblem would be respected by both sides.

I am, &c., C. F. Maunder,
Surgeon to the London Hospital, formerly Surgeon on the Staff of the Army in the Crimea.

16, Queen Anne-street, W., September 14.

SNUFF FOR CATARRH.

Letter from Dr. Richard Neale.

[To the Editor of the Medical Times and Gazette.]

Sir,—As the use of topical remedies to the Schneiderian membrane has been greatly revived since Dr. Ferrier's paper upon the subject, it may not be amiss to remind your readers of a very simple and pleasant snuff, many years since recommended by Dr. Brown-Séquard—viz., finely powdered white sugar. This application is efficacious, not only in ordinary catarrh, but in that unpleasant form produced by overdose of iodide of potassium. I am, &c.,

Richard Neale, M.D. Lond.

60, Boundary-road, St. John's-wood, N.W., Sept. 18.

OBITUARY.

HENRY JAMES SIBTHORPE, M.D. Glasg., etc.

The death of this respected member of the profession occurred suddenly on Wednesday, September 6, at his residence, 18, Hume-street, Dublin. Even on the morning of the day on which he died, Dr. Sibthorpe was engaged in the out-of-door practice of his profession, and, although he had not been quite well for a few days, nothing serious was anticipated. About half-past twelve he sat down in his study arm-chair, gave a few sighing gasps, and was gone. He had almost completed his seventy-second year. Educated at Trinity College, Dublin, Sir Patrick Dun's and the Meath Hospitals, Dr. Sibthorpe obtained the Licence of the Apothecaries' Hall, Dublin, in 1828. Three years later he became a member of the English College of Surgeons, and in 1832 graduated as M.D. of Glasgow University. It was not until 1860 that he joined the King and Queen's College of Physicians as Licentiate and Licentiate in Midwifery. Having served as Assistant-Physician to the Rotunda Lying-in Hospital, Dr. Sibthorpe devoted his attention largely to obstetric practice, and in 1872 the Dublin Obstetrical Society elected him one of their Vice-Presidents. Gentle and unobtrusive in his manners, a kind physician, and a faithful friend, he died as he had lived—a zealous Christian gentleman.

Vaccination Grant.—Mr. J. Prior Purvis, public vaccinator for Greenwich, has received a grant (the third) of £49 13s. from the Local Government Board for efficient vaccination.

Caustic Properties of Bromide of Potassium.—Dr. Perrant, of Libourne, had his attention drawn to the caustic properties of the powder or a concentrated solution of bromide of potassium by observing the effects produced on the skin of animals by the subcutaneous injection of a concentrated solution. He has since availed himself of this property by repeatedly applying it for the destruction of certain ulcerated tumours of the jaws, no pain being caused except at the points of implantation. He also employs chloral, mixed in the form of a soft paste by means of tragacanth gum, as a vesicatory. This acts in twelve or fourteen hours, the ampullæ not being completely formed until some hours after the vesicatory has been removed.—*Gaz. Hebd.*, September 8.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 7:—

Chavasse, Thomas Frederick, Birmingham.
Wagstaff, John Philip, Marlborough-road, Dalston.

The following gentleman also on the same day passed his primary professional examination:—

Taylor, Frank, Bristol Medical School.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BURKE, WILLIAM MALACHI, F.K.Q.C.P.I.—Registrar-General of Births, Marriages, and Deaths, *vice* William Donnelly, C.B., resigned.

DYSON, WILLIAM, B.A. Lond, M.D., M.R.C.S. Eng.—Lecturer on Physiology in conjunction with Dr. O'Keefe, at the School of Medicine, Sheffield, *vice* Mr. S. Morton, resigned.

FAIRBANK, F. ROYSTON, M.D. Heidelberg, M.R.C.P. Edin., etc.—Surgeon to Doncaster General Infirmary, *vice* Fras. Carbutt Fairbank, M.R.C.S. deceased.

FAIDEAUX, ENGLEDUE, L.S.A.—Resident Medical Officer to the Small-pox Hospital, Derby.

UPTON, ALFRED, M.R.C.S., L.S.A.—Resident Medical Officer to the Brighton and Hove Dispensary.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon Gordon Jackson has been promoted to be Fleet-Surgeon in her Majesty's Fleet, with seniority of August 24, 1876.

INDIA OFFICE.—Her Majesty has been pleased to approve the following admissions to Her Majesty's Indian Medical Service:—Bengal: To be Surgeons—Arthur Tomoe, Edward Bishop Meredith, William Arthur Mawson, George Hamilton Peevor, Sorabshaw Hormasji Dantra, Donald John Macdonald, Henry Hamilton, M.D., Nicholas John Halpin, Bernard Doyle, Robert Cobb, Augustus Edward Richard Stephens, William Hotson Cadge. Madras: To be Surgeons—John Maitland, George Lemon Walker, M.D., Joseph Hunter, Charles Lethbridge Swaine, Maurice Henry Smith, Peter Joseph Farrell. Bombay: To be Surgeons—John MacGregor, Alexander Kenneth Stewart, William George Hume Henderson, Kharshedji Ardeshir Dalal, Henry Walker Butler Boyd. Under instructions from Simla, Surgeon-Major C. Graves Irwin, in Medical Charge of Station, Staff Lock Hospital Garrison Class, District Military Prison, and Senior Medical Officer, Sialkot, has arrived at Meean Meer, to assume the duties of Officiating Deputy Surgeon-General, British Forces, *vice* Surgeon-Major J. Gibbons, appointed Administrative Medical Officer at Rangoon.

BIRTHS.

BERRY.—On September 6, at Bracondale House, Wimbledon hill, the wife of O. W. Berry, M.R.C.S. Eng., of a son.

BURN.—On September 16, at 67, East India-road, the wife of W. Barnett Burn, M.D. Lond., of a son.

COLLINS.—On August 26, at 12, Osborne-villas, Windsor, the wife of W. Maunsell Collins, M.D., Scots Fusilier Guards, of a daughter.

DARWIN.—On September 7, at Down, Beckenham, the wife of Francis Darwin, M.A., M.B. Cantab., of a son.

DODGSON.—On September 5, at Derwent House, Cockermouth, Cumberland, the wife of Henry Dodgson, M.D., of a son.

DYER.—On September 16, at Ringwood, Hants, the wife of Henry Geary Dyer, L.R.C.P., etc., of a son.

GAIRDNER.—On September 15, at Ardrossan, Ayrshire, the wife of Professor Gairdner, M.D., of Glasgow, of a daughter.

MARTIN.—On September 16, at Abingdon, Berks, the wife of Paulin Martin, M.R.C.S., of a daughter.

NORTON.—On September 8, at 86, Gower-street, Bedford-square, the wife of Selby Norton, M.D., of a daughter.

PICARD.—On September 9, at 59, Abbey-road, St. John's-wood, N.W., the wife of P. Kirkpatrick Picard, M.D., of a daughter.

RHODES.—On September 4, at 2, Royal-terrace, Weymouth, the wife of Charles Rhodes, M.D., of a daughter.

ROWLAND.—On September 7, at Malvern Wells, the wife of H. Mortimer Rowland, M.D., of a daughter.

RUGG.—On September 17, at Grove-road, St. John's-wood, the wife of Harold Rugg, M.R.C.S., L.R.C.P., of a son.

SMITH.—On September 20, at Bella Vista, Lewisham-hill, S.E., the wife of Frederick H. Smith, M.D., of a son.

STEELE.—On September 13, at the Superintendent's House, Guy's Hospital, the wife of John Chas. Steele, M.D., etc., of a son.

MARRIAGES.

BLACK—MACGREGOR.—On September 6, at St. Luke's, Redcliffe-square, Arthur Black, M.A. Oxon., eldest son of Patrick Black, M.D., to Florence Caroline, youngest daughter of the late James MacGregor, Esq., some time M.P. for Sandwich.

CHAMPNEYS—DALRYMPLE.—On September 12, at the British Embassy, Paris, Francis Henry Champneys, M.A., M.B., L.R.C.P., of 11, Wyndham-place, Bryanston-square, to Virginia Julian, only daughter of John Warrender Dalrymple, Esq., late Bengal Civil Service.

COLLINGWOOD—GREEN.—On August 28, at Bromley, Kent, W., Percy Collingwood, M.R.C.S.E., to Catherine Maria Green.

DODD—ANDERSON.—On August 19, at the Cathedral, Bombay, Charles A. Dodd, Captain Bengal Staff Corps, to Margaretta, daughter of Arthur Anderson, M.D., C.B., late Inspector-General of H.M.'s Hospitals.

DORRINGTON—BARTON.—On September 14, at St. Leonard's-on-Sea, James Thomas, eldest son of the late James Dorrington, Esq., of Didsbury, to Mary Ellen, second daughter of the late Joseph Barton, M.D., of Charleston.

HARDWIDGE—RIGGALL.—On September 12, at St. Stephen's Church, Westbourne-park, Robert, son of the late Robert Hardwidge, of Burnham, Somerset, to Emily Florence, only child of Edward Riggall, M.R.C.S., of Bayswater.

HARE—PALMER.—On August 15, at Pembroke Church, Bermuda, George Hare, L.R.C.P. Edin., Surgeon Army Medical Department, to Lavinia, daughter of the late William Palmer, Esq., of 14, America-square, City, and Park-place, Highbury.

HART-DAVIES—HILL.—On September 7, at St. Luke's Church, South Kensington, Daniel, son of the late Venerable T. Hart-Davies, of Christ Church, Ramsgate, to Mary Helen, daughter of Robert Gardiner Hill, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., of Earl's Court House, Old Brompton.

HENDERSON—GORDON.—On September 12, at St. Peter's Church, Dublin, William George Hume Henderson, Surgeon in the Bombay Army, to Jane Sidney Louise, daughter of Samuel Gordon, M.B., President of the College of Physicians, 13, Hume-street.

HOLMES—JOY.—On September 7, at All Saints' Church, Maidstone, Frederick Herbert Holmes, of Steyning, Sussex, to Florence, youngest daughter of Henry W. Joy, J.P., F.R.C.S., of Bower-terrace, Maidstone.

LAYCOCK—PENARD.—On September 14, at the English Church, Versailles, the Rev. J. M. Laycock, B.A., Assistant-Chaplain, of Paris, to Louise Ellen, daughter of L. Penard, M.D.

MALAN—BROCK.—On September 6, at Christ Church, Doncaster, Henry Noel de Mérindol, son of H. V. Malan, M.D., to Mary Louisa, eldest daughter of the Rev. H. F. Brock, Vicar of Christ Church and Canon of York.

MCCLEVERTY—MASSY.—On August 16, at St. Mark's Church, Bangalore, James McCleverty, Captain 45th Regiment, youngest son of General McCleverty, Colonel 48th Regiment, to Elise Charlotte, daughter of H. H. Massy, C.B., Surgeon-General British Army, M.B. Dub., L.R.C.S.I., and L.M.

QUINTON—MILLS.—On September 14, at the parish church, Harrow-on-the-Hill, William West Quinton, M.B., L.R.C.S.I., Surgeon-Major, to Virginie Lucy, eldest daughter of Major-General Henry Mills.

RAISIN—BUSS.—On September 13, at the parish church, Hammersmith, Walter Felix, youngest son of D. F. Raisin, of Camden Town, to Kate Aubrey, youngest daughter of the late William Buss, M.D., of Turnham-green.

SCOBIE—SULLIVAN.—On August 24, at St. Paul's Church, Toronto, Nicf F. M. Scobie, Captain the Highland Rifle Militia, to Louisa Phœbe, daughter of the late Henry Sullivan, F.R.C.S.L, of Toronto.

STEWART—SMYLY.—On September 7, at St. Stephen's Church, Dublin, the Rev. Robert Warren Stewart, M.A., missionary to China, son of James R. Stewart, Esq., of Gortleitragh, Monkstown, to Louisa Katherine, daughter of the late Josiah Smyly, M.D., of Merrion-square, Dublin.

ST. JOHN—WILSON.—On September 12, at the Priory Church, Great Malvern, Aubrey Beauclerc Lennox St. John, third son of the late Major Frederick Berkeley St. John, 52nd Regiment, to Clara Constance, only daughter of the late James Wilson, M.D., of Great Malvern.

WEBB—EVERETT.—On September 12, at St. Nicholas, Worcester, Aston Webb, of 26, St. Charles-square, Notting-hill, to Marian, younger daughter of D. Everett, F.R.C.S., of Foregate-street, Worcester.

WOODLAND—LUND.—On September 15, at St. George's, Hanover-square, Clement C. Woodland, late Royal Navy, to Frances, elder daughter of Edward Lund, F.R.C.S., Professor of Surgery, Owens College, Manchester.

DEATHS.

BOYD, JOHN STUART, L.R.C.P. Edin., Surgeon in the Immigration Medical Service, at Georgetown, Demerara, British Guiana, on July 31, aged 31.

DARWIN, AMY RICHENDA, wife of Francis Darwin, M.A., M.B. Cantab., at Down, Beckenham, on September 11.

ECCLES, CHARLES WILLIAM, M.R.C.S., of Knackeraknowle, near Plymouth, on September 11, aged 31.

ELDIS, EMILY ARABELLA BROWNE, widow of C. J. B. Aldis, M.A., M.D., Trin. Coll. Camb., F.R.C.P. Lond., at Weston Lodge, Isleworth, on August 30.

FASSI, Mrs. G., eldest daughter of the late Augustus Cooke, M.D., of Denmark-hill, at 70, Kellett-road, Brixton, on September 9.

GRIBBON, ETHEL MAY, daughter of Surgeon-Major G. C. Gribbon, M.B. Dub., L.R.C.S.I., at Naini Tal, India, on August 18, aged 3 years and 3 months.

HEMBROUGH, JOHN, M.D., F.R.C.S., at his residence, Louth, on September 16, aged 69.

HUSBAND, MARY ANNA, eldest daughter of the late William Husband, M.D., of York, at Clifton-green, York, on September 11.

JONES, CHARLOTTE ELIZA, widow of George John Jones, M.R.C.S.E., late of Prittlewell, Essex, at 406, Clapham-road, S.W., on September 10.

MACKAY, CHARLOTTE JULIA, wife of George Mackay, M.D., R.N., at Sutherland House, Wellington, Somerset, on September 2.

McClure, James Campbell, infant son of Thomas McClure, M.D., of Worle, Weston-super-Mare, on September 8, aged nearly 6 months.

Moore, Louise Henrietta Penaose, infant daughter of George Moore, M.D., Fleet-Surgeon Royal Navy, at the Royal Dockyard, Pembroke, on September 2, aged 10 months.

Norton, Robert, M.D., etc., late Chairman, and for many years of the Court of Examiners of the Society of Apothecaries, at 42, Hereford-road, Westbourne-grove, on September 20, aged 74.

Sibson, Francis, M.D., F.R.S., of 59, Brook-street, very suddenly, at Geneva, on September 7, aged 61.

Young, Adam, L.R.C.P., L.R.C.S. Edin., of Boston, Lincolnshire, at St. Leonard's, on September 4, aged 73.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Clayton Hospital and Wakefield General Dispensary.—House-Surgeon. Candidates must be registered in medicine and surgery under the Medical Act. Applications, with testimonials, to John Banks, Hon. Secretary, Wakefield, on or before September 30.

General Infirmary at Hull.—House-Surgeon. Candidates must be Members or Licentiates of the College of Surgeons of England, Edinburgh, or Dublin. They must be qualified as general practitioners, registered, and unmarried. Testimonials to the Secretary of the Hull General Infirmary, on or before October 1.

Kent County Lunatic Asylum, at Chartham, near Canterbury.—Assistant Medical Officer and Dispenser. Candidates must be duly registered and possess a medical and surgical qualification. Applications, with testimonials, to the Committee of Visitors, on or before September 26.

Liverpool Dispensaries.—Two Resident Assistant House-Surgeons. Candidates must be unmarried and duly qualified. Applications, testimonials, and registration papers to William Lister, Secretary, 34, Moorfields, Liverpool, on or before September 27.

Sunderland and Bishopwearmouth Infirmary and Dispensary.—Junior House-Surgeon. Candidates must be doubly qualified. Testimonials to the Secretary of the Medical Board, the Infirmary, Sunderland, on or before October 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

VACANCY.

Helston Union.—The Fourth District is vacant; area 15,584; population 9876; salary £55 per annum.

APPOINTMENTS.

Banbury Union.—Thomas Hill, M.R.C.S. Eng., L.S.A., to the Middleton Cheney District.

Daventry Union.—Samuel L. Popham, B.M. & M.C. Dub., to the Second District.

Dover Union.—Richard S. Davey, L.S.A., M.R.C.S. Eng., M.D. St. And., to the Second Division of the St. James District.

East Ashford Union.—Charles S. A. Atkinson, M.R.C.S. Eng., L.S.A., to the Fifth District.

Eastbourne Union.—Hugh Wallis, L.R.C.S. and L.R.C.P. Edin., to the Fourth District.

Huddersfield Union.—John E. Richards, L.R.C.P. Edin., L.R.C.S. Edin., to the Woodhouse District.

Llandilofawr Union.—Wm. L. Jones, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Western District.

Melton Mowbray Union.—Charles G. Leacock, L.R.C.P. Lond., M.R.C.S. Eng., to the Wymondham District.

New Forest Union.—Robert W. Jenkins, M.R.C.S. Eng., L.S.A., to the Third District.

Patrington Union.—Wm. Kirk, M.R.C.S. Eng., L.S.A., for part of the West District.

Rotherham Union.—Charles Gowan, M.D. & C.M. Univ. Edin., L.R.C.S. Edin., to the Laughton District.

Sculcoates Union.—Wm. Kirk, M.R.C.S. Eng., L.S.A., to the Hedon District.

South Metropolitan School District.—Thomas Godfrey, M.R.C.S. Eng., L.S.A., to the School at Herne Bay.

Whitechapel Union.—James J. Hott, L.S.A., M.R.C.S. Eng., L.R.C.P. Edin., to the South Grove Workhouse.

The Medical Officer of Health has reported to the Truro Town Council that scarlet fever has appeared in different parts of the town, and urges the adoption of precautionary measures to prevent the spread of the disease.

Royal College of Surgeons.—The half-yearly preliminary examination, in Arts, etc., for the diplomas of Fellowship and Membership of the College, which had been going on at Burlington House, was brought to a close last week, when 321 candidates had been examined—viz., 100 for the Fellowship, and 221 for the Membership. Owing to the great number of papers to be read, the result cannot be known for some weeks, but will be in time for those about to commence their professional studies.

The Library of the Royal Medical and Chirurgical Society was reopened on Thursday, the 14th inst.

Sichel's Ophthalmological Library.—The ophthalmological library of the late Dr. Sichel, of Paris, which comprises about 1000 works, is without all question the most complete assemblage of ophthalmological publications that exists at the present time. On account of the completeness of this really valuable library it is highly desirable that it should be purchased as a whole, and offers to this end may be addressed to Dr. Arthur Sichel, Rue Neuve des Mathurins 86, Paris.—*Deutsche Woch.*, August 26.

Phenicated Camphor.—Under this title Dr. Saulez describes (*Bull. de Thérap.*, August 30) a combination of carbolic acid and camphor, which exerts a remarkable influence on wounds of an unhealthy character, as proved by him in the Romarantin Hospital. The acid will take up a large quantity of camphor, but Dr. Saulez ordinarily employs a solution of two grammes and a half of the powder in one of the acid (nine grammes to one of alcohol), which produces a pale yellow oleaginous liquid, in which the disagreeable odour of the acid is no longer to be recognised. It is not miscible with water or glycerine, and in employing it we have first to emulsify it by the addition of a twentieth part of the phenicated camphor either to olive oil or infusion of saponaria.

The New Medical Faculty at Lille.—The Faculty of Medicine and Pharmacy at Lille is announced as having been constituted with twenty professional chairs. To nine of these the Minister of Public Instruction has nominated the professors (chiefly clinical and surgical) of the former Ecole Préparatoire de Médécine of Lille, only one additional Professor (of Pathological Anatomy and Elementary Normal Histology), in the person of M. Coyne, Assistant-Director of the Laboratory of Pathological Anatomy of La Charité, Paris, having as yet been appointed.—*Gazette Heb.*, September 8. [It will probably be found far easier to found "chairs" in the new Catholic faculties than to obtain suitable occupants.]

Cancer of the Lips in Auvergne.—At the recent Congress at Clermont-Ferrand, Dr. Fleury, of that place, read a paper on the great prevalence of cancer of the lips in Auvergne, the facts being derived from a statistical account running over more than thirty years. The lesion is especially met with among the mountaineers, much less frequently occurs among the inhabitants of the plain, and is very rare among workmen in the towns. Abuse of tobacco-smoking cannot be adduced as the cause, as the mountaineers do not smoke; while the workmen in the towns, who are almost exempt from the affection, are all smokers. On this account Dr. Fleury, in 1856, entered his protest against the conclusions of Prof. Bouisson's work, which attributed cancer of the lips to smoking, designating it *cancer des fumeurs*. He believes that it approaches in its etiology chimney-sweepers' cancer, the want of cleanliness of sweeps and the mountaineers being the common cause of epithelial cancer in both. He agrees with Prof. Bouisson as to the less frequency of this cancer in women, and its localisation in them in the lower lip. He believes that, with improved hygiene and a greater attention to personal cleanliness, this disease, which annually sacrifices so many victims, will greatly diminish in frequency if not disappear.—*Gaz. Hebd.*, September 8.

Mortality of Slaves in Ancient Rome.—In the course of excavations that are being made near the Porta Maggiore in Rome there has been discovered a *columbrarium* containing the funeral urns of the slaves and freedmen belonging to the great family Statilia, which flourished during the latter years of the Republic and the early ones of the Empire. The *columbraria* were so-called from the urns placed in their niches having some resemblance to the nests of a dovecot. Signor Bixio, the Inspector of Antiquities and Director of Excavations, has found in this *columbrarium* several inscriptions indicating the ages of the deceased. They are, however, rare, as out of 400 such inscriptions only seventy-five indicate the ages, fifty-five being the urns of men, and twenty those of women. Signor Bixio found that forty-five of these slaves or freedmen had not attained the age of forty, nine only reaching that age, and one attaining that of sixty. Of the women, fifteen had died under thirty, two exceeded that age, and three had exceeded forty. This early mortality of the slaves of a rich family is remarkable, and we can only conjecture that it may have been due to the physical and moral suffering, bad diet, and the excess of work and libertinage to which the slaves at this epoch were exposed.—*Société de Statistique.*

REPORT OF THE COLLEGE OF SURGEONS.—From the last annual report of this institution it appears that the receipts were £19,896 17s. 11d., and the expenditure to £20,776 9s. 8d., but this sum included what is considered a very judicious investment in the purchase of the freehold house adjoining the College for the sum of £6450; so that at present the College possesses the following valuable freeholds in Lincoln's-inn-fields, viz.:—Nos. 37 to 43 inclusive. The list of Fellows from whose ranks elections into the Council are made now numbers 1261—viz., 499 who have obtained that distinction by examination, and 762 honorary and elected Fellows. The fees received from the former on their examination amounted to £446 10s., from the latter on their election only £136 10s.; in fact, the number of those members eligible for election is now greatly reduced. The investments in the freehold property adjoining the College appear to have been made with considerable judgment, as already stated, inasmuch as the rent derived from letting in chambers amounted to £1210 3s. 9d. In the trust-funds it is satisfactory to see the gradual increase, although small, in the value of the Jacksonian Prize, which, from £10 for so many years past—in fact, from the establishment of the prize by the late Mr. Samuel Jackson, to a few years ago—is now increased to £11 7s. 11d., for which we believe the profession is indebted to a late astute member of the Council, who resigned his seat as such much too soon for the College and its members: we allude to Mr. Charles Hawkins, who proposed that the interest of the fund should be added to the principal, instead of merging into the funds of the College when no competitors appeared for the prize; or when, the essays not possessing sufficient merit, no award had been made.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Anderson, Singapore.—Your P.O.O. has been received.

Dr. A. Florance, N.Z.—Your letters, with enclosures, have been received.

F. E. Gabb, Belize.—Your letter, with enclosure, has been received.

M.D., Clapham.—Mr. Francis Mason, F.R.C.S., will deliver the "Introductory" at St. Thomas's Hospital.

J. B., King's College.—Sir William Fergusson is the senior baronet, having been created in 1866; he was born in 1808. Sir James Paget, who was born in 1814, was created a baronet in 1871. Both their heirs were educated at Oxford.

F.R.C.S., Cambridge.—On inquiry, we find that the Calendar of the Royal College of Surgeons will be published about the end of the month, and will contain the information about which you inquire. Write to Mr. Stone, enclosing 1s. 10½d. in stamps, for a copy. Sir James Paget will deliver the Hunterian Oration.

H. S. Sutton.—The late Professor Pittard left several children. His widow resides at Guernsey. His eldest son, who has passed the preliminary examination for the fellowship of the Royal College of Surgeons, has just commenced his professional studies at the Charing-cross Hospital.

Abolitionist.—Previously to the invention of hats, both men and women generally wore close-knit woollen caps. The man's hat was invented at Paris by a Swiss, 1404; first worn in England in Henry VII.'s time; and first manufactured in London, 1510.

Psychologist, Devonport.—In his "Lives of the Queens of England," Dr. Doran says that "George III. was now in the condition once noticed by the celebrated John Hunter in himself—'My mind,' said he, 'is still inclined to odd thoughts, and I am tempted to talk foolishly, but I can govern myself.'"

A QUERY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—During the past week I have been trying to find the London agent of the Medical Aid Committee at Le Vallon, in Ceylon, but without success. Can you help me by telling me whether I can apply to anyone in England concerning the vacancies in Ceylon? A reply by return would very greatly oblige, as I shall be in London on Tuesday. I am, &c.,

Church House, Aveley, Romford, September 10. C. GLEN BOTT.

THE INTRODUCTORY LECTURES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The winter session of our medical schools is now rapidly approaching, when the usual introductory lectures will be delivered at most of them. As we are all aware, the "introductories" are not generally popular; they have partaken much too largely of a scholastic character. Would not the evidently declining interest in these annual addresses be revived if an "old student" of the hospital were occasionally invited to undertake this duty, in the place of a member of the medical or surgical staff, as is now customary? I am, &c., J. FRENCH BLAKE.

36, Queen's-square, W.C., September 11.

Ralph R.—"The second causes took the swift command,
The *medicinal* head, the ready hand,
All but eternal doom was conquered by their art."—*Dryden.*

A Metropolitan Teacher.—Yes; the annual registration of students will take place again this year at the Royal College of Surgeons. You are not the only teacher failing to see the utility of it. It will commence on Monday, the 2nd prox. The second registration, in March, at the close of the session, will not please the students, as it is now to be limited to the last week in that month.

M.D. and Indignans.—Mr. E. G. C. Snell, *surgeon-accoucheur*, who attends daily at the Victoria Dispensary, where his patients receive his valuable advice, with necessary medicines, for the sum of one shilling per week each, is *not* a Member of the Royal College of Surgeons nor one of its Licentiates in Midwifery.

Amicus.—The date of the introduction of vaccination into China is 1850. In the spring of that year, Mr. Hewet, a subject of Portugal and merchant of Macao, making a voyage from Manilla to that place, brought with him on board his own vessel several persons inoculated with the cow-pox by the medical man under whose care the vaccine matter had been carried from the Spanish colonies in South America to Philippine Islands.

A Tutor, An Anxious Candidate, and E.S.S.D., etc.—You are all too impatient to know the result of the recent Arts examination for the diplomas of Fellow and Member of the College. The examination of about 350 candidates has very recently been brought to a close, and now the authorities at the College of Preceptors are busily engaged in reading the many hundreds of papers on all subjects. We have ascertained from Mr. Stone that the result will be known in time to have your professional studies registered at the College next month.

P. P.—1. January 7, 1837. 2. Both Dr. Parrish and Dr. Dodge, the two medical witnesses from America, in their evidence before the late Dr. Dalrymple's Committee, asserted that the prohibitive laws of the various States were not enforced, but evaded in a hundred ways, and it was always a question with Dr. Parrish whether "the demoralisation of society in creating a sense of disrespect to the law, and all sorts of manœuvres to escape it, was not as great an evil as the drinking of liquor." On a large number of estates in England and Scotland the drink traffic has been altogether suppressed with the best social results. The late Lord Palmerston suppressed the beer-shops at Romsey as fast as the leases fell in.

Medico.—A remarkable instance of that conjecture by which the skill of Dr. Baillie was distinguished is the following:—After other physicians had severally given their opinions on the nature of Mr. Horner's hidden complaints, Dr. Baillie at once decided against all those theories; but when he came to propose his own, avowed the extreme uncertainty in which so obscure and difficult a case had left him. However, he said that he *guessed* it was one or the other of two maladies so rare that he had only seen a case or two of the one, and the other never but in a museum of morbid anatomy. When the body was opened by Vacca, at Pisa, where he died, it was found that both those rare diseases existed.

Wallace C., Shropshire.—The use of goats as wet-nurses is thus spoken of in "Montaigne's Essays," Cotton's Translation, 1711:—"It is ordinary, all about where I live, to see the country-women, when they want suck of their own, to call goats to their assistance. And I have, at this hour two footmen that never sucked woman's milk more than eight days after they were born. These goats are immediately taught to come to suckle the little children, well knowing their voices when they cry, and come running to them; when, if any other than that they are acquainted with be presented to them, they refuse to let it suck; and the child, to any other goat, will do the same. I saw one the other day, from whom they had taken away the goat that used to nourish it (by reason the father had only borrowed it of a neighbour), that would not touch any other they could bring, and doubtless died of hunger."

CHOOSING A PHYSICIAN.

"To choose a physician," says Lady Mountcashel on Physical Education, "one should be half a physician one's self; but as this is not the case with many, the best plan which a mother of a family can adopt is to select a man whose education has been suitable to his profession, whose habits of life are such as prove that he continues to acquire both practical and theoretical knowledge, who is neither a bigot in old opinions, nor an enthusiast in new; and for many reasons, not the fashionable doctor of the day. A little attention in making the necessary inquiries will suffice to ascertain the requisites here specified; to which should be added what are usually found in medical men of real worth—those qualities which may serve to render him an agreeable companion; for the family physician should always be the family friend."

CHOLERA AND TYPHOID FEVER IN INDIA.

According to recent advices, in one part of the line of the Northern State Railway, in Bengal, 150 persons died of cholera in one day. The disease prevails in the Terai, below Darjeeling, and it is feared it may reach that sanitarium. In Kashmere, from April 22 to April 28, 157 cases occurred, of which 73 were fatal. At Toomcoor, near Bangalore, there have been 280 seizures, and 128 deaths. In some parts of Southern India the disease continues with relentless severity. It is very severe in the district of Kristoagberry, and in the last week of April nearly 270 deaths occurred in the Oosoor district. Typhoid fever is prevalent among the European residents in the cantonment Bangalore, and some deaths are reported.

COMMUNICATIONS have been received from—

Mr. Peavis, Greenwich; Mr. Babaclough, New Wandsworth; Dr. Robert Lawson, Wakefield; Mr. Godlee, London; British Dynamite Company; Mr. Wylde, Charing-cross; Mr. C. G. Bott, Romford; Dr. Milroy, Richmond; Mr. J. Bowes, London; Mr. M. Becher, Ramsgate; Dr. J. W. Moore, Dublin; Dr. A. Florance, Canterbury, N.Z.; Mr. J. F. Blake, London; Mr. C. Candlea, Melbourne; Dr. Lucas-Championnière, Paris; Mr. J. H. Courtenay, Hanover, Jamaica; Inspector-General Smart, Haslar Hospital; Dr. Druitt, London; Mr. Vincent Harris, London; Mr. Collingwoath, Manchester; Mr. G. Brown, London; Mr. J. Chatto, London; Dr. Skeaaitt, Bristol; Mr. Macnoar, London; Dr. Neale, London; Mr. J. Pearson Irvine, London; Dr. Ranke; Mr. Tegg, London; Dr. Jacob, Leeds; Dr. Barr, Liverpool; Dr. Glasier, King's Lynn; Messrs. Grindlay and Co., London; Dr. Stephen Alford, London; Dr. Greenfield, London, Mr. Wilkinson, London.

BOOKS AND PAMPHLETS RECEIVED—

Le Docteur Louis Grósz, Loi sur l'Organisation des Affaires de l'Hygiène Publique—A. Ferrand, De l'Empoisonnement par les Phénols—Dr. Robert J. Lee, M.A. Cantab., Hooping-Cough: Remarks on its History, Prevalence, Symptoms, and Treatment—Professor Pietro Blaserna, The Theory of Sound in its relation to Music—Alfred Hill, M.D., Report on the Health of the Borough of Birmingham for the Year 1875—William Tegg, The Last Act; being the Funeral Rites of Nations and Individuals—Christopher Heath, F.R.C.S., A Course of Operative Surgery, part 3—T. Orme Dudfield, M.D., Special Report on the Alleged Chronic Prevalence of Typhoid Fever in South Kensington—Dr. J. Chauvel, Précis d'Opérations de Chirurgie—Surgeon-Major W. J. Moore, Brow-Ague or Brow-Ache—Saint Matthew, Bethnal-green, Annual Report by George Paddock Bate, M.D.—Charles Bell Taylor, M.D., Clinical Lecture on a Case of Cataract Extraction—Ephraim Cutter, A.M., M.D., A Contribution to the Treatment of Uterine Versions and Flexions.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Richmond and Louisville Medical Journal—Chemist and Druggist, September—Buxton Advertiser—Boston Journal of Chemistry—New York Medical Journal, September—Chicago Medical Journal and Examiner—Dairyman—Canada Lancet.

APPOINTMENTS FOR THE WEEK.

September 23. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

25. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

27. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

28. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

29. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 16, 1876.

BIRTHS.

Births of Boys, 1211; Girls, 1185; Total, 2396.
Average of 10 corresponding years 1866-75, 2126·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	593	526	1119
Average of the ten years 1866-75	665·7	635·2	1300·9
Average corrected to increased population ...	...	...	1392
Deaths of people aged 80 and upwards ...	...	...	37

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	5	2	1	...	2	...	7
North	751729	8	2	13	3	6	...	6	...	11
Central ...	331369	...	1	5	1	...	...	1	1	2
East	639111	2	...	12	...	3	...	2	...	15
South	967692	6	5	15	...	7	4	5	...	18
Total	3254260	16	8	50	6	17	4	16	1	53

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·603 in.
Mean temperature	51·5°
Highest point of thermometer	66·0°
Lowest point of thermometer	41·6°
Mean dew-point temperature	45·9°
General direction of wind	W. & N.W.
Whole amount of rain in the week	0·18 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 16, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Sept. 16.	Deaths Registered during the week ending Sept. 16.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2396	1119	66·0	41·6	51·5	10·84	0·18	0·46
Brighton	100632	42·7	50	31	63·8	45·6	52·3	11·28	0·40	1·02
Portsmouth ...	124867	27·8	72	62	61·0	47·0	52·9	11·61	0·20	0·51
Norwich	83430	11·2	44	28	62·5	43·0	50·5	10·28	0·85	2·16
Plymouth	72230	51·8	36	18	...	...	...	...	...	...
Bristol	193539	44·8	143	80	63·4	45·5	52·9	11·61	0·64	1·63
Wolverhampton ...	72549	21·4	44	30	63·4	42·9	50·4	10·22	0·30	0·76
Birmingham ...	371839	44·3	281	141	65·0	43·0	51·4	10·78	0·07	0·18
Leicester	113581	35·5	89	41	...	...	...	...	...	...
Nottingham ...	93627	46·9	50	32	65·4	36·0	50·1	10·06	0·13	0·33
Liverpool	521544	100·1	375	210	61·3	46·0	51·3	10·73	0·76	1·93
Manchester ...	357917	83·4	238	165	62·0	40·0	51·6	10·90	0·36	0·91
Salford	138425	26·8	110	70	62·1	38·9	50·1	10·06	0·37	0·94
Oldham	88609	19·0	70	37	62·0	45·0	52·4	11·33	0·25	0·63
Bradford	173723	24·1	114	57	61·6	44·2	51·3	10·73	0·22	0·56
Leeds	291630	13·5	205	123	63·0	44·0	52·7	11·50	0·18	0·46
Sheffield	274914	14·0	201	104	63·0	40·2	51·0	10·56	0·24	0·61
Hull	136933	37·7	103	57	62·0	44·0	51·6	10·90	0·50	1·27
Sunderland ...	108343	32·8	73	36	65·0	43·0	51·0	10·56	0·45	1·14
Newcastle-on-Tyne	139929	26·1	102	61	...	...	...	...	...	...
Edinburgh	215146	51·3	149	75	...	...	...	...	...	...
Glasgow	545141	90·4	382	222	...	...	...	...	...	...
Dublin	314666	31·3	159	137	63·1	33·3	50·9	10·50	0·61	1·55
Total of 23 Towns in United Kingdom	8028595	37·7	5498	2944	66·0	33·3	51·4	10·78	0·37	0·94

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·60 in. The highest reading was 29·72 in. at noon on Tuesday, and the lowest 29·45 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture X.

DEATH BY DROWNING.

Resuming the subject commenced at last lecture, I now come to notice—

2. The *appearances in the interior* of the body after death by drowning.

(*a.*) Much reliance is properly placed on the finding of *a light watery froth*, either at *the lips* and *nostrils*, or in *the mouth, throat*, and *air-passages simultaneously*, or in *only one or more of these situations* in the same case, as indicative of death by drowning. The presence of this *froth about the lips and nostrils* is only to be encountered after this mode of death when the body is seen early. In seventy-five instances in which I have noted its presence, the period after death averaged twenty-two hours, and ranged from nineteen or twenty minutes to four days. At later periods it was found to have disappeared. In forty of the cases the froth appeared at the lips, and in thirty-five of them at the nostrils.

Contrary to what is generally believed, the froth appears sooner in *winter* than in the *summer*. In winter, however, as might be anticipated, it is slower of disappearing than in summer.

Two explanations have been offered to account for this appearance in the drowned—(1st) that the quantity of froth in summer is so abundant as to fill completely the air-passages and the mouth, and thus to be propelled outwards at the lips and nostrils; (2nd) that the froth originally present in the air-passages and the mouth is pushed forwards from the latter by the gases formed in the air-cells of the lungs and the bronchi *under the influence of putridity*. If the former of these suppositions was the correct one, the froth should be seen *earlier in summer than in winter*, which we have seen *not* to be the case. That *the latter* of these suppositions is *untenable*, is shown by the circumstance that froth may be encountered at the lips in the freshest bodies—as after only a few minutes' immersion. Would the phenomenon be more satisfactorily accounted for from the collapse of the walls of the chest on the cessation of the tonic spasm of its muscles, which would then propel the froth from the air-passages outwards and out of the mouth? Without assigning any special value to this conjecture, it seems to be borne out by the fact that the froth about the mouth and nostrils is always most copious shortly after death.

The froth at the lips and nostrils of the drowned is readily affected by the exposure of the body to the air on its removal from the water. I have never met with it at all distinct on the day following such removal, however previously well marked. This disappearance is not, fortunately, so speedy as regards the—

Froth in the larynx and trachea, where it is often met with after it has gone from the nostrils, mouth, and throat.

There is an opinion and statement advanced by Caspar, and adhered to by Dr. Taylor, in regard to the froth of the drowned, in which it is not possible to concur—viz., that it is *not requisite to its production* that, as contended for by Orfila and Devergie, the individual in drowning should *have got his head out of water;* and that the froth was met with in circumstances in which this could not have happened, as where suicides had loaded their bodies with heavy weights before throwing themselves into water. It detracts, however, from the value of this opinion and the facts on which it is based that neither Caspar nor Taylor seems to discriminate sufficiently betwixt *the froth of the drowned* and *the mixture of air and mucus* found in other than drowned bodies—speaking, as Caspar does, of the froth "as the product of *the mixture* of the inhaled fluid in which the drowning has occurred, of *the natural mucus of the passages*, or even of blood from some ruptured vessel, *with the air* contained in the lungs and trachea."—(Syd. ed., page 238.)

Devergie was the first to draw attention to *the true character* of the froth found in the air-passages of the drowned, and his remarks on this point are of importance to be kept in mind. "The froth" that forms in the way we have noticed, and which is strictly a vital phenomenon, "is usually (though in rare cases sanguinolent) of a white colour, and consists of numerous very small air-bubbles, constituting a *lather, rather than a froth* properly so-called. It never adheres to the trachea by mucus, but is in immediate contact with that tube. All the bubbles that form it have a watery envelope easily broken, and often, in opening the trachea, the greater part disappears like soap-bubbles."—(Méd.-Lég., vol. ii. pages 340-41.)

These marks serve to distinguish the froth found in the air-passages shortly after *death by drowning*, not only from the *frothy mucus* found after *death by bronchitis* or *pneumonia*, but also from that which is frequently detected in the same situation *at long intervals after death by drowning;* and which is merely a post-mortem change. This last appearance—by no means rare—is solely occasioned by the development of putrid gases in the natural mucus of the air-passages, or on the surface of the water which may be present at the bottom of the trachea in bodies undergoing decomposition. I have met with appearances of this last sort at periods after death respectively of seven, twenty-four, twenty-six, thirty-five, and fifty-six days. This sign, as thus distinguished from the other appearances which might be confounded with it, I have had occasion to observe to be *produced otherwise than in* the death-struggle in *drowning*.

Thus, in a female who perished from an overdose of laudanum in 1836, an attendant poured into her mouth some water containing a few drops of *sulphuric ether*. This was about an hour before the woman's death, while she was sinking and had lost the power of deglutition. The consequence was that the fluid, in place of being swallowed, had entered the windpipe, and been churned up into reddish froth. Had the body been found in water, and no laudanum (which was the case) been found in the stomach, it might readily have been decided that the deceased had died from drowning (Ed. *Med. and Surg. Journal*, No. 130, page 66). The colour of the froth here would have afforded no discriminating mark, as the froth of the drowned, though rarely, has been observed, as stated by Devergie, of a reddish hue.

(*b.*) Simultaneously with or after the disappearance of the froth in the air-passages, *water* is usually found *in the trachea and bronchi*, either *with* or *without the same fluid in the air-cells of the lungs*, in the bodies of the drowned. The froth and water in the air-passages are indeed mutually dependent phenomena. Curiously enough, however, up to a comparatively recent period the actual existence of these two signs in the bodies of the drowned was largely contested. Thus, we have their presence *denied* by Wepfer, Conrad, Becker, Littré, Petit, Morgagni, Haller, Unger, Fothergill, and Colman, either singly or in conjunction—an opinion grounded on their failure to detect them in bodies which they had examined. Later observers and experimentalists have shown the fallacy which lurked under these conclusions, by showing, both by experiments on animals and observations on the bodies of the drowned, that these signs are constant *when looked for early*, and that it is only their disappearance after a time that gives any colour to the denial of their existence in certain instances—points on which all medical jurists are now agreed. In corroboration of this I may state that, in my own inspections of adults, I found water in the air-passages in 58 per cent., and froth in the larynx or trachea in 59 per cent. of these. In all of these examinations, however, the bodies were fresh, while in the remaining cases, which had been from four to fifty days in water, both signs had disappeared.

(*c.*) Besides *water, particles of ice* and *several foreign substances* have been encountered in the air-passages. Thus, Marc and Orfila both met with ice, which had been drawn in with the water in winter. In a case in the *Gazette Médicale*, *sand and pebbles* were found in the trachea of an epileptic who had perished from falling with his head in a pool of water. Devergie mentions his finding mud in the trachea, drawn in from foul water in the same way. A case is also published in the *Transactions of the Medical and Physical Society of Bombay*, where *mud* was found in the bronchi of a Hindoo who had been drowned in a drain.—(*Brit. and For. Med.-Chir. Rev.*, vol. ix. page 279.)

In one instance I met with small stalks of decayed leaves in the air-passages; in a second, fragments of seaweed; in a third, sand in the mouth and trachea; in two, sand in the air-cells of the lungs; and in three, sand in the pharynx,

trachea, and bronchi. In one of the cases the presence of the sand in the air-cells of the lungs was the only indication of the drowning—the body, that of a fisherman lost in a squall at sea, having been only recovered after more than a month's stay in the water, in the unusually warm summer of the present year (1876), in a state of advanced putrefaction and considerable mutilation.

In connexion with the finding of foreign matters in the air-passages of the drowned, this may be the proper place to refer to the discovery of *the liquor amnii*, and even *meconium*, in the same situation in the bodies of still-born infants; and to the conclusion drawn from this, that the infant in utero may thus die by *drowning* prior to its birth—a point to which we shall have to recur again under "Death by *smothering*." The death of the fœtus in this way has been referred to the arrest of the circulation in the cord, or placenta, by the German jurists and accoucheurs, by whom the subject was first mooted, and by whom it has been industriously followed up. The consequence of this is by them believed to be, that by this arrest of the circulation the fœtus is compelled to attempt to inflate its lungs; and thus the liquor amnii, where it has not previously escaped, is drawn into the air-passages, and, in addition, any meconium which may be found in that fluid. In proof of this, Bohr has brought together nine such cases, out of fifty-six fatal instances of arrested placental circulation, collected from different sources, in which these foreign matters were found in the air-passages of the infant.—(Caspar, *Vierteljahrschrift*, ebruary, 1863, page 48.) In some of these cases the lungs were partially inflated; and in two capillary ecchymoses were encountered.

Another sign closely connected with the last is *water in the air-cells of the lungs*. Of course if we admit the entrance of water into the trachea and bronchi, it follows of necessity that it will readily find its way into their extreme ramifications. The value of this sign, however, depends altogether on the state in which the water is found in the pulmonary vesicles. Nothing is more usual than to meet with a copious watery or bloody froth in such cases, as is at once made evident on compressing the cut portions of the lungs; but this may be met with in the body after death from various causes, while we have no ready means of distinguishing a mere watery froth in this situation and other frothy matters with which it may be readily confounded. When met with unmixed with air and in any quantity, especially when the corpse has not been long in the water, Orfila considers water in the air-cells of the lungs as one of the most valuable indications of death by submersion, and even as the master-sign in a case of this sort. Some deductions must be made from this statement, however. In the first place, it is *not always found to be present*, it having been *wanting* in nearly one-half of the cases (48·7 per cent.) I have had the opportunity of examining. Its absence from the lungs in several of these cases was accounted for by its presence in the cavity of the chest, which, from the character of the fluid and the absence of any indication of its morbid origin, made it evident that it had escaped by transudation or exosmosis from the lungs. In six of these the quantity of watery fluid was small (from one to four and a half ounces); but in the remaining ten, from thirteen to thirty-four ounces.

In depreciation of this sign of drowning, it has been suggested that water may enter the lungs of a body after death from other causes, as where it has been kept in a vertical position; or, if Orfila is to be trusted, where it has lain on its back in water. The further objection—that it might possibly be injected after death—is of such an improbable character as scarcely to require notice.

(*d.*) *Water in the stomach* is the sign of drowning which next calls for notice. I have met with it in 36·9 per cent. of my cases. In ten others this fluid, absent in the stomach, was met with in the abdominal cavity, but only in sparing quantities, six fluid ounces being the highest quantity noted. The presence of water in the stomach of the drowned was met with in fresh, and but rarely, if at all, in decayed bodies. From the former it is known readily to escape by the mouth in turning the corpse on its face.

Experiments on animals have shown that the water found in the body in drowning enters the stomach by the act of deglutition during the death struggle, as the quantity of the fluid was greatest where the animals had been allowed repeatedly to come to the surface to respire; while when they had been kept constantly immersed, and thus in a condition but little favourable to the exercise of deglutition, little or no water entered the stomach.—(Taylor, "Manual," page 120.)

It may be safely assumed that the power of swallowing would be suspended after death, and that the walls of the œsophagus would apply themselves too closely to each other to allow of the passage of water to the stomach in a body immersed in that medium. It has been found, in fact, that no water enters the stomach in animals thrown into water, after the extinction of life, prior to the progress to a considerable extent of the putrefactive process.

(*e.*) Caspar lays much stress on *the increased volume of the lungs* after death by drowning—a phenomenon only encountered to a like extent after "the most acute œdema of the lungs," and "occasionally after suffocation in irrespirable gases" ("For. Med.," vol. ii. page 239). In a few instances this expansion of the lungs is so considerable as to cause them to rise out of the chest on the removal of the sternum. I have met with this in fifteen, or 12·6 per cent., of my inspections; but in seven of these putrefaction was well marked, which leads me to suppose (as stated in Lecture VII.) that that process has a good deal to do with this great augmentation of the bulk of the lungs. Short of this, expansion of the lungs is so common in the drowned as to strengthen Caspar's conclusion. In only four of my own cases were the lungs found in the state of collapse, and that in bodies much decomposed.

(*f.*) *Reddening of the mucous coat of the trachea*, a good deal insisted on by Caspar, is not so constant in the drowned as he states, while, as he admits, it is common to other forms of apnœa, and follows the advance of putrefaction.

(*g.*) *Congestion of the lungs*, as might be expected, is very characteristic of this form of asphyxia, and persists even after putrefaction has made great advances. Its extent, however, varies. In three instances I could not determine its existence, while in the remaining cases its extent varied. In the former cases the bodies had averaged forty-four days in water. The lungs, sparingly congested, exhibited some marks of disease. Deducting these, extreme congestion was seen to be less usual than a moderate degree of it.

(*h.*) *Congestion of the liver, spleen, and kidneys* is common to this and other forms of death by asphyxia and coma, though usually less marked in the latter than in the former of these.

(*i.*) *Engorgement of the right cavities of the heart and of the venæ cavæ* is one of the most constant of the signs of death by drowning. In my cases the right heart was altogether or nearly empty in nine, the left heart empty in seventeen, and both hearts empty in three; this emptiness was explicable by the effects of decomposition in the bodies, which had been, on an average, thirty-five days in water.

(*k.*) *Fluidity of the blood*, characteristic of death by drowning, and common to this and other forms of asphyxia, as well as coma, is not, however, invariably to be encountered in the drowned. In ten cases I have met with blood partly clotted in the right side of the heart. The same circumstance has been noticed once by Orfila, and several times by Devergie.

(*l.*) *Congestion of the head* is more characteristic of death by coma than of this and other forms of apnœa. In some cases it is very marked; in others it is not met with to any perceptible extent. Certain states of the body, as well as the circumstances attendant on this mode of death, there is little room for doubt, favour hyperæmia in this direction—such as previous intoxication, apoplectiform and epileptiform tendencies, and maniacal excitement, etc. In my inspections the congestion has been more frequently met with in the scalp than in the interior of the cranium.

(*To be continued.*)

A LECTURE ON PERNICIOUS ANÆMIA.(a)

By Professor H. QUINCKE, of Bern.

GENTLEMEN,—Among those so-called idiopathic or essential anæmiæ in which, as in chlorosis, the post-mortem has revealed no constant organic change except simple bloodlessness, must be reckoned a severe form of anæmia which sometimes even terminates in death. Cases of this disease had undoubtedly been observed sporadically here and there, and also reported in medical literature,(b) but they were first comprehensively

(a) Translated, by permission, from No. 100 of Volkmann's *Sammlung Klinischer Vorträge*.

(b) *Cf.* Trousseau, "Clin. Méd.," vol. iii., page 70.

treated of by Biermer, a few years ago, under the title of "Progressive Pernicious Anæmia."

In the last two years ten cases of this form of anæmia have come under my notice, and my interest in them was all the greater because they made me acquainted with the characters of a disease which I had never previously met with. Four of the patients were men, and five women, between the ages of twenty-five and fifty-nine years, and the other was a girl of eleven. It is true that all these cases were not accurately investigated in all desirable directions, partly owing to their not having entered the hospital till shortly before their death, and partly because the predominance of some phenomena at first led us to diagnose some other disease. This was especially true of my first case, in which I was more disposed to have faith in my experience, and to assume some fault in the diagnosis on my part, than to regard the case as one of "idiopathic anæmia." Ulcer of the stomach, cancer of the stomach, nephritis, phthisis, and typhoid fever were all simulated by particular cases.

Allow me now to found an analysis of the clinical and anatomical characteristics of this disease on the cases I have observed. The first thing that strikes you is the extreme pallor of the patients, which gives their skin a waxy, slightly translucent look, and which is also clearly visible on the lips and under the nails. The face seems slightly swollen, so that the features are a little altered; distinct œdema is only observed in the later stages, and generally remains limited to the feet and legs. The slight dropsical effusions into the serous cavities which are found post-mortem are seldom detectable during life. The general condition of my patients was below par, and most of them had become very thin, whereas other observers have been specially struck by the contrast between the enormous anæmia and the large amount of fat remaining on the body. In two cases a slight but distinct icteric tint was noticed on the skin and conjunctivæ, though the urine all along remained free from bile-pigment.

After the pallor the most striking symptom is the tremendous weakness and languor which the patients exhibit. They like to lie in bed, are generally highly apathetic, and often find the movements necessary for feeding themselves too tiring. They very often complain of headache, and sometimes suffer from giddiness and faintness, especially on standing up. A subjective feeling of palpitation of the heart is also often complained of.

The heart's action is rapid and variable; the pulse in the peripheral arteries is small, soft, and occasionally jerking. Anæmic murmurs are heard with extraordinary intensity over the heart, and they always accompany the systole. The bellows-murmur is most distinctly audible over the pulmonary artery, and may there assume a remarkably rough character. Probably, the retraction of the lungs which is so common in all anæmic and weakly individuals, has a great deal to do with the development of this murmur; and it is probable that the increase of the heart's absolute dulness is also due to the same cause. It is sometimes possible to make out, both by percussion and post-mortem examination, that an actual enlargement of the heart, owing to dilatation, especially of the right ventricle, has taken place. In a few cases the right ventricle even shared in forming the apex of the heart. Generally, the heart was contracted and held very little blood; the valves were always healthy, but the muscles of the heart often showed a moderate degree of the fatty degeneration which Biermer has insisted on. But I must distinctly state that the degeneration was completely absent (even microscopically) in several cases, and that the muscles only looked very pale, just as all the other organs did; so that fatty degeneration of the heart is not a constant and essential, but only a secondary, although a frequent, alteration in pernicious anæmia. In two cases hæmorrhages were observed in the substance of the heart and under the cardiac layer of the pericardium, and once there was narrowing of the aorta. A loud buzzing murmur was heard as well as felt over the jugular and innominate veins.

The respiratory organs were free from morbid changes, with the exception of occasional catarrhs, nor were the remains of destructive processes found at the post-mortems.

Disturbances of the digestion occurred in almost all the cases, and generally gave rise to marked symptoms, either because they were present from the outset and were one of the predisposing causes of the disease, or else because atonic dyspepsia appeared during the course of it as a partial phenomenon of the general cachexia. It was rare for the appetite to be preserved. Generally there was a marked disinclination to food and a feeling of weight in the stomach after eating, and obstinate vomiting after every kind of food was repeatedly observed. The tongue was generally clean, and its epithelial covering was remarkable for its delicacy; it was perhaps for this reason that some patients continually complained of pains in the tongue and burning in the mouth. Some patients were exceedingly constipated, while others suffered from uncontrollable diarrhœa. The anatomical changes in the digestive organs were trifling when compared with the intensity of the symptoms. The mucous membrane of the intestine was very pale, and sometimes slightly relaxed. In one case we had to regard a croupous inflammation of the mucous membrane of the large bowel as the final complication. The mucous membrane of the stomach, too, looked pale, and in one case, where there was obstinate vomiting, it was very thin, and the gastric glands appeared, on a lateral view, to be less numerous than usual. Even in the cases where there was slight icterus no alteration of the biliary ducts could be made out. The liver cells in one case were slightly infiltrated with fat, and in several cases the liver had a yellowish-brown tint which contrasted with the pallor of the other organs. This point will be referred to later on.

The urine was perfectly normal; its quantity, colour, and specific gravity varied considerably, according to the amount of nourishment taken in, and to the presence or absence of diarrhœa. The urine only contained albumen temporarily, and, with a single exception, only in very small amount. There were no fresh anatomical changes, such as cloudiness or fatty degeneration of the epithelial cells, found in the kidneys.

Epistaxis was noticed a few times, and in one case it recurred so often and so abundantly that it killed the patient. Small petechiæ were noticed on the skin but once, and at the post-mortem hæmorrhages were also found in the substance of the heart, under the epicardium, on the dura mater, and in the cavity of the arachnoid.

Retinal hæmorrhages were constantly found in those cases—eight in number—in which the eyes were examined; so that they may be regarded as almost pathognomonic of pernicious anæmia. They are most abundant round the entrance of the optic nerve, and they often follow the course of the vessels. They are generally many in number, though small in size; of an irregular, oval form, with their longest diameter radial, and generally of a bright red colour. Large hæmorrhages of more than a quarter the breadth of the optic disc generally arise from the coalescence of smaller ones. Very often one sees a lighter greyish-red speck, as large as the point of a pin, in the centre of the hæmorrhage. In a few cases the retina in the neighbourhood of the papilla (perhaps on account of the very abundant hæmorrhages) was somewhat cloudy, and the edges of the papilla were indistinct. In another case changes were observed such as are usually regarded as characteristic of nephritic retinitis. No case was observed in which the hæmorrhages caused impairment of vision, as has been noted in some cases that have been published by other authors, either because the hæmorrhages were too few in number, or because the patient's general state was too low for his sight to be tested.

In most cases the temperature of the body was normal; in others there was a moderate remittent fever of indefinite type which most nearly resembled that of typhoid fever, but whose absolute height was lower, for it was quite exceptional for the temperature to exceed 39° C. When there was severe epistaxis, or after transfusion, the temperature varied slightly.

Lastly, I must state with regard to the blood-forming organs that slight swelling of the spleen appeared to be present only in the two cases that recovered, yet, owing to the possibility of mistake, one ought not to lay much weight on this fact, because the spleen was never found enlarged at a post-mortem.

The lymphatic glands were only a few times found enlarged to quite a trifling extent. The marrow of the bones showed no abnormality.

Course.—The development of the disease is always gradual, and the transition from health is almost unnoticed, so that when the patients apply at the hospital their illness is already very far advanced. Several times they were only admitted a few days before their death. The total duration of the disease was from a few months to half a year, and in a few cases to upwards of a year. The disease generally exhibited the progressive character which Biermer has indicated by its name; the anæmia and cachexia advanced uninterruptedly; the

amount of food absorbed steadily becomes more deficient, and so life ebbs gradually away (just as it does in many cancers of the stomach and stenoses of the œsophagus), after the pale and apathetic patients have become more and more like corpses in the last days of their life, and their pulse has been long scarcely perceptible to the finger.

It is rare for there to be any final complication, but any unusual change in the equilibrium of the feebly glowing life —the journey to the hospital, or the removal of a long existing constipation—may induce the ultimate collapse. In pregnant women abortion took place, in the cases which have hitherto been observed, in the seventh or eighth month, and death, even without any great loss of blood, quickly followed.

In those rare instances in which the course of the disease is favourable, improvement only very gradually appears; the patients are able to take in food again and digest it, the fever subsides, strength and colour very slowly return, yet, in any case, a certain amount of anæmia remains behind. A girl of eleven, who was sent out apparently healthy after several months' treatment, fell ill again after a year and a quarter, and eventually died.

The *prognosis* will be seen, from what has been said, to be generally unfavourable, but it must not be set down, as has recently been done, as absolutely fatal, for two of my cases left the hospital cured in the ordinary sense of the word; and De Cérenville, too, has lately published two cases of recovery. Without wishing to found any special prognostic deductions on them, I will only remark that one of the cases, which recovered in spite of other severe symptoms, only presented retinal hæmorrhages of moderate extent; and that the other, which, however, afterwards relapsed, was a child of eleven.

According to our present experience (Gusserow, Gfrörer, and my ninth case), the anæmiæ which occur in pregnant women are prognostically unfavourable; in all such cases death occurred a few hours after abortion had taken place.

The *diagnosis* of a pernicious anæmia is not always easy, even after a careful examination, and it can often only be made with some probability after long observation of the case.

In the advanced stages the patients in their general appearance, and in the way in which they complain of headache, palpitation, and digestive troubles, most nearly resemble some persons with incipient granular kidney, and the presence of albumen in the urine may support the idea of Bright's disease; but the albuminuria is generally but transient, and there is no hypertrophy of the left ventricle of the heart.

The diagnosis from chronic ulcer of the stomach or cancer of the stomach is in many cases more difficult, and especially when loss of appetite, vomiting, and pain in the stomach after food are the earliest and most prominent symptoms of the disease. We must here lay stress on the absence of blood in the vomited matters, and on the negative result of physical examination. Still, when we consider how often characteristic symptoms are completely absent, although there are severe anatomical lesions in the stomach, and when we compare a case like my sixth, where obstinate vomiting was combined with epigastric pain, and slight but protracted jaundice, we see that in many cases we must be content either to err in our diagnosis, or at least to suspend our opinion for a time.

Cases in which there is fever, especially when this is accompanied with diarrhœa and general apathy, may be taken for typhoid fever. Such a diagnosis was made by the doctor before one of my patients came into the hospital, and it was only the lowness of the temperature and the somewhat irregular course which it ran, as well as the absence of splenic enlargement, etc., which showed us we had to deal with "anæmic" fever.

Confusion with phthisis pulmonalis is of much rarer occurrence. Even when the disease is complicated with bronchitis, the negative results of repeated examination of the lungs and the observation of the other symptoms soon leads to a correct opinion. Nor will anyone be led into the error of mistaking pernicious anæmia for heart disease, in spite of the subjective palpitation and the loud murmurs which may be present; for the murmurs are always systolic in rhythm, and though they are often heard at all four of the valvular orifices, yet they are always loudest over the pulmonary artery. Intensification of the second sound over the pulmonary artery depends on abnormal retraction of the lungs; and, further, the other phenomena of pernicious anæmia correspond neither with long-standing valvular disease nor with acute endocarditis.

Ophthalmoscopic examination is of most decided diagnostic value, for in advanced cases retinal hæmorrhages are very seldom absent, and their number and the absence of true retinitis are not likely to give rise to mistakes, especially as they generally occur in young individuals. The greyish-red centre of these hæmorrhages appears to be in some respects characteristic. I have already mentioned that I have as yet found retinal hæmorrhages quite exceptionally in persons suffering from other cachexiæ—*e.g.*, cancer. On the other hand, it is important to know that retinitis, similar to that of Bright's disease, can occur in pernicious anæmia, and therefore must not be regarded as pathognomonic of nephritis.

(To be continued.)

ORIGINAL COMMUNICATIONS.

ON BURNS BY GUNPOWDER, AND ON SCALDS BY STEAM.

By Inspector-General SMART, C.B., R.N.

In a paper read before the British Medical Association meeting of South Hants, Dr. Smart related some observations on these points. Of the former category he had dealt with twenty-one cases that occurred during our occupation of Canton in 1857, of which six proved fatal on the seventh, tenth, fifteenth, seventeenth, eighteenth, and thirtieth days respectively. He detailed cases typical of the organic sequences that led to fatal results, on the seventh day by meningitis, on the eighteenth by dysentery, and on the thirtieth by exhaustion of nervous power by blood poisoning ending in ischuria, and one on the seventeenth day by erysipelas attacking the head and face. He supplemented this with the details of a case that recovered, in which the primary violence was equally severe, but where these sequences were absent, and where constipation had been a characteristic of great prognostic value, as in all other favourable cases.

The constitutional treatment was on the general principles observed in treating these complications when they appear idiopathically. The local treatment through all the cases was, in the first stage of depression and of inflammatory reaction, by Carron oil on cotton wadding; in the second stage of suppurative action, attended more or less with sloughing, by oxide of zinc powder and by calamine ointment; and in the granulating and cicatrising stages by the same applications as in the suppurative, but, when the granulations became flabby and pale, by strips of lint covered with resinous ointment containing an excess of turpentine. It was gratifying that over two-thirds of them—all very severe burns of the head, face, and neck, with more or less of both upper and lower extremities—recovered.

Then, exemplifying the subject of scalds by steam by those that lately happened in the *Thunderer* explosion, he stated that of thirty-four vigorous men who were in the stoke-holes, only two remain alive; and in addition to these, thirteen have since perished who were not so near to the explosion. In all about eighty persons were involved, of whom forty-five have perished by an explosion of steam and hot water, bursting the boiler with the force of a thirty-five ton gun, scattering huge masses of iron, tons of boiling water, and volumes of steam, together with dense fumes from the extinguished fires. After an hour the living, fifty-eight in number, followed by nineteen corpses, reached Haslar Hospital. Of the latter, fifteen had been brought up dead from the stoke-hole, and four had expired in the passage to the shore. Of the living, the majority were very severely scalded, but only one had received mutilation (of an ankle-joint), and he died in four hours. Within thirty hours eleven others had succumbed to primary shock—some of them semi-comatose, and little sensible to pain; others, after attempts to rally, became delirious, rolling heavily from side to side, breathing heavily, vomiting, and suffering strangury, and stripping the dressings from off their flayed limbs. Those who survived shock felt relief of scorching agony, and gained fitful sleep in thirty-six to forty-eight hours, passing urine and fæces, and some asking for animal food. Possibly, steam-scalding of fauces and of primary air-tubes, in those who died of so-called "shock" within thirty hours, was the lesion of most fatal import. The stage of reaction for suppurative effort was attended with internal congestions and inflammatory action in the brain and along the gastro-enteric track, with

their characteristic symptoms. Under such conditions six perished on the fifth, sixth, eighth, and ninth days from injury. On the tenth day there remained alive forty-four, of whom twelve have died, twenty-seven have been discharged, and five remain under treatment (September 12). Of these last,

J. D., severely scalded by steam over head, face, and neck, in the air-passages, and over arms and hands. He had been exposed to the first rush of the steam through the casing of the funnel, and over 350 square inches of his surface had been denuded of cuticle or covered with large vesications. On the sixth day all his unscalded surface was of a lurid red colour. He then became delirious, and had frequent fits of moaning, which lasted till the eleventh day, when he again answered coherently; but from the fifteenth to the twentieth he was again delirious. After that he recollected for the first time that he had been on board the *Thunderer*. In the meantime he had severe ophthalmia, that had ulcerated both corneæ, the left irrecoverably. On the twenty-second day he complained of dysphagia, and the fauces were found to be sloughy and aphthous, and at the end of the fourth week gastro-enteritis affected him till the thirty-second day. On the fortieth day the kidneys were excreting bile-pigment, specific gravity 1046, which gave way to deposits of urates and phosphates, with later traces of oxalates. He is now convalescent, with, however, left staphyloma, and a few cicatricial contractions of the eyelids.

Another case, recovering, was scalded by steam to the extent of 400 square inches. He had no full signs of meningitis; but from the suppurative stage he has had attacks of gastric irritation, and that also of the kidneys to the extent of excretion of albumen and broken blood-discs.

Such have been the two worst of the cases which have evaded dangers that many have gone through, only less in degree. In all, the results of nervous shock are well marked in a lowered courage and dread of the past, from which time alone can restore them. Sloughing of the deeper integuments has been rare compared with that in gunpowder burns, wherein delirium is of earlier access. Early deaths from shock have been more frequent than in gunpowder burns; and this may be attributed to the greater surface involved, causing nervous depression, from which the reparative powers could not rally.

A scientific observer, who had been witness of the results in two great explosions of magazines, remarked to me that eighty square inches of inflamed surface induced fever, with danger to life. To test this, I set Dr. Burke—a painstaking officer—to make approximate measurements of the scalded surfaces in twelve cases remaining in the seventh week. He found it in square inches to have been 198, 213, 232, 265, 283, 345, 355, 363, 377, 398, 477, and 766, giving an average of 356 square inches excoriated or vesicated. Of these, the men now under treatment gave 198, 355, 363, 398, 477 square inches. All these had two points in common—the severity of the scald on face and head, and sloughs leaving indolent ulcers on the arms, on which the new cuticle was very thin. The lowest (198 square inches) was in the oldest man injured—aged fifty-three—who had a heavy struggle through the febrile reaction. The figures 355 belonged to the extremely dangerous case of J. D., already detailed. The highest (766 square inches) is altogether exceptional, as he could not have survived had the whole of that surface suppurated, much of it drying under the vesications. In him the scald was over nearly one-third of his surface. He is one of the two remaining who were in the stokehole, and he escaped into a coal-bunker, from which he was drawn insensible.

The questions of viability as dependent on the extent of surface involved, that determines the degree of shock, and that of the depth of tissue injured, that taxes the reparative powers, are worthy of more precise observation. Perhaps, in those who did not survive primary shock, the scald of the respiratory track, as well as that of the skin, precluded rallying; while in those who fell later, the depth more than superficial extent proved fatal, which may explain a higher mortality from the sequences in gunpowder explosions than in severe scalds not directly fatal. I would view 350 square inches (the mean of the measurements of scalds) and 250 square inches of surface burnt by gunpowder as equally fatal injuries.

As to the treatment, until decided signs of rallying, it was by stimulants, with sago and beef-tea, anodynes of opium and of chloral hydrate, chloroform to allay iritation of the stomach, and the use of the catheter. After rallying, beef-tea and animal food, where appropriate, were given night and day. Lime-water with milk was given to allay irritability of stomach. On and after the third day, laxatives were given where required to relieve constipation, which was a most auspicious sign throughout, as animal food was then well borne, and the healing processes went on rapidly. In treating internal complications general therapeutics were observed. In those of the air-passages there were favourable results in the congestive stage, and pneumonia developed only in two cases, one fatal. The meningitic symptoms were beyond special treatment, and yet two such recovered; and several also in which delirium had been present. Gastro-enteritic symptoms ran high, but subsided more readily than the meningitic with the establishment of suppuration, but there were instances of recurrence at a later stage, in which one died with coffee-grounds vomit. The renal disturbance was generally checked by alkalis and nitric ether. Great nervous prostration caused anxiety as leading to syncope, which was the mode of death in one instance.

The local treatment was by oil and lime-water in cotton-wadding in every part to the fourth and fifth days, and later, in the majority, on the limbs. This being found inconvenient on the face, head, and neck, it was changed for a wash over with carbolic oil (one to ten), then dusting on it from a common flower-dredger a powder consisting of one part of oxide of zinc, one of magnesia, and two of powdered starch, sifted on wherever moisture appeared, care being taken to keep free the facial orifices; it formed a mask to the features, excluding the atmosphere. Under its protection the process of "scabbing" went on favourably, and on the crusts detaching, the scalds were found healed, except sometimes on the pinna of the ear, where abscesses gave trouble. In one case only is there any permanent deformity by cicatrices on the face, so that I think it applicable likewise in confluent small-pox. It was used also on some sores on the limbs, the forearms, and hands with success. Although only a mode of excluding atmospheric air, yet its claim is for simplicity and readiness of application.

The treatment by oil and lime-water was in general disuse before the tenth day, and where the above was not employed, it was substituted by a liniment of carbolic acid and olive oil (one to twenty) on lint under oil-silk, retained by bands of Lister's gauze, which, although locally successful, was not found free from a suspicion of irritating the kidneys.

To maintain the highest possible degree of atmospheric purity, almost every known deodorant was used, but preference was given to the process of Dr. Goolden, of disengaging chlorine insensibly from a mixture of nitrate of lead and common salt in solution sprinkled on the floors from watering-pots, and on sheets hung round the offensive beds.

Very much has been due to the efforts by careful personal attention of the surgical staff, under the guidance and responsibility of Deputy Inspector-General Loney, for by them the duties, however humble, have been performed in a zealous spirit, regarding solely the welfare of the sufferers.

CLINICAL ILLUSTRATIONS OF GRAVES'S DISEASE.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

(*Concluded from page* 252.)

Case 3.—This case occurred in the person of a married woman, aged twenty-seven, at first an out-, and afterwards an in-patient of the Birmingham General Hospital. Both proptosis and goître first appeared about three years before I saw the patient. The goître increased gradually through six months, and then receded under the application of a paint. It is now again increasing, though it is still of quite small size; both lateral lobes are involved. The protrusion of the eyes did not lessen with the diminution of the thyroid, though it was twelve months before the eyes attained their full degree of prominence, so as completely to uncover the corneæ. The pupils are of medium size, and not unusually active. With the presence of the two symptoms now described, the patient became subject to flushing of the face, together with a sense of heat and burning in the ears; her mother asserts that her lips are redder than they used to be. Her hands are apt to burn, but not her feet, and they sweat more than formerly. She is prone to perspire generally, and in the hospital could not endure the ordinary amount of bed-clothing, though by day she dresses as usual. Her eyes have been noticed to be

tearful. She has become subject to palpitation and short breath, and is very nervous, low-spirited, and irritable, but neither passionate nor hysterical. She has suffered from headache and vertigo since the commencement of her present complaint; sleep, however, has been good and dreamless. She asserts that she has not lost flesh, and her appearance confirms the accuracy of her statement. Menstruation is scanty. She says that her complaint has been on the increase for nine months.

The patient's family is healthy, with the single exception of a case of "fits" in the person of an uncle of her mother. She herself has always enjoyed good health, and has been quite free from nervous disorder; nor does she present any peculiarity of nervous temperament. No cause can be assigned for her malady. She married at the age of twenty-three, and soon after had two miscarriages; she has not had any children. Twelve months ago she lost her hair; it is now returning; but I could not discover any evidence of syphilis.

The thyroid gland is free from thrill, but a soft systolic bruit is audible over its entire extent, and much less distinctly in the carotids, whence, indeed, it is often absent. The carotids and temporals pulsate considerably. At the first examination no throbbing was felt in the abdominal aorta, nor in the femorals, but on subsequent occasions both abdominal aorta and femorals were felt to pulsate excessively. The heart's impulse was abrupt, the sounds very sharp—the first was loud and ringing. The region of cardiac dulness extended from the third rib above, where it was an inch broad, to the nipple-line below. Vision was clear; she read No. 1 Brilliant, but did not accommodate well. Mr. Arthur Bracey reported that the circulation of the fundus was normal; perhaps the veins were a little full.

She remained an in-patient for five weeks. Whilst attending as an out-patient her pulse was from 160 to 170, though it fell to 136 after a short time; whilst an in-patient it never sank below 118. She presented marked vascularity of both ears, particularly of the right, and distinct arterial pulsation could be felt in the lobe of the right ear. The face, too, was apt to flush; but this tendency, together with the increased vascularity, soon subsided, the latter remaining only in the right ear, and then disappearing altogether. Her nights were good. Her temperature was taken through six successive evenings after she had been in bed some time. On every occasion the temperature of the *left* arm-pit was below that of the right; on one evening the difference amounted to 1·2° Fahr., on the other five evenings it varied between 0·2° and 0·8° Fahr. The extremes of temperature were 97·8° and 96·6° on the left, and 98° and 97·4° on the right. But between the two cheeks, within the mouth, the difference, when any existed, was reversed; twice the temperature was exactly alike on each side; on each of the other four occasions the temperature in the *left* cheek was 0·2° above that of the right. The extreme temperatures were 98·6° and 97·6° on the left side, and on the right 98·4° and 97·4°. The urine passed in twenty-four hours (not including that voided with the stools) varied between thirty and forty-three ounces, with a specific gravity from 1013 to 1023; it was free from albumen, sugar, or an excess of earthy phosphates. Her stay in hospital was too brief to permit of a fair trial of remedies; she took first arsenic, and then steel with strychnia. The eyes receded very manifestly, and the thyroid underwent decided diminution in size; but, as already stated, the pulse remained too rapid, though it was much reduced in frequency.

Case 4.—In the case just narrated there was no evidence of inherited tendency to nervous disease, nor was there any history of previous nervous unhealthiness in the patient herself. The symptoms of general nervous disorder, though indicating emotional exaggeration or excess of irritability, hold a subordinate position. On the other hand, the cardiac disturbance was considerable, and the vascular phenomena also constituted an important feature in the case. In the case I have now to describe, general nervous disturbance of decided character preceded the development of the symptoms usually associated with Graves's disease, and, moreover, the patient had been the subject of a profound mental impression. But goitre was absent, and though phenomena due to vaso-motor disturbance were sufficiently distinct, the heart's action was but slightly if at all deranged.

H. H., aged thirty-two, married. Her family history did not present any evidence of the presence of nervous disease, with the single exception to be immediately noticed. The patient is of an irritable temper. She gives us the history of liability to frequently recurring and very severe attacks of migraine for many years. She tells us that her mother suffers from the same liability, and also a sister, and that her own daughter suffers in the same manner. She is a cartridge-maker, and five years ago was in an explosion. She was very much frightened, and has seemed to herself to be getting worse ever since that occurrence. Three years ago she began to suffer from aphonia, apparently hysterical; and the aphonia has returned at times, especially when she has been excited. There is general concurrence of testimony that her eyes have been changing for the last twelve months. "Every time I see her they seem to get larger," her sister observed. She has had an uneasy sensation under the eyes after a day's work, and cannot do sewing, as it hurts her eyes and makes her head ache. The proptosis, though not advanced, is decided, and particularly evident by contrast with her sister, who, in other respects, is very much like her. The pupils are of medium size and active; the palpebral conjunctiva is rather red, and the eyes are watery. Her breath has been somewhat short during the last fortnight, and when questioned she admits some palpitation for six weeks, but it is altogether subordinate, and throughout two months, during which she was under observation, the pulse remained steady, even after walking, at 80 to 84. The sounds of her heart were feeble but pure, and its action was quite regular. Great flushings have been observed to spread down both sides of her face and over both ears. "She goes like scarlet all over her." This occurs very frequently, and is accompanied by a sense of heat, extending all over her body, and if she be in bed she is obliged to throw off the clothes until the feeling subsides. She feels first "stifled," and then "of a chill." The paroxysm lasts for a quarter of an hour. She does not perspire. Her feet have been constantly cold.

She has found a marked change in her temper for six months: she has become irritable and passionate, and apt to burst into tears if anything puts her about, or if she is frightened. She has suffered from want of sleep, and of late her nights have been worse than before; she often awakes in a fright. She has been losing flesh for six or seven months, and her appetite has declined. Her menstruation has been scanty, but regular; she has one child, and has not miscarried. She has no goitre. Mr. Arthur Bracey found that the fundus oculi was healthy, excepting fulness and some twisting of the veins. My further notes of the case are too scanty for reference.

Case 5.—In the subject of the next case the aspect of the disease is again changed. Proptosis was probably absent. The formation of the goitre and the production of palpitation seem to have taken place with considerable rapidity. Nutrition, too, had suffered much. The cardiac disturbance was considerable, and the goitre was large. The presence of physical fatigue, as an element in the history, will be noted in connexion with a similar remark applied to the first case.

An unmarried woman, aged twenty-three, paid a single visit to the out-patient room of the Birmingham General Hospital. She gave us a history of hard work at service, particularly of having to carry heavy buckets for a quarter of a mile several times a day; she said that, whilst carrying them, she felt so much beating at her heart that she was obliged to stop by the way. She was of an equable temper, but apt to keep things to herself. One brother, out of a family of eight, was epileptic; the rest were free from nervous disease.

The patient had been emaciating for nine weeks, and when she applied at the hospital she was very thin, without development of the breasts, and rather anæmic. There was very positive assertion that her thyroid did not begin to enlarge until five weeks ago; it was then large, the girth of the neck being fifteen inches. It was solid and soft, without thrill or bruit; the enlargement affected both lateral lobes. One or two large veins coursed over its surface. Palpitation came on whilst the gland was enlarging, and became so violent that her mother declared she could hardly lie in bed with her; during the same period her breath had been short. Her pulse at her only visit was 160. The first sound of the heart was rather prolonged. It is manifest that in every respect a marked change had taken place in the patient during the preceding five weeks. It was doubtful whether the eyes were at all altered, but, when asked, her mother said she thought her daughter's eyes were more prominent than they used to be.

Case 6.—In all of the three following cases the symptoms with which we are at present concerned were associated either with the presence of organic disease or of decided ill-health

in the patient. In the first (Case 6) the symptoms of organic disease were urgent, though the nature of the disease was never made out. In Case 7 there was valvular disease of the heart. It is to be noted that two of the patients were more advanced in years (aged forty-three and fifty-four) than is the case with the majority of instances of Graves's disease, though the malady may occur at any age; Dr. Stokes has met with it at the age of sixty. In all three cases, especially in the last, there existed a marked difference from my first four cases, in the much greater rapidity with which the special symptoms of Graves's disease occurred; this was particularly so with the third (Case 8). In Case 7 the marked reference of the first appearance of proptosis to the occurrence of hæmorrhage is also to be remarked.

I only paid two visits to the subject of the following case. She was under the care of Mr. Bracey. My visits were paid in June, 1868. She was married, aged thirty-five. She was of an irritable temper, but had enjoyed good health, and no explanation of her present illness could be obtained. She was confined in October; her illness began in the following February. Short breath and palpitation were early symptoms; proptosis and goitre dated from the following month (March). Emaciation went on rapidly, especially during the five weeks preceding my attendance; anasarca of the lower extremities set in nine weeks ago, and four weeks after that she found her abdomen enlarging. I found that menstruation had ceased for three months.

She was exceedingly attenuated, and was unable to lie down on account of the shortness of her breath. The action of her heart was very tumultuous; the pulse beat 140 times in the minute, and on one occasion Mr. Bracey found it at 200. The eyes were wild; the entire iris was uncovered, but the prominence, when I saw the patient, was less than it had been. The pupils were equal, and of normal size. There was decided enlargement of all the three lobes of the thyroid gland. The left superficial jugular, and the cutaneous veins of the upper part of the chest on the left side, were distended. The thyroid arteries seemed dilated, and these vessels, together with the carotids, pulsated violently. A remarkable thrill was felt in the neck, particularly over the right superior thyroid; and a loud whizzing, synchronous with the cardiac systole, was heard over the thyroid and carotid arteries. The heart acted tumultuously, and a decided roughness coincided with the first sound. The abdomen contained much fluid; the lower extremities were anasarcous, and the urine was albuminous, and presented hyaline casts containing nuclei.

I left the patient in Mr. Bracey's charge. The abdomen required tapping, but never refilled, and the albumen was temporary only. No disease was discovered to explain the ascites. The patient regained a fair amount of strength, but eight years afterwards Mr. Bracey informs me that she had been subject to disturbed action of the heart from time to time, attended with severe headache. Menstruation remained long suspended, but was completely restored. "She gets about and enjoys life in a quiet way, and has never been seriously ill since her first attack." The treatment was by digitalis and liquor strychniæ continued for a considerable time; "it seemed to have a beneficial effect in checking the violent action of the heart." Afterwards she took syrup of the iodide of iron, and then had change of air.

Case 7.—A woman, aged fifty-four, applied at the out-patient room of the hospital with a decided systolic bruit in both aortic and mitral valves, but in her history the symptoms of the heart disease were distinguished from those of the later ailment. Eighteen months ago she had an illness of nine months' duration, characterised by cough, short breath, and by expectoration tinged with blood. She believes that she perfectly recovered. She again lost health four or five months ago; her breath became short, and especially so in the last fortnight. Her husband has been incapacitated for many years, and much of the labour of maintenance has fallen on her. During the last six months she has suffered much anxiety from finding her own strength fail, and their means of support lessened. She has had varicose veins on the right leg, and a month ago she lost much blood from the bursting of one of the varices; the bleeding has returned three or four times, though at her visit she was not anæmic. The proptosis was referred to the occurrence of the hæmorrhage. Both the patient and her daughter affirm that the present protrusion of the eyeballs, which is to such an extent as to uncover the irides, has been effected during the last nine days, and they add that it increases daily. The thyroid is free from enlargement. There is no congestion of the vessels of the neck, nor of the face.

I regret that I have no further notes of this case.

Case 8.—I paid a single visit to a married woman, aged forty-three, whom I saw with Dr. Griffiths. She had not enjoyed good health for twenty years, but she dated her present symptoms only eight weeks before my visit. Her symptoms consisted of inability to lie down during the early period of the malady; general tremor, so that I was compelled to count the pulse by help of the stethoscope, the tremor being increased when she stood; a sharp abrupt impulse of the heart; a pulse of 140; a bruit limited to the region of the pulmonary artery; violent throbbing of the carotids, and some throbbing of the abdominal aorta. The last-mentioned symptom (not usual in Graves's disease, though present in one of the foregoing cases) had been much more violent before I saw the patient, but Dr. Griffiths believed he had relieved it partially by restoring the anteverted uterus to its natural position. Each lobe of the thyroid gland was large and soft, and presented the character of simple hypertrophy, but without any thrill or evidence of dilated arteries.

There was no proptosis, but there had been much lachrymation for three days; nutrition was good; menstruation was normal. She was very nervous and irritable, and suffered from hysterical symptoms. Her urine was free from albumen and from sugar.

It is just seven years since these notes were taken. Dr. Griffiths now informs me that both the goitre and the liability to palpitation remain; the former, however, is somewhat smaller, and "the violent action of the heart is in a more modified form." The hysteria has left her, but she is still morbidly excitable. Beyond these liabilities she is in good health, and has not had any medical attendance of importance for the last five years. Throughout the illness Dr. Griffiths has depended upon digitalis mainly, with the effect of moderating the action of the heart.

Case 9.—I may place next the following short notice of a man, aged thirty-four, who applied as an out-patient, with considerable enlargement of each lobe of the thyroid gland, and proptosis completely uncovering the irides. These two symptoms had been of eight years' duration; they were coincident in their occurrence. The heart's impulse was abrupt; the pulse 138; but there was no bruit or thrill. The scanty notes afford no further information.

Case 10.—The remaining cases may be dismissed briefly. They show uncertainty in the presence of one or other of the characteristic symptoms of Graves's disease, whilst the symptoms of general nervous disorder are prominent. In the concluding case these last-mentioned symptoms had assumed a condition of extreme intensity.

I saw the present case once only, with Mr. Davies, at West Bromwich. The patient, a female, seventeen years of age, was very anæmic and emaciated. Her heart beat with regularity, but reached 140 to 160 pulsations in a minute. Respiration was 60. There was a blowing sound, probably inorganic in the aorta and carotids. No œdema. The eyes were singularly pearly; they did not appear to me to be prominent, but the family strongly affirmed that they had become very "staring," and they assured me that this change in the eyes had altered the entire physiognomy of the patient. She had become excitable to a very morbid degree, and was indisposed to obey the directions given to her; she had long ceased to take meat. The thyroid was not enlarged.

She had been out of health for three years, her indisposition being directly referred to deep mental impression made upon her by the unexpected death of an uncle at her house, aggravated a year after by the rapid death of her father of acute pneumonia. Her irritability dated from that period; previously she had been in good health. About six weeks before I saw her she had a severe epileptic fit. Her symptoms had varied much in degree of severity. I could not discover evidence of disease in any of the organs of the body; nevertheless, I heard that she died two months after my visit.

Case 11.—A boy, aged eighteen, presented a large goitre affecting each lateral lobe of the gland. There was no proptosis, though his mother stated that a month ago the boy's eyes were as if starting from his head; but at that time he was wearing a tight ligature round his throat. The action of the heart was irritable, but there was no palpitation; his breath was short, and he was much troubled with a dry throat-cough. His pulse was 124, and hardly lessened in frequency during his attendance; his face was very apt to flush. No bruit could be heard, but the first cardiac sound was loud and

ringing. The patient was well nourished, and had not lost flesh. His mother had observed that the throat was enlarging during the last four years; it had increased lately with much rapidity. She affirmed that the neck had gained in girth nearly two inches, by actual measurement, during the preceding eight weeks. She added that the patient had been nervous, easily put about, and very irritable. Afterwards she described him as being very low and hysterical, sitting crying, and unable to bear a sharp word. At this time the cough was excessive, and prevented him from sleeping.

Case 12.—I have a note in my out-patient book, of a married woman, aged thirty-six, who had suffered much nervous excitement and depression of spirits for four years. She had been subject to palpitation for two years, and during this period the thyroid had been enlarging, until, at the time I saw the patient, it had attained the size of half a small apple, but was without bruit or thrill. Her pulse beat at 120. The heart acted very irritably. Her eyes were quite natural.

Case 13.—In this case the patient, a female, aged fifty-eight, suffered from an extreme condition of mental depression and hypochondriasis, with perfect loss of the power of self-control. To this condition was added severe frontal headache, vertigo, and general tremor, with very marked dysæsthesia (hypersensitiveness) of the scalp and of the integuments of the head, chest, and back. Her sleep was disturbed; she was liable to paroxysms of profuse general perspiration, and stood in the out-patient's room fanning herself and mopping her face; her feet were constantly cold; she was in a state of debility. The impulse of her heart was abrupt and nervous; the first sound had a very ringing character, but was without a bruit. The pulse varied between 140 and 160; the respiration was panting, 48 in a minute. There was general fulness of all the small vessels on each side of the face. With this condition was united a marked stare of the eyes, the pupils being contracted; and this stare, with the injected face, the stooping attitude, and the rapid breathing, imparted a marked peculiarity to the patient's appearance. The thyroid was of its natural size.

Her illness was of six months' duration, and was preceded by much distress and anxiety occasioned by the death of her husband and by losses in business.

ON HEREDITARY SYPHILIS AND THE CONTAGIOUS DISEASES ACT.

By GEORGE BARRACLOUGH, M.A. Cantab., M.R.C.S.

(*Concluded from page* 351.)

It is not merely in the interest of those who voluntarily incur the risk of infection; it is mainly in behoof of the unfortunate married women and poor helpless children, that the humane mind contemplates with satisfaction some such measure as the Contagious Diseases Act. There are many living besides myself who will remember the words wherewith an eminent obstetrician was wont to address his class in reference to these matters. "Gentlemen," he used to remark, "a pure young girl marries, and then in a few months how changed the scene! A blight seems to have passed over her existence; from a bright, happy girl, she has become an ailing, broken-down woman. The old women say, 'Marriage has disagreed with her.' Gentlemen, *we* know what has disagreed with her—it is this infernal poison." And then he would further add:—"Gentlemen, you will have to do with difficulties in the ordinary way of labour practice; but these difficulties will be as child's play compared with those you will meet with in labour complicated with syphilis."

My dear friends who rave on platforms about that of which you know so little, what would you say if the members of the medical profession declined to attend your daughters—left them to perish, in fact, as they inevitably would do—when they happened to meet with such adverse fortune as that just alluded to? For even *your* daughters may not be exempt. Very indignant you would be, no doubt. But what right would you have to complain, since you refuse us the protection of the Act? To show that our danger is no fancied one, I will narrate a little history which came under my own cognisance. In the course of travel I chanced to land in the Zulu Islands. Now, it so happened that the King of the Zulus, being an enlightened monarch, and desirous of keeping pace with other nations, had issued a decree making vaccination compulsory on all his subjects, and had appointed medical officers in every district to carry out the provisions of this decree. One of these officers hearing of my arrival, and ascertaining that I was a brother-professional, sent me an invitation to his house, which I accepted. On entering, I was welcomed by a quiet, amiable old gentleman, about seventy years of age, and evidently in very feeble health. I observed, in course of time, that his faculties, both of mind and body, were failing him; his memory was especially defective. He informed me of his intention to leave his home for a short time for the benefit of his health, and begged as a favour that I would take charge of his practice during his absence. To this proposal I willingly consented. Presently, in the course of conversation, he raised the palm of one hand, and called my attention to the state of the skin. I was rather surprised at what I beheld; but he inquired, "What do you think that is?" And, without waiting for my opinion, he continued—"My medical friends tell me that I am suffering from secondaries." "Well," I replied, "I presumed the affection was psoriasis palmaris syphilitica, but I was not rude enough to say so." "Don't you think," he proceeded, "it is very dreadful at my time of life? Don't you think it is very unfortunate?" "Truly unfortunate," I rejoined. "I know," he continued, "that this has not happened from any impure connexion. At the beginning of the year I attended a poor woman in labour. She had a sore on her person, and I suppose I took it from contact with that; for, after attending her, I was affected with a very troublesome sore on the first joint of my thumb,"—showing me the cicatrix of a large chancre. "It was such a long time in healing, I thought it never would heal. Yet it never occurred to me to think what it was, and now I am afflicted with all these symptoms. Do you think I shall recover?" I expressed a fervent hope that he would, though I had very little expectation of its being realised. Before his departure, this unfortunate gentleman handed me a lancet wherewith to vaccinate his patients, affirming that it was the one he ordinarily used, and in excellent condition. I received it and placed it in my pocket for use. No great length of time elapsed before an infant was brought for vaccination. I bethought me of the lancet, and, as is my custom, carefully examined it to ascertain whether it were perfectly clean. What was my surprise to find it thickly coated with dried blood and serum. I straightway applied to the niece, who acted as housekeeper to her uncle, for another instrument. "Why," she exclaimed, "cannot you use the one uncle gave you? I have no other." "Because," I remarked, "it is stained with blood." "Nonsense," she replied. "Indeed, I assure you it is so, as you will perceive if you have the goodness to inspect it." I handed it to her. "Oh," she exclaimed, "I know how that happened; I opened an abscess with it in uncle's neck some time ago, and I suppose I put it away without wiping it." After having endeavoured ineffectually to cleanse it—not with any view of using the instrument, but only to render it less dangerous in the hands of others,—I returned it to the niece, remarking that it might possibly infect anyone for whom it was used. Poor girl! she was quite ignorant of the terrible danger lurking in the instrument. As no other lancet was forthcoming, I effected the vaccinations with the point of a darning-needle. Had a Contagious Diseases Act been in force throughout the kingdom of Zulu, this poor gentleman might have escaped the ruin of his health. Further, had provision been made for the superannuation of vaccination officers when the decay of age rendered them unable to perform safely the duties of their office, this dangerous incident of the lancet would never have happened. How are we, in England, situated in this respect?

It has always appeared to me that a Contagious Diseases Act is the needful corollary of a compulsory Vaccination Act. Every day the onward march of syphilis renders it more difficult to obtain lymph from untainted sources. No one can estimate the blessing of vaccination more highly than I do. Nothing can ever displace Jenner from the lofty pedestal on which he stands, to all time, as one of the great benefactors of mankind; but it is a question whether it would not be wiser to lengthen the period for vaccination from three to six months, so as to give time for the signs of hereditary taint to develope themselves. The complication of teething with the maturation of the vaccine vesicle is undesirable, but this is a minor consideration in places where syphilis is very prevalent, as in Liverpool and other seaports, for instance. I know there are some medical men who disbelieve that lymph taken from infants affected with secondaries, if free from blood, is capable

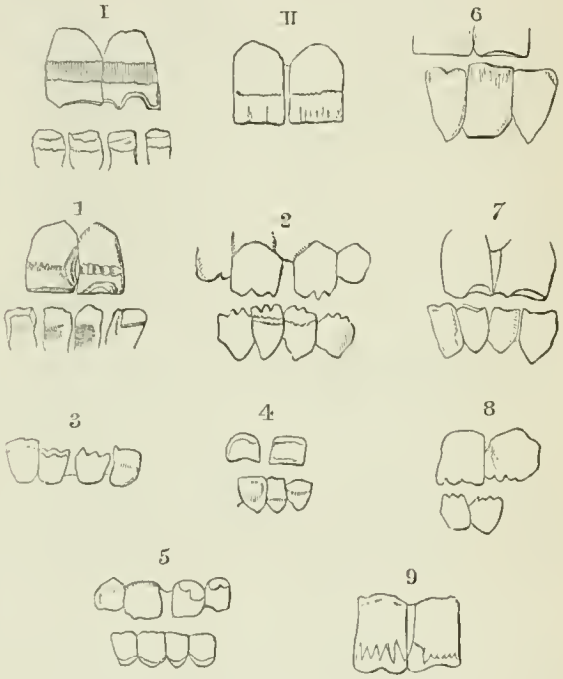
of conveying any infection. Much less would these hold that there is any danger in vaccinating from a source where there is only a remote hereditary taint, except perhaps in the case of their own children; they would hardly manifest such faith in their doctrine as to vaccinate their own offspring from a child suffering from secondaries, or even from a minor degree of infection. Till this difficult question is set at rest, which is far from being the case at present, we are bound to take every precaution,—and foremost in the way of precaution stands an efficient Contagious Diseases Act. The relation of preventive measures against the spread of syphilis to the preservation of a pure supply of lymph has not been sufficiently urged on the attention of the intelligent laity.

There is no spot on the face of the earth, not even excepting Marseilles, where syphilis is so rife, in all its phases, as in Liverpool. It would be difficult to ascertain which produces the more disastrous consequences in this town—the traffic in drink, or the traffic in syphilis. It is a question whether there be a single family in Liverpool, that has resided there for two or three generations, which is wholly free from some hereditary taint. Nowhere else can hereditary syphilis be studied with so much facility. If the general practitioners of Liverpool would make accurate records of what is passing before their eyes every day, what a flood of light might they not throw on the questions I have enunciated at the commencement! I know too well what the trials of the general practitioner are. I know that when, in the evening, they return to their homes fagged to death, and sink into the chair by their firesides fairly exhausted, they must feel little inclination to leave the companionship of wives and children to work at reports. Yet, we must appeal to them, because it is they, and not hospital physicians (who see their patients only for a short time, and know nothing of their family histories), who have the best opportunity for enlightening us as to the phenomena of inherited syphilis. There must be many old practitioners in Liverpool who have seen the children and grandchildren of syphilised parents grow up and intermarry. These men could do much to answer my questions would they set their minds on the task. It may be asking much of them in suggesting this in addition to their daily labours; still, the questions are momentous and worthy of some sacrifice.

Addendum.

Since writing the above a few other cases worthy of record have come under my notice. I happened, towards the close of last year, to be resident in a large village situated about twelve miles from a garrison town and four miles from a seaport of some pretensions. Of course, syphilis was widely spread throughout this district, and I had an opportunity of sketching some suspicious teeth. Sketch No. I. displays the incisors of a married woman, aged sixty-three years; and No. II. the two upper incisors of her daughter, a young married woman of twenty-four. In both instances is seen that magnitude of the upper incisors which, so far as my observations go, is so often associated with an inherited taint. The mother's teeth exhibit the horizontal line (to which I have previously called attention) very broad and very strongly marked; the left upper incisor has the characteristic notch; in the lower teeth is seen a narrow and serrated line. The notching is but faintly indicated in the teeth of the daughter, and the serrated horizontal line manifests itself only on the two middle and upper incisors. The vertical lining seen in this case is sometimes associated with white patches in the enamel, somewhat resembling the cloudiness which affects the cornea in specific keratitis. Her remaining teeth presented nothing worthy of note. This young woman was the mother of one child, a large infant of relaxed fibre, and about seven months old when I saw it. As the child had not cut any teeth, I had no opportunity, in this instance, of observing the appearance of the teeth in the third generation. No. 9 presents a drawing of the incisors of a woman, aged forty-nine years, residing in the same locality. These teeth have the usual large development, and are remarkable for the manner in which the serrations of the horizontal line dip down into the lower portion of the enamel. This woman was subject to fits, and possessed a silly, idiotic countenance. Of her two children, one expired in a fit at four years; the other, now twenty-four years of age, has, she assured me, outgrown the fits to which he was subject.

Quite recently, I was located for some weeks in a large village situated on a canal, about twelve miles from a seaport, and six miles from a market town. Syphilis was very rife here, and the general tone of morals was extremely low. Indeed, out of sixteen children which I vaccinated in a fortnight, nine were illegitimate. The gang system was in full operation; but the male and female workers are, however, now separated. In this place I was fortunate enough to meet with the rare opportunity of observing all the offspring of two syphilitic brothers. The teeth of these latter are exhibited in drawings Nos. 1 and 6. The father of these brothers, still living—a gay old gentleman, seventy-one years of age—suffers from a stricture arising through, or aggravated by, an attack of gonorrhœa contracted six years since. I made no inquiries concerning syphilis, as I was a stranger to him, and attended the old gentleman merely for an attack of bronchitis. But having contracted gonorrhœa at sixty-five, it is not unlikely that he was the subject of a primary sore between twenty and thirty.



There is decided notching in the teeth of both brothers, though this feature is more marked in the children than in their parents. Certainly, the teeth of No. 1 are very remarkable; there is the horizontal lining, but in the left upper incisor it was formed by a number of indentations (the enamel not being carious) dipping down into the dentine, and presenting the appearance of a series of little chambers. In one of the lower incisors a portion of tooth showed all the appearance of having been carefully sawn out, and afterwards cemented in. The prevailing hue of the teeth was a dirty yellow, and the whole surface irregular in the highest degree. It will be seen that the teeth of the children become less notched from the eldest downwards. But in No. 5, though there is scarcely any notching, there is rather a serious state of things exhibited by two of the upper incisors—viz., an ulcerative action tending to the circular form, which has eaten through the enamel and attacked the dentine beneath. Some months ago this little girl fell from a low bedstead and bruised her thigh. This injury, though trivial, was followed by a periosteal tumour. I examined the limb, and found the remains of a tumour still existing on the anterior aspect of the thigh, and apparently of periosteal character. Keeping in view the ulceration of the tooth, might we not, *à priori*, have predicted the likelihood of such a tumour arising from the accident to the limb? I presume that every surgeon has observed a carious condition of the teeth—of strumous rather than syphilitic character—associated with hip-joint disease in children. This strumous condition of the teeth may be crossed by syphilis, and thus present complications not easy to unravel. The fine black line seen at the base of this child's lower incisors was continued inwardly along the base of the molars.

The majority of these children were the reverse of robust, and No. 4 manifested that solemn and adult deportment which

so often characterises children tainted with syphilis. I am not aware that the remarkable gap here noticeable between the incisors is in any way connected with syphilis, though it is slightly indicated in H. and 9, and I have seen it before in syphilitic subjects. In the present case it was inherited from the mother, whose teeth, though of yellowish tint, showed no syphilitic peculiarity. In appearance, however, this lady exhibited the most marked syphilitic cachexia. She had borne five children, and had experienced in addition four miscarriages. The children of the second family were all unhealthy, and were affirmed so to be by their own mother, who had experienced much difficulty in rearing them. It is not a little remarkable that in this family the eldest daughter and son, aged respectively nineteen and seventeen, showed no notching or other syphilitic appearance about the teeth, the colour of their teeth, however, being a dirty yellow. The scalp of No. 7 was affected with a mass of sores after vaccination in infancy. This eruption the mother attributed to the use of impure lymph! The nervous anxiety which the mothers of syphilitic children betray as to the source of the lymph from which their own offspring are vaccinated is truly ludicrous. Little dreaming that the impurity is in the blood of their own children, they invariably assign impure lymph as the cause of any eruption which appears subsequently to vaccination.

After several years of observation amongst the manufacturing, mining, rural, and seafaring populations of this country, my latest experiences only urge on me more strongly the conviction that syphilis is spreading—chiefly through the agency of speed in locomotion—in such a manner that blood as yet untainted has its chance of escaping contamination diminished every year in exact proportion to the increase of cheap and swift locomotion; and tainted blood has every year a less chance of recovering itself. When medical men and educators have expended infinite pains on sanitation and hygienic exercise, it is really heartbreaking that an infernal poison should run riot unchecked in our midst, and undo in one moment what has taken years to build up. In face of these considerations, who is there having reared a daughter—strong, comely, and untainted—that does not shudder at the future which may lie before her? Certainly, he will not be unaffected who travels much, and knows intimately the history of many families. I write more in the interests of good form and manly vigour of body and mind than as taking any special interest in the pathology of syphilis for its own sake. Would that there were no such "pathos" to study!

As associated with the training of many hundreds of athletes, I know how difficult it is to find in youths tainted with inherited syphilis that spontaneous activity which is the very essence of athleticism, and without which the trainer may try his art in vain. To borrow a phrase from the fine arts, youths of this sort appear as if they had been scumbled from birth—a blight seems to have passed over them; their sluggish movements cause the gymnasiarch to despair. In vain does Ulysses mingle foils, gloves, and sabres with his wares; these remain unheeded, whilst the trinkets excite a solemn and languid pleasure.

A Pleasant Solution of Sulphate of Quinia.—Dr. Isaac Smith says that with aromatic sulphuric acid we get a passable solution, but the acid is often objectionable when not contraindicated. In practice I find the *spiritus ætheris dulcis* to be all that is desired. One ounce will dissolve two drachms, giving a transparent solution.—*New York Medical Journal*, August.

The Mischievous Sucking-Bottle.—Dr. Emerson in an interesting paper on Cholera Infantum, in the *Boston Medical Journal*, July 27, pronounces a condemnation upon the sucking-bottle, which is also so generally used with ourselves, among at least the children of the poor (as anybody may see among the passengers in the perambulators), as to call for more active denunciation than it has yet received. "There is a point," he says, "which I wish to allude to—namely, the great popularity among the rich and the poor of the nursing-bottle with the flexible tube. It is an invention of which Herod might have been proud. It is always in the baby-waggon and the crib, in hot sun or close air. The child falls asleep with the nipple in its mouth. The mouth is usually never washed; the bottle and tube are, 'with scalding water and soda,' so the mothers say, if you ask. Smell it, and see what you think."

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES UNDER THE CARE OF MR. MARSHALL.

Case 1.—*Compound Depressed Fracture of Skull, simulating Puncture—Trephined—No Head-Symptoms—Cured.*

Charles C., aged thirty-four, admitted March 10. He is a healthy-looking and well-nourished man, and has followed his occupation as bricklayer for fourteen years. At the time of the accident he was working at a new sewer; the pit was about twenty-five feet deep; a stone about one foot by nine inches by five inches fell on his head from the surface, and he was senseless for about five minutes; he then got better, and was brought up to the hospital in a cab. Patient was quite conscious when he was admitted.

On admission, there is a wound on the right of the middle line, over the occipital bone, two inches long. On introducing the finger, a fracture is felt about an inch and a half long, and another running from it transversely inwards. A part of the bone as large as a shilling is depressed, the centre of the depression being the line of fracture; thus it somewhat resembles a punctured fracture. No symptoms of compression whatever. Patient complains of pain at seat of injury. At 5 p.m. the patient was put under the influence of gas and ether. Mr. Marshall trephined and removed some fragments of bone, and elevated one piece at the inner part. The dura mater was uninjured. This was done under the antiseptic spray. A drainage-tube was inserted, and the flaps of skin brought together, and the antiseptic dressing was applied. At 9 p.m. the dressing was soaked through, and the wound was redressed. Five grains of calomel were administered; ice-bag applied to head; ordered iced milk to drink.

11th.—3 a.m.: Dressing soaked through, and was reapplied. 10.30 a.m.: Patient slept well all night. Bowels very freely moved; tongue covered with a thin white fur; no headache; pupils equal; no intolerance of light; complains of pain towards right shoulder. Temperature 100·3°; pulse 90, regular, rather soft.

17th.—He continued to do well. Wound was frequently dressed, and the bowels were kept well opened by means of calomel.

23rd.—Temperature 98°; pulse 58. Patient was up for an hour or so yesterday afternoon, and says that he feels all the better for it. This afternoon he complained of slight headache, which he thought was due to the bandage being tight. The dressing was removed, a few drops of pus were pressed out of the wound, and a drainage-tube was inserted through a small opening at the back part. The wound is healed up with the exception of that part. Dressing reapplied.

30th.—Dressing removed. Wound healed up. Complete absence of pain. Pad of dry lint and bandage put on head. Temperature 99·6°; pulse 58.

April 2.—Discharged to-day, wound quite healed.

Case 2.—*Compound Fracture of Skull, Vault and Base—Laceration of Brain—Removal of Loose Bone—Elevation of one Fragment—Shock—Death.*

James T., aged forty-six, admitted at 12.30 p.m. on July 13 1876. He was struck by an engine-buffer in the loins, and was thrown forwards, striking his head either against the metals or some carriage-steps.

On admission, a large wound over middle of forehead, extending from one inch above inner angle of left orbit four inches vertically upwards. At the middle of this there was a short transverse wound on left side; edges of wound bruised. Another small wound at back of scalp. A triangular piece of bone was lying loose on the surface of scalp; on the right side there was a piece of bone, two inches by one, depressed beneath level of skull. Above and below this there were two loose pieces of bone. Brain-matter was protruding from the wound; the fracture extended down to orbital arch. Insensible, occasionally saying, "O, my head!" "Go on." Could not answer questions. Pupils equal, normal, acted to light; no paralysis. Respirations 36, not stertorous; pulse 96, small. No blood from nose or ears; blood in mouth, and

under left conjunctiva. At 2 p.m. Mr. Marshall removed two pieces of bone; raised the large piece to proper level. Ordered carbolised lint, and carbolic oil. Enema of beef-tea and brandy. Immediately bone was raised he cried out. Is able to swallow milk.

14th.—Quite quiet, occasionally moving his hands. Retention of urine relieved by catheter. Death by coma.

Post-mortem, twenty-four hours after Death.—Weather very hot. Rigor mortis very well marked. On opening belly several ounces of dark fluid blood escaped. Large and small intestines greatly distended with gas. Blood in great and small sacs of peritoneum. Bones: Third, fourth, fifth, and sixth ribs of the right side fractured two inches from their cartilages; fourth rib on left side fractured an inch and a half from head. No fracture or dislocation of vertebræ. Lungs: Right pleura ruptured over fifth rib; it contains about two ounces of dark fluid blood. Upper lobe of left lung adherent. Both lungs deeply congested, especially the right. Heart: Pericardium deeply stained; blood in right auricle, soft clots; cavities deeply stained. Liver: In the under surface of the right lobe is a rupture an inch and a half long, and three-quarters of an inch deep. Posterior to this is a small laceration, the size of little finger, which can pass into an irregular cavity the size of a small egg. The surfaces of these fissures are covered with adherent clots. Liver pale. Kidneys healthy. Head and Brain: Wound of scalp as described in notes. A small quantity of purulent lymph. Considerable effusion of blood over right temporal fascia. Piece of bone detached from left side of frontal bone, one-third of an inch of orbital arch, one inch of forehead, a quarter of an inch of orbit. An oval piece of upper portion of frontal bone just beyond middle line is depressed beneath right half of frontal bone. Clotted blood beneath dura mater, which is adherent under surface. There is a transverse fracture extending from one inch from right of temporal ridge to one inch to left of middle line, and one inch above orbit. The right external angular process is broken through, and the left end of this transverse fracture extends into orbit, so that the right lower half of forehead is completely movable. Frontal bones detached from nasal bones. Three small scales of bone lying in dura mater, one an inch and a half long, consisting of inner plate and diploë only. Dura mater extensively lacerated over both frontal lobes, not in superior longitudinal sinus. No effusion of blood outside dura mater. In the upper surface of right frontal lobe the convolutions are lacerated. In the left frontal lobe they are extensively lacerated from upper to lower surface. Slight amount of arachnoid hæmorrhage. Small laceration on right margin of convolution; left entirely destroyed. No blood in ventricles. Roof of left orbit completely smashed up; roof of right broken into several fragments. Fractures extending through ethmoid bone and body of sphenoid. No fractures in posterior and middle fossæ; probe easily passed from both nostrils through ethmoid bone into skull. Left malar and superior maxillary bones separated, and the malar process of left superior maxillary bone completely detached.

LEEDS GENERAL INFIRMARY.

TWO FATAL CASES OF ACUTE RHEUMATISM.

(Under the care of Dr. EDDISON.)

[Reported by Dr. E. H. JACOB, Resident Physician.]

Case 1.—R. B., aged thirty, a thick-set, powerfully built man was admitted into the Infirmary, July 18. Seven years previously he had been laid up sixteen weeks with acute rheumatism, and had then had blisters applied to his heart. Six days before admission he was seized with pain and swelling in his big toes, the pain soon extending to the knees, shoulders, and back. He had been treated with alkalies, with some relief to pain. He had drunk hard for two days before the seizure.

On admission, his knees and shoulders were swollen and tender. There was a copious red miliary rash on the skin; temperature 103·8°, perspiring freely; tongue coated; pulse 130. The heart's action was very rapid and irregular; but a systolic murmur was faintly audible at the apex. He was ordered ten grains of compound powder of ipecacuanha at night, and thirty grains of salicylic acid every two hours.

July 19.—Slept two hours after the powder. Is delirious this morning. Temperature at 8 a.m. 103·4°, at 11 a.m. 105·9°; pulse 150. He was put into a bath at 95°, cooled to 75°, which reduced the temperature to 98·6°. He was quiet for some time after, but soon became delirious again, refusing to take medicine. He fell asleep at 9.30 p.m. for about two hours and a half. Respirations 36; pulse 120, full and steady; temperature 103°. On waking he was partially sensible, complaining of pain in his shoulders.

20th.—9 p.m: The temperature during the day has varied between 102° at 1 a.m. and 104·6° at 9 p.m. He has taken four doses of salicylic acid (twenty grains) and a good quantity of food, but has been delirious all day, and occasionally violent.

21st.—Had no sleep, but has been very delirious. Temperature at 8 a.m. 103·6°; pulse 120. Was bathed as before. Temperature after bath 99°. He slept for half an hour at night after thirty grains of chloral, but took the medicine regularly. Temperature at 8 p.m. 104·4°.

22nd.—Temperature at 9 a.m. 105°. He was put into a bath at 95°, cooled to 70°, and then raised to 86°. He remained in about fifty minutes. Temperature after the bath 96·8°. 9 p.m.: He dozed occasionally during the day, and has been very quiet since the bath. He slept an hour in the night, and a little in the morning.

23rd.—Temperature 9 a.m. 103·8°, 9 p.m. 103·6°; respirations 28, noisy; pulse 130, much weaker. Tongue dry and coated; pupils normal; subsultus tendinum. Omit the acid, and take five grains of quinine every four hours, and four ounces of brandy in the day. He slept five hours and a half in the night after forty grains of chloral.

24th.—Temperature 9 a.m. 102·6°, 10 p.m. 104·8°.

25th.—Temperature 9 a.m. 103° to 103·6°, at 12 noon 105°, at 3 p.m. 105·2°. He remained sensible till 2 p.m. At three he was treated with cold affusion, which reduced the temperature to 100·6°. At 10 p.m. the temperature was 104°. Hands much swollen. Liq. vesicator. applied.

26th.—Temperature throughout the day remained about 104·4°, once rising to 105·2° for an hour. The patient complained of stiffness in his legs, but all signs of rheumatism had gone. There was considerable muscular tremor. Urine 1025; no albumen.

27th.—Temperature 3.30 p.m. 105·4°; he was bathed for thirty minutes, which reduced his temperature to 97·8°. Temperature at 11 p.m. 103·8°. He remained in a typhoid condition till after the bath, when he was sensible and had some sleep; coughs a little, and complains of general numbness.

28th.—Was sensible all day; both great toes and right ankle swollen. Temperature 7 a.m. 104·6°, at 11 p.m. 100·2°. Sodium salicylate, thirty grains, added to the quinine.

29th.—Is much worse. Face dusky; bowels very loose. Takes very little food; is sleepy and apathetic. Temperature 101·2° to 103·6°.

30th.—Better; slept six hours. Takes food better; answers sensibly. Complains of stiffness in joints, but no great pain. Temperature 102° to 103·6°.

31st.—Temperature 101·6° to 103·6°; dozed a good deal.

August 4.—For the last three days the temperature has varied between 101·6° and 104°. He slept at night after large doses of chloral, but was only occasionally sensible. Bowels have been very loose, for which he was ordered a pill of opium and sulphate of copper. Took food well. Temperature at 5 p.m. 104·8°.

5th.—Temperature at 10 a.m. 104°; pulse 130. He was bathed, the temperature rising afterwards to 103°. Cough rather troublesome.

7th.—Has not been sensible since the 5th. Tongue very dry; bowels loose. Temperature 102°; pulse 130.

8th.—Tolerably sensible; slept well. Breathing oppressed, with bronchial râles; bowels less loose. Temperature, morning 101°, evening 103°.

9th.—Not sensible. Temperature 101·2°; pulse 140.

10th.—Breathing noisily; fine crepitation heard all over lungs. Temperature, morning 101·4°, evening 100°; pulse 140.

11th.—Temperature 9 a.m. 99°; pulse 120. Comatose. Died at 11 a.m.

Post-mortem, twenty-five hours after Death.—Pericardium contained four ounces of serum. The heart weighed fourteen ounces; both sides dilated, and somewhat hypertrophied. Aorta atheromatous, but valves competent; mitral valve incompetent, and covered with a ring of vegetation. Both lungs were œdematous at the bases, especially the right. The bronchi showed considerable inflammation. Liver large, soft, and somewhat fatty. Brain somewhat anæmic; dura mater very

adherent at upper part. Kidneys congested; intestines normal; spleen normal size, but very soft.

(Under the care of Dr. CLIFFORD ALLBUTT.)

Case 2.—H. M., aged nineteen, admitted July 29. Twelve days before admission she had had slight shiverings, followed by catarrhal symptoms, and some tenderness of joints, especially the hips. She took to bed six days before admission.

On admission, ankles, knees, and wrists were swollen and tender. She had had severe pain over region of heart. There was a slight systolic murmur at the apex, and over one spot a faint rub audible. No cough; tongue coated; bowels open. Temperature 102·2°; pulse 120. Ordered thirty grains of sodium salicylate every three hours.

July 31.—Feels better, but was slightly delirious last night. Pain in joints gone except from knees. Vomited the medicine three times to-day. Temperature, morning 106·6°, evening 101·4°.

August 1.—Seemed fairly well in the morning; temperature 101°. 9 p.m.: Is very restless, breathing noisily; respirations 36; temperature 103°. She continued very restless, talking much, and at 11.30 was violently delirious, shouting and screaming; temperature 105·2°. She was put into a bath at 93°, cooled to 70°, for half an hour. Soon after the bath she became quiet and sensible, and slept for one hour and a half. Temperature 1 a.m. 99·2°, at 4 and 7 a.m. 100·6°.

2nd.—9 a.m.: Is sensible this morning, but restless, complaining of heat of head and thirst; pulse 120, weak; tongue dry. She says it hurts her to lie on the left side. Dry râles audible all over chest. Respirations noisy, 32; face flushed. During the last twelve hours she has had four doses of salicylic acid, thirty grains, without vomiting. No swelling of joints; no sweating, but copious red miliary eruption. 2 p.m.: Temperature 102°; pulse 100. 3 p.m.: Temperature 105°. 3.40 p.m.: Temperature 105°; pulse 135. She was bathed as before. Temperature after the bath 100°. She was quite quiet but unconscious before the bath, but after seemed partially to regain consciousness. At 5.40 p.m., temperature 103°; at 7 p.m., 107°, pulse 120; respirations 40; almost comatose. She was bathed as before, the bath being cooled to 65°. Did not regain consciousness after the bath. Temperature at 8 p.m. 99°; pulse 120; respirations 32. At 9 p.m., temperature 100·3°; at 10 p.m., 103°; at 11 p.m., 105°; at 11.30 p.m. it was 106·8°. She was then bathed again; the temperature afterwards being 97·8°. She seemed very faint, and was given brandy and enemata of beef-tea.

3rd.—At 1 a.m. the temperature was 100°, at 2 a.m. 102°, at 3 a.m. 106°. She died at 4 a.m.—temperature 106·2°—the pulse having been so weak for the last few hours that it was not thought desirable to bathe her again.

Post-mortem.—Both lungs were collapsed and solid. There were about two ounces of serum in the pericardium, with a few flakes of lymph. Cardiac valves healthy. Brain normal.

Remarks.—In the above cases the salicylic acid, which has been used successfully in a large number of cases in this Infirmary, seems to have completely failed, unless we may attribute the rapid disappearance of the joint-affection in Case 2 to its use, though the temperature rose. The effect of the cold baths, though it did not on each occasion of its employment restore consciousness, was most marked in producing quiet and, generally, sleep. In the first case the rapid appearance of muscular tremor, considering his previous habits of intemperance, would seem to indicate possibly delirium tremens as a factor in the disease.

THE NEW YORK WATER-SUPPLY.—The difficulties which attend the efficient supply of pure water to large aggregated masses of population are illustrated just now by the loud complaints made at New York concerning the foul smell and taste of the water supplied by the Croton Aqueduct. It has always hitherto been supposed that no capital in the world was so secure of a constant supply of the purest water, the watershed supplying the Croton water extending over an area of 339 miles, and being capable of supplying four times the population of New York, free from all pollution derivable from sewage, factories, and the like. Owing, however, to the prolonged drought, the water has become very foul, and this has been traced to the accidental admixture of vegetable refuse, and an extra accumulation of green scum, technically termed "nostic." The *New York Medical Record* says that additional engineering operations will soon overcome these defects, and prevent their recurrence

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 30, 1876.

SUPERVISION OF MEDICAL SCHOOLS.

OUR "Students' Number" has, long ere this, been anxiously scanned by many who will shortly be enrolled and registered as students at the various schools throughout the country: many, we fear, will have almost lost themselves in the maze of rules, regulations, requirements, and recommendations which are to be found in its pages; and the recollection of our own misgivings years ago rises up before us as we picture the uncertainty with which a student is beset not only in the choice of a "School," but also in the interpretation of the rules which determine the right of *entrée* to the various examinations of the corporate bodies who grant the much-coveted diplomas which are the end and object of the student's career.

And no doubt there is much—very much—both to perplex and to discourage. There are anomalies in the present system of medical education, which are the results, as well as the characteristics, of British conservatism, parallels of which may be found in other professions beside that of medicine. But it is with medicine that we shall deal. There are now no less than eleven schools of medicine in the metropolis catering for students, each one giving the courses of lectures, practical and theoretical, such as are required by the examining bodies. These schools are self-constituted. We believe no other real qualification is needed than that each school shall be attached to a hospital with a given number of beds. We do not at all underrate the importance of this one rule; we only just state the fact. These self-constituted schools are got up for the most unselfish purposes no doubt, and are worked according to the letter of the law as promulgated in Lincoln's-inn or Pall-mall, and thus claim to be, and are, recognised. But, so far as we know, neither the authorities of the Colleges of Surgeons nor of Physicians take any further cognisance of these establishments. Of course, the lecturers are duly qualified, in the sense of having both degrees and diplomas, and most of them

are men well able, even pre-eminently so, to practise their profession in the various branches which they take up. As medical men, happily passed and registered, we are quite satisfied with the *status quo;* but as public journalists we are quite unable to say anything in praise of a system which is tolerated simply because it is old, and which is perpetuated simply because those who ought to reform it are too much engrossed with the ever-accumulating cares of private and of professional life, and feel unequal to the task.

In addition to the regulations required by the examining boards, which, we are bound to admit, are really framed with a view to facilitate the student's career, and with which we have nothing whatever to find fault, there are others, framed by the various schools, the sole objects of which, it seems to us, are to harass the student, and apparently to counterbalance certain shortcomings which even the prestige of old names and old foundations is unable to hide. Among the first of these regulations we would point out that scholarships, prizes, and many of the hospital appointments are only open to matriculated, full, or perpetual (according to the nomenclature adopted) students of a hospital. Now, although such a rule is clearly protective, it is suggestive of weakness. For if a student enter at a hospital, and gain a scholarship, he will certainly stick to that hospital or its school, *provided the teaching is good and thorough*, without having to be bound to it by any such bonds as those referred to; and if the teaching be poor, not even the bribe of a fat scholarship will completely satisfy the craving for a good sound education (for the want of which many a good man is lost to the profession), or reconcile a student to a system of teaching which is not only radically wrong, but as obviously insufficient. It will fail to generate a feeling of *esprit de corps* and make the student speak well of his *Alma Mater* in after-life, on both of which factors the success of every school mainly depends. The success of a school, however, though intimately connected with its management, is not our subject at present. We are dealing with the more prosaic theme of regulations, and we repeat that it is a matter for regret that the managers of our London medical Schools find it necessary to fetter the distribution of their prizes by such rules as we find given in the various prospectuses now before us. Even irrespective of prizes, we find that a student is at a disadvantage as regards hospital appointments if he change from one school to another. This is certainly very much to be regretted; for nothing so tends to narrow a man's mind as a narrow field of observation, and in this sense the largest even of our metropolitan hospitals deserves the epithet. Of course, if each year were a separate and independent period of study, so would also the emoluments be. Exhibitions for two or three years would have to be abolished, and the student who wanted an annual prize would have to give an amount of work each year which in the end would bear fruit. If each year were spent with such an object in view, and in a different school, with what a variety of views and of practice would not an industrious student be brought in contact.

The drift of our remarks will be clearly obvious, and we need scarcely say more. The Colleges require a certain standard of knowledge on certain subjects, and students who present themselves for examination are "referred" unless they possess this knowledge. To supply it various schools have been established. Although working for the same end, each one is "in opposition" to the other, and tries by all available means—advertising, giving scholarships, hospital appointments, and the like—to attract a larger number of students than its fellows. Having got them, it imposes such restrictions that change is next to impossible, however much the student may desire it. As we have already said, these regulations are protective, and it is of course only right that certain conditions should be imposed. But, speaking from the student's point of view, we are bound to say that these rules are very one-sided, for we do not find at any one school that there is the slightest guarantee offered that the students shall really get a sound education. Beyond the mere fact that certain lectures shall be given, that a tutor shall be at hand *two or three times a week to help students in their work*, there is nothing which implies a thorough system of training. In other words, the students are met at every point by stringent rules—a student may not do this, a student may not do that—a student will not be eligible for this unless, etc.,—he will be ineligible if, etc. But the teachers, on the other hand, are absolutely unfettered; they make laws for themselves to suit themselves, and as they have no higher tribunal than themselves, they are practically free to do as they think fit. Such a system is radically bad, and it is as radically unsuccessful in its results. Every thinking man must read the pass-lists of the Royal College of Surgeons with regret; to think that so small a proportion of the candidates who present themselves get through the examination is in itself suggestive, alike to the College as to the School authorities. At different times there have been outcries that the medical profession was retrograding, and as a result of this the College authorities have revised their rules and altered the plan of their curriculum. First a longer period of study; then the division of studies into two parts; next an increased stringency in the examinations themselves; and, finally, the selection of specialists as examiners in the various branches of knowledge required. The result of all these changes has been, it seems to us, greatly to decrease the number of successful candidates.

Now, although the unsuccessful candidates would themselves acknowledge the justice of their rejections, are they entirely to blame for it? Is it not possible that the fault may lie in the manner of their training? Surely the men are as good, taken as a body, as formerly; they are certainly more highly educated; and we believe that, if the training were sound, they would be found equal to the task of passing such examinations as are required of them.

With this long introduction, we will now pass to the more immediate subject of our remarks—"the supervision of medical schools." We advocate such an innovation (not for the first time) because the present system has signally failed. We venture to suggest that the Royal Colleges should appoint a number of inspectors; that these should be chosen from the different schools much as are the present examiners, and that they should work in pairs. If the same care were exercised in the selection of these inspectors as in the election of examiners, and if the same spirit animated the former as seems to animate the latter, there can be no doubt that the pass-lists of the College would soon tell a different tale. If a school inspector could reject a lecturer because his lecture was below a certain standard, either as regards subject-matter or adaptability to the requirements of the students to whom it was addressed, we should soon have a decrease in the number of lecturers, and an increase in the quality of those who continued to hold their chairs. We think that it is a manifest omission on the part of the College authorities to leave these matters entirely in the hands of the various Schools. It is simply impossible for a student to tell his teachers that their lectures are not "up to the times"—that the physiological lectures, for instance, even if carried away *verbatim*, would not answer the requirements of the College examinations; or that the lectures on medicine or surgery, though good and true, are personal experiences rather than lectures on the art and science of medicine or surgery. Hence there should be some one to do it for him. These are not mere ideas; they are facts that anyone so minded may verify for himself during any week in the coming session.

The College might also extend this supervision to class-books. A sort of signed criticism in the "Review" column of one or

other of the medical journals would, if properly carried out, spare the student many an anxious moment, and save him from buying many a book which is little less than useless to him after he has got it. There is no end to the improvements which such supervision would bring about. And if even we gained nothing but the substitution of professors who made their subjects their speciality, and did away with the *dilettanti* who—for the sake only of filling up the list of lecturers, and maybe also for the emoluments which accrue therefrom—now lecture on subjects about which they knew little beforehand, and care less, we should indeed have made least one at step in the right direction.

VIRCHOW ON THE RELATION OF TYPHOID FEVER TO DRAINAGE.

Professor Virchow, of Berlin, contributes to the *Deutsche Medicinsche Wochenschrift*, Nos. 1 and 2, 1876, an interesting paper on the relation of typhoid fever to the cleanliness of towns; and first he shows how the mortality from this disease had been diminished in certain German towns by providing them with a proper system of sewers. Thus, in the case of Hamburg, which has had a regular system of sewers longer than any other German city, the most carefully prepared statistics show that while in the seven years before the introduction of sewers (1838-44) the mean mortality from typhoid fever per thousand deaths from all causes was 48·4, in the nine years (1845-53) while the sewers were in progress it fell to 39·3; while in the first eight years (1854-61) after the works were completed it was 29·3, and in a second period of eight years (1862-69) it diminished to 25·7—that is to say, to almost less than half what it was before the sewers were made. In the years 1872-74 the reports of the medical inspector, Dr. Kraus, revealed the important fact that the proportion of those suffering from typhoid fever was on the average in a thousand living persons 2·68 for the parts of Hamburg in which the sewer system is complete, 3·2 for those districts in which it is nearly but not quite finished, and 4·6 for those which have no sewers at all—namely, the country districts beyond the suburbs. In two of the villages included under the latter category the average sickness per thousand from typhoid fever in 1872 was 7·0 and 6·6, against 2·68 in the city itself—a startling contrast, not at all favourable to the rural districts.

Another example of the influence which may be exerted over the prevalence of typhoid fever by proper measures is shown by the case of Halle. This town during 1852-61 had an average annual mortality from typhoid of 36; in 1862-65 a severe epidemic raised the mortality to 194, 215, 254, and 160 per annum; in 1866-69 the deaths were 62, 65, 65, and 42 respectively; and in 1870 they fell, *with the introduction of a new water-supply*, to 14! Professor Virchow passes on to consider the distribution of mortality from typhoid fever over the different seasons of the year, and he shows that in Berlin the number of deaths from this cause begins to increase with great constancy in July, is very high in August and September, and highest in October; in December and January it falls, and reaches its lowest point in March, rising again a very little in April and May, and falling once more low in June. The same state of things holds good for Thüringen, Nassau, Saxony, Silesia, and French Switzerland, also for Schleswig-Holstein.

On the other hand, this rule no longer applies when the statistics of certain parts of Bavaria, including Munich, are compared with those of Berlin and North Germany, for here, speaking generally, the winter and spring, and especially the period from January to April—the best time in North Germany—are the most unfavourable, though the acme is reached in Munich more towards the spring than in the rest of Bavaria, where the winter months suffer most. Both for Munich, however, and the rest of Bavaria, the fact remains that the warmer months show the least mortality from typhoid. For those who are specially interested in this subject Professor Virchow supplies the necessary figures in support of his statements; it is, however, more suitable to our present purpose to give the conclusion to which he has come as to the cause of the difference between the season of greatest typhoid mortality in North and South Germany, taking Berlin and Munich as representatives of the two districts. Both towns are built on a comparatively level and very porous soil, that of Munich being the more porous of the two. Now, in both cases statistics show that the one condition which bears a constant, *but inverse*, ratio to the mortality from typhoid is the height of the water in the soil (*Grundwasser*), as estimated by its level in the wells. Now, in Berlin the wells are fullest in the winter or spring, especially in February and April, and they are lowest in the summer or autumn, especially in September, October, and November. In Munich, on the other hand, they are fullest in the summer (July and August), and lowest in the winter (December and January). In both cities, as the water rises the typhoid diminishes, and *vice versâ*.

In the course of his paper, Professor Virchow takes occasion to point out the position which he occupies at present with reference to Pettenköfer's theory that the rise and fall of the water in the soil (*Grundwasser*) is the main element in producing typhoid epidemics. He admits the truth of Pettenköfer's theory with regard to certain places—*e.g.*, Munich and Berlin,—but denies that it is universally applicable. He considers that the *Grundwasser* only exerts an influence where the soil contains impure matters, or where it is itself impure. "Pure *Grundwasser* in a clean soil I so little regard," he says, "as a cause of typhoid, that I never hesitate either to allow it to be used as drinking-water, or even to propose its use."

Professor Virchow believes in the origin of typhoid by contamination of drinking-water with impurities soaking into them from without, which Pettenköfer appears to deny, in spite of a great array of facts. On one other point, which is independent of the *Grundwasser* theory, he is at issue with Pettenkofer. The latter does not believe in the *contagious* nature of typhoid fever, nor does Virchow claim for contagion a large share in the production of epidemics. What he says is this: that he has been convinced, not only by the numerous reported cases which have occurred in villages and small hamlets, but also by a series of house epidemics which he has been able to carefully investigate at Berlin, that typhoid fever can be transferred from one person to another. Whether long cohabitation, he adds, be necessary or not to make the contagion effectual, the fact remains that it can be so transmitted.

Although there may be little or nothing that is novel in the contents of Professor Virchow's paper, yet its writer's fame and influence in Germany are so great that all that falls from him deserves consideration.

In urging on the introduction of scientific drainage and wholesome water-supply into the backward cities of his native country he is rendering a vast service to it, for in sanitary matters as yet Germany does not take the lead.

TREATMENT OF INSANITY IN AMERICA.

We have not at hand a list of all the papers to be read, and the subjects to be discussed, at the International Medical Congress, Philadelphia, and therefore cannot feel sure whether the subject of insanity is or is not in any degree to be brought forward. But a partial programme that we some time ago saw of the proceedings of the Congress covered such a vast extent of ground that it is hardly possible that the treatment of the insane, or the study of insanity, should not, from some point of view, be included; and we are sure that

our American brethren might give us some very useful and instructive information if they would place before us in a concise form the results of their experience, and the conclusions they have arrived at on some points in the management and treatment of the insane, about which opinions still differ. We have before us now one of the Annual Reports of the Board of State Charities of Massachusetts;(a) and from the sections concerning insanity in Massachusetts, and the State Lunatic Hospitals, we find that many of the burning questions as to the management of the insane with us are also exercising the minds of our brethren, and of the civil authorities, in America.

We propose to note shortly, for the benefit of our readers, some of the information contained in the Report; but we may be allowed to observe, *en passant*, with some of that kind of satisfaction which human nature is said to derive from fellowship in misfortune, that—in some points, at any rate—things are not better managed in America than with us. The Board find great fault with the extravagant cost of two of the rebuilt lunatic hospitals. They were at first estimated to cost $600,000 each; but additional grants have been asked for year by year, till, according to the calculations of the Board, the two hospitals, "before they can be fully completed, with all their surroundings, and furnished for occupancy, will cost the State *two millions and a half of dollars*." Each of the two buildings was calculated to accommodate 400 patients: the "construction account" will therefore amount to $2500 for each patient, while the former construction account was only $1000 for each patient, and the Board consider that there is no evidence or proof that the great additional cost would result in a speedier and more successful cure of the patients, or in greatly improving their condition and health.

The opinion of the Board is strongly against very large hospitals. They consider that if a large proportion of the patients are recent cases, the total number should not exceed 300. "If you go beyond that aggregate, defects and evils appear which more than counterbalance the supposed advantages of larger hospitals." And even chronic cases can be better treated, they consider, in small than in large hospitals: in the management of chronic insanity the most valuable remedial agents are pleasant occupation for mind and body: physical exercise, especially by means of *work* in the open air; amusement; and, as far as possible, *personal freedom*, "which has a powerful tendency gradually to restore the patients to a normal state of mind, self-preservation, self-support, and self-government." But, say the Board, "abundance of light and pure air cannot easily be obtained in large establishments; neither can the means for mental and moral improvement, nor the opportunities for the exercise of the social faculties be so well secured there. As to employment and freedom, these can be found to a far greater extent in small than in very large institutions." The evil attending the treatment of acute and chronic, hopeful and hopeless, cases together is much insisted on, and greater attention to, and facilities for, the classification of patients strongly recommended; and the early treatment of cases is, of course we may say, urged as of the highest importance. The Superintendent of one of the hospitals says, "The early period of the disease is the golden time for treatment, and not a moment should be lost in obtaining competent medical advice, which should be promptly and thoroughly followed." And the Superintendent of the Taunton Hospital shows that out of 3131 patients admitted when the disease was of less than six months' duration, 1351 recovered; while of 3088 admissions in which the insanity was of more than six months' standing, only 317 recovered. "In other words, the chances of recovery in hospitals are four times as great when the patient is committed at an early period in the disease as when the disease has existed for six months or more before the admission." We fear that it will be many years, perhaps even a generation or two, in America and in Europe before the people at large learn to commit all cases of insanity, at once and from the first, unreservedly to the best system of management and treatment. And it will probably take quite as long to educate governments and nations up to employing all known and possible means for the prevention of mental, as well as of bodily, disease by hygienic and sanitary agencies. In the Report before us the paramount importance of the *prevention* of insanity is dwelt on at some length. The Board quote, with high approval, a paragraph on the subject from the Report, for 1874, of the Commissioners in Lunacy for Scotland; and one of their own Superintendents writes: "Finally, an ounce of prevention is worth a pound of cure. It is to a more careful observance of the laws of physical, mental, and moral hygiene that we must look for a diminution of insanity."

The total number of patients remaining in all the hospitals —State, county, and private—for the insane in the State of Massachusetts, in September, 1875, was 2283; and the average number under treatment during the year was 2259. This gives too small a number of cases to furnish any very safe or valuable statistics; but the fact that while the total number of cases treated during the year was 3472, those figures represented only 3281 individuals, points to one of the sources of error that may vitiate statistics relating to recoveries—the duplicating of cases by the readmission of the same person. Dr. Eastman, the Superintendent of the Worcester Hospital, observes, speaking of the statistics above quoted: "Of the year's new cases, 108, or nearly 33 per cent. of the whole number, had been in some hospital before, and doubtless many of them were discharged and counted as recoveries elsewhere." And Dr. Earle gives some interesting and highly suggestive facts from the history of the Northampton Hospital: he instances seven persons who have contributed thirty-seven recoveries, or "cures," to the statistics of that institution, "and yet one of them finally killed himself while insane, and two of the others are known to be in hospital at present." He tells of a hospital in another State from which one person alone went out "recovered" no less than twenty-two times; and he gives, from still another State, the case of a woman "who contributed six to the total of recoveries within a single year, was discharged as recovered forty-six times in the course of twenty-nine years, and yet ultimately died as insane in the same hospital." Of course, it is to be acknowledged that there are cases of genuine recurrent or periodical insanity; and it may be a question whether or not recovery from each one of the paroxysms should not be reported as a recovery from insanity. We are glad to see that when considering the question, "Is recent insanity increasing?" the Board arrive at the conclusion that though the aggregate of chronic cases to be cared for increases, yet "it does not seem probable that recent insanity in Massachusetts is gaining ground—that is to say, there do not appear to be more attacks of insanity in a year now than formerly, considering the increase in the population."

In view of a "movement" of the day, it is worth noting that at the Worcester Lunatic Hospital an experiment instituted by a former Superintendent has terminated by the resignation of "the female physician in charge of the female department"; and the Secretary of the Board remarks: "Whether another woman may ultimately be appointed to the position, or whether the idea of having a female physician has been finally abandoned, does not appear, but the female inmates are now under charge of a male physician."

On the whole, we gather from the Report that, in the treatment of the insane, America may yet learn something from the Old World; but we might learn something of value from the experience of America in the general management and

(a) "Twelfth Annual Report of the Board of State Charities of Massachusetts, to which are added Reports from its Departments." January, 1876. Trübner and Co., London.

modes of providing for the insane population, could we get the information in a concise and trustworthy form.

THE WEEK.

TOPICS OF THE DAY.

At a recent meeting of the Port Sanitary Committee of the Corporation of London, the Medical Officer of Health reported that during the months of July and August last a total of 1324 vessels had been visited in the river, and 912 in the docks. Twenty-eight only of those visited were outward-bound, as it is the rule only to examine the forecastles of inward-bound vessels, and, if possible, not later than twenty-four hours after arrival in port. In nineteen cases structural and other arrangements were suggested to promote the health and comfort of the respective crews. It is observed by the officers of the Committee that those vessels requiring the most constant sanitary supervision come from Guernsey, or from some of the north-eastern ports of the kingdom. Fifteen parcels of clothes belonging to seamen who had died abroad were disinfected, it having been ascertained that in each case these men had died of small-pox, yellow fever, cholera, or some other contagious or infectious disease. Port sanitary work has in this respect been much facilitated by the issue of an official circular (suggested by the Port of London Sanitary Authority) from the Board of Trade to all consuls and colonial officers abroad, requesting them, in sending all such parcels of clothing to the United Kingdom, to notify the particulars, in order that they may be dealt with on arrival promptly and effectually. An important report on the conditions of the canal barges was also presented by the Port Medical Officer, and a copy was ordered to be sent to the Local Government Board, as some legislation as to the canal population is said to be contemplated next session. Nuisances occasionally arise between Woolwich and Gravesend from the landing of foul manure and street-sweepings brought from the metropolis in sailing barges. As these nuisances affect exclusively the inhabitants of Grays, Greenhithe, and other villages, it appears desirable that the respective waterside authorities should take steps so as to compel the discharge of these objectionable cargoes at comparatively uninhabited situations. No epidemic occurred in the Port during the intensely hot weather, and no special increase of diarrhœa was noted. The sanitary state of all the school-ships is also reported to have been very satisfactory.

It is stated that the Duchy of Saxe-Gotha has taken the lead in allowing cremation, and the town of Gotha has granted a site for the purpose. The German Society for the Introduction of Cremation has paid a sum of 15,000 marks to the town of Gotha to cover the necessary expenses of erecting a cremation apparatus. Strict regulations have also been published by the police, ordering the examination by competent medical officers of all bodies submitted to be burnt, so as to prevent cremation in all cases where the causes of death have not been properly ascertained. Bodies sent from abroad are to be subjected to the same, or even more stringent, rules. At first no corpse is to be burnt unless the deceased had expressed a wish to that effect, and the relatives have approved of it.

As a rule, it cannot be said that boards of guardians are particularly celebrated for common sense, but the Westbury-on-Severn Board is certainly to be congratulated upon a recent decision. Acting upon the report of a committee specially appointed to consider the question of discontinuing the use of alcoholic drinks to paupers, this Board has decided not to abandon their use, but in all cases to obtain the best classes of wines and spirits when the same are recommended by the surgeons, instead of having recourse to inferior qualities, as has been the custom hitherto.

Under the Infant Life Protection Act of 1872 no person is to receive for hire more than one child under a year old, for the purpose of nursing it apart from its parents, except in a house registered by the local authority, the applicant being a person of good character; the registration to be in force for a year only. The Metropolitan Board of Works, the local authority for the metropolis, report that during the year 1875 in their whole district the total number of houses registered was only five, and they were only authorised to receive eleven infants. The Superintending Architect observes in his report that until this Act shall be amended it seems impracticable to obtain any satisfactory observance of its provisions regarding registration of nurses.

Dr. H. Crookshank, who served during the Franco-Prussian War in the English Ambulance at Metz, Sedan, and Epernay, left last week for Constantinople in company with Dr. Samuel Gordon, of Dublin, with the object of attending upon the sick and wounded in Turkey. If recent reports are to be credited, the plague has broken out badly in the army of Abdul Kerim Pasha, in consequence of which the Turkish Commander is compelled to change his positions before Alexinatz every three days, and to burn the tents and huts occupied by his troops. There may be no truth in this rumour, but it is not altogether improbable when it is considered that the Turkish levies have been drawn from all quarters, and that the disease may, therefore, have been imported from some of the districts where it was recently prevalent. In addition, the defective sanitary arrangements of the Turkish camps would go far to foster the outbreak of an ailment which admittedly owns its origin to filth.

The peculiarity of the "Peculiar People" will have received a severe shock from the sentence passed upon John Robert Downes at the Central Criminal Court last week. The prisoner was a labouring man at Woolwich, and was charged with the manslaughter of his daughter, aged one year and five months. Mr. Sharp, a surgeon residing at Woolwich, had made a post-mortem examination of the child, and proved that it bore a generally healthy appearance, and he attributed its death to scarlet fever and a diseased condition of the kidneys, both of which maladies were amenable to medical treatment, and the chances of saving the child's life were diminished by the absence of that treatment. It was proved that the only remedies attempted to be applied to the child were prayer and anointing its body with oil. The Clerk of the Court was also called to prove that the prisoner had been tried and convicted upon a previous occasion for a similar offence; when Baron Huddlestone explained to him that he was bound by the law to provide medical assistance for a child of tender age, and the prisoner promised to consult the elders of his sect, and conform to the law in future. In passing sentence the judge said there was no doubt the prisoner had infringed the law, although he gave him credit for acting conscientiously. It was the duty of everyone to obey the law, and he hoped that this would be understood by all the members of prisoner's faith for the future. He would be imprisoned for three months without hard labour. Upon the former occasion Baron Huddlestone passed only a nominal sentence upon the prisoner, and the present case shows that such leniency was entirely misplaced.

Professor Schiff, of Florence, has demonstrated that the non-edible mushrooms have a common poison, muscarina, and that its effects are counteracted either by atropine or daturine. Italian apothecaries now keep these alkaloids in the rural districts where the consumption of the non-edible fungi is apt to occur. The *Sanitary Record* thinks the hint is worth taking in England, where deaths from eating unwholesome fungi mistaken for mushrooms are of frequent occurrence.

The following appeal to the public has been put forward by the Society of Arts in continuation of the sanitary labours

recently undertaken by it:—"In the general interests of public health, the Council of the Society of Arts appeal to the inhabitants of the metropolitan districts, and to the public generally, to send to the Society evidence of cases showing the various evils which have occurred from the present imperfect system of the drainage of houses. At the conference on the health and sewage of towns, lately held by the Society, and attended by numerous representatives from various towns and localities in the kingdom, the importance of greater attention to the house drainage, as distinct from the sewerage, was especially brought to the notice of the Society. It was pointed out that, however good the general sewerage might be, unless the drainage proper of the house and its connexions with the sewers were carefully planned, executed under due supervision, and maintained in proper order, there was imminent danger of typhoid fever and other diseases from the imperfect exclusion of sewer-gas. The Council have sought for information and suggestions from the various metropolitan authorities having such matters in charge. They appreciate the valuable labours of these bodies, but they desire to draw public attention to what, it appears to the Council, needs further action on their parts, and they suggest that Parliament should be moved, if need be, to confer additional powers and responsibility on local authorities. Under these circumstances the Council invite communications both as to cases of evil arising under the present state of things in the metropolis and in the country generally, as well as any suggestions for remedy; and they will be glad to receive such communications before October 20 next."

A handsome donation to London hospitals has to be recorded. By the will of the late Mrs. Marian Nasmyth, of Westbourne-park-terrace, Bayswater, which was recently proved by Sir William Fergusson, Bart., and other executors, the sum of £6000 is bequeathed to St. George's Hospital, and the sum of £5000 to University College Hospital, Gower-street. In leaving these sums the testatrix trusts that it may not be inconsistent with the rules and regulations of the governing bodies of such hospitals to establish with these sums in their respective hospitals a ward to be called "Mrs. Marian Nasmyth's Ward."

SEPARATION OF THE SPINE OF THE TIBIA.

THERE is a fracture of the tibia, seldom or never described in surgical text-books, which is not without interest, and very possibly is more common than is generally supposed. A case presented itself to Professor Dittel, of Vienna, not long ago: an energetic landlord was ejecting one of his customers, whose legs "crossed themselves backwards," when some one who was helping the host gave the unfortunate man a kick either in the calf or the ham, producing altogether a complicated and not very intelligible accident. Blood was effused into the joint; amputation followed puncture; and at an autopsy it was found that the anterior crucial ligament had detached itself from its lower origin, tearing with it an oval piece of the upper surface of the tibia. This case led Dittel to perform a number of experiments on the cadaver (*Centralblatt für Chirurgie*, No. 29), in the way of forcible flexion, extension, and rotation of the knee; but he seems to have failed in any case to obtain the exact result which occurred in this and the two following cases. In extreme extension the tibia gave way, either as the result of impaction of the condyles of the femur into it or by separation of the epiphysis; and if rupture inside the joint occurred at all, the posterior ligament carried away its lower attachment. In over-flexion, on the other hand, it was the anterior ligament which gave way, but it invariably remained attached to the tibia, and carried away part of its insertion into the femur. A number of other experiments of the same sort were performed, with various results. In No. 38 of the *Centralblatt für Chirurgie* is the record of a case described by Poncet in the *Bulletin de la Société de Chirurgie*, 1875, in which death occurred from fracture of the skull, produced by falling down three storeys. Afterwards, when operations were being practised on the dead subject, it was found that the left knee-joint was filled with blood, of which no trace was visible externally, while the whole spine of the tibia had been torn off by the separation of the lower attachment of the anterior crucial ligament. A case almost identical occurred in the wards of University College Hospital in April, 1873, and we believe the specimen is now in the museum there. It differed, however, in the fact that the patient was a boy of eleven years, instead of being, as in the other two cases, of adult age. A cart-wheel passed over some part of his leg, producing such extensive destruction of soft parts that, in spite of attempts to save it, it was found necessary to amputate a fortnight after his admission. No special complaint of the knee was made, nor was there anything externally to point to an injury; but after the removal of the limb a condition precisely similar to that described by Poncet was discovered, but in this case the blood had been absorbed, and its previous existence was shown only by the yellow staining of the cartilage. One point may be added, which, if the close proximity of the attachments of the external semilunar cartilage and the anterior crucial ligament be borne in mind, must almost certainly have occurred in the other two cases—viz., that the external semilunar cartilage went up with the anterior crucial ligament and the separated spine of the tibia, and thus remained adherent to the femur, while the internal, of course, kept its place on the surface of the tibia.

There is a reflection in connexion with these three cases which reaches beyond the mere surgical curiosity of the accident. How often does it fall to our lot to see an injury of the knee-joint followed by a most intractable, if not life-long, inconvenience, which, for want of a better diagnosis, we refer to a strain and a chronic inflammatory condition which has been lighted up by it, or to some other vague and perhaps meaningless explanation! Is it not possible that we may be sometimes dealing with a case of this very nature, and that in this and other joints somewhat similar conditions may produce very uncomfortable results? We remember, for instance, to have seen in the dissecting-room a small piece of the back of the astragalus, to which a part of one of the lateral ligaments was attached, completely separated. It is easy to picture to one's mind the prolonged and ineffectual treatment by douches and liniments to which this patient may have been subjected during his lifetime.

SOCIETY FOR DEALING WITH HABITUAL DRUNKARDS.

A MEETING of the Society for Promoting Legislation for the Control and Cure of Habitual Drunkards was held last week at the Charing-cross Hotel. Dr. A. Carpenter, who was voted to the chair, said they had met for the purpose of endeavouring to promote the formation of a society for furthering legislation for the control and cure of habitual drunkards. "Great events from little causes spring,"—and he hoped that great results would ensue from that meeting, small as it was. That there was a necessity for further legislation on this subject had been amply proved. The report of the Select Committee of 1872 had recommended a certain course of legislation; but the report of the Committee had not as yet met with any response from the House of Commons. But, besides the evidence laid before that Committee, they had the testimony of the whole medical profession as to the necessity for legislation upon this subject. Such restraint as he had advocated was absolutely necessary, and the question that arose was, Why should it not be carried out? To attain this end it was better that a society specially devoted to such a purpose

should be formed. The proceedings of the promoters of the Society had been supported by observations that had been made by different periodicals. The course of action proposed was the formation of a society which would have for its objects the promotion of legislation in the direction indicated in the petition of the British Medical and Social Science Associations. The way in which the public looked at the matter would be somewhat difficult to overcome, but when the facts were put before them in a proper light he thought there would be few obstacles to an alteration in the law. He deprecated the practice of sending persons to prison repeatedly for drunkenness, because they were treated as criminals for what, in the case of habitual drunkards, was mania. They came out uncured of their propensity for drink. They ought instead to be sent to proper places where they could be detained until they were cured; and to get a law passed to attain this end was the object of the Society they were now inaugurating. Dr. Hardwicke then moved—"That this meeting being convinced of the necessity for further legislation in regard to habitual drunkards, hereby constitutes itself into a Society for the attainment of this object." He said the public had no idea of the enormous amount of disease and death produced by drunkenness that was revealed in coroners' courts, such as that over which he presided. Mr. Harry Chubb seconded the resolution, which was carried. Mr. W. Wood moved, and Dr. N. Kerr seconded, a resolution to the effect that the Earl of Shaftesbury be requested to accept the post of President of the Society. The resolution was adopted. The next resolution requested the following to act as Vice-Presidents of the Society:—The Archbishops of Canterbury and York, the Bishops, the Deans, Cardinal Manning, Sir T. Watson, Bart., Vice-Admiral Sir W. King Hall, K.C.B., and such other gentlemen as the Executive Committee might select. An Executive Committee was then appointed. Dr. Carpenter consented to act as Treasurer to the Society, and other and formal resolutions concluded the business of the meeting.

AN ARTIFICIAL URETER.

An interesting case of Nusshaum's is quoted in the *Centralblatt für Chirurgie*, No. 37, from the *Baierisches Aertzl. Intell.-Blatt*, 1876, No. 7, p. 63, in which this ingenious surgeon has manufactured an artificial ureter. After the operation for ovariotomy on a woman forty-seven years old, healing took place rapidly under the antiseptic treatment (which is always employed at Munich for such cases), but a small fistula remained, from which urine was discharged. The right ureter had no doubt been divided in removing part of the tumour which had become adherent to it. After dilating the sinus with laminaria tent, the finger introduced passed into a cavity as large as a pigeon's egg at the right side of the uterus, containing urine, and into which the right ureter opened. A cure was effected in the following way:—The urethra was rapidly dilated, and the finger introduced into the bladder, but as the entrance of the right ureter could not be detected, a trochar was passed through the wall of the bladder into the small cavity mentioned above, and this track was kept open by means of drainage-tubes. The drainage-tube, though frequently introduced, always worked its way out of the canal which had been made for it; still the passage remained patent, while the fistula in the abdominal walls closed after an application of the cautery, and a complete cure was the result.

THE CLOSING OF MALAHIDE BURIAL-GROUND, COUNTY DUBLIN.

In the *Medical Times and Gazette* for November 21, 1874, page 585, will be found an account of the facts relating to two inquiries into the condition of this graveyard, which were held by the Local Government Board for Ireland in 1873 and 1874 respectively. On each occasion the Board made an order to close the burial-ground; but owing to technical informalities both orders were quashed. The lord of the manor, Lord Talbot de Malahide, has petitioned the Board to hold a third inquiry, and this was arranged to take place immediately. As the case is important in a sanitary point of view, we hope to notice the inquiry in a future number. The graveyard is damp, its soil is saturated with human remains, and it is situated within forty-nine feet of the windows of Malahide Castle.

THE ARMY MEDICAL SCHOOL, NETLEY.

We learn that the War Office has appointed Staff Surgeon James Lane Notter to the post of Assistant-Professor of Military Hygiene in the Army Medical School, Netley. Dr. Notter is in every way eligible to hold the appointment. A distinguished graduate in arts and medicine of the University of Dublin, he obtained, with high distinction, last December the diploma in State Medicine given by that University; and to the fact that he holds this qualification his appointment is largely due. The University of Dublin may also be congratulated on the recognition of the value of the diploma in State Medicine, the credit of instituting which belongs to Dr. Stokes, the enlightened Regius Professor of Physic in the University.

PROFESSOR LAYCOCK, M.D., F.R.S.E.

It is with great regret that we have to record the death of this distinguished and learned physician. He had been Professor of Medicine in the University of Edinburgh since 1855, having been chosen to fill that chair through the reputation which he gained while filling a similar appointment in the York School of Medicine. We hope shortly to be able to give a complete obituary notice.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

APHASIA OR ALALIA: ITS VARIETIES.

(Second Lecture.)

Differential Diagnosis of the Varieties of Aphasia—Clinical Characters—Elements and Means of Observation—Varieties of Lingual Dyskinesia—Relation between Disorders of Deglutition and Glosso-ataxy—Different Degrees of Dumbness in Patients Aphasic from Logoplegia—Automatism of Speech—Verbal Amnesia—Voluntary and Automatic Exercise of the Memory—Distinction between the Depository (dépôt) *and the Recollection—Echo or Echolalia—Comparison between Physiological and Psychological Analysis of Speech—Anatomical Localisation of the First Two Forms of Aphasia—Observations.*

Gentlemen,—The differential clinical characters of our five varieties of aphasia are exceedingly clear—they have become apparent to you of themselves during the examination of our patients. Partial or complete abolition of the mobility of the tongue belongs exclusively to the first species, of which this phenomenon is a pathognomonic sign.

In glosso-ataxy the patient speaks as in the preceding group; but his words are unintelligible, from being no longer normally articulated, and, in regard to the ultimate purpose that it fulfils, the function is no less abolished, for the person can no longer communicate with his fellows by means of speech. Thus it was in the patient whose history is recorded by Osborne,(a) and who, with no other disorder than verbal ataxy, was constantly obliged to have recourse to writing in order to make the simplest matters understood.

Logoplegia is clearly distinguished by the symptom of dumbness from the first two species, with which it has in common—integrity of intellect and of memory, consciousness

(a) J. Osborne, "On the Loss of the Faculty of Speech depending on Forgetfulness of the Art of Using the Vocal Organs" (*Dublin Journal of Medical and Chemical Science*, vol. iv., 1833-31, p. 157).

of the infirmity, preservation of the ability to write, and to read mentally, and of the wish to speak.

In alalia from verbal amuesia the patient cannot write, and he cannot understand what he reads—two negative characters which establish a well-marked line of demarcatiou between this and the preceding varieties. But although memory of words is altered, the other manifestations of intelligence may be intact; the person has consciousness of his infirmity, and he endeavours in a thousand different ways to supply the place of words which fail him.

Lastly, in hebetude, the intellectual depression renders impossible that active and voluntary operatiou which consists in clothing thought with verbal formulæ, either because the thought is too confused and too ill-conceived to awaken any intellectual operation whatever, or else because this operation, like a too heavy burden, is actually beyond the strength of the innervation.

You see, gentlemen, the method to be followed with an aphasic patient, and the series of signs which you must successively inquire into, in order to determine the origin and mechanism of his alalia—in other words, to arrive at its pathogenic diagnosis. The mobility of the tongue, the articulation of sounds, the preservation or the absence of ability to read mentally, of memory for words, of ability to write, and, lastly, the gauging of the intellectual condition,—these must be your guide-posts. I grant that they are not always at your disposal; from the grave nature of the cerebral lesions upon which the aphasia depends, a complete study of both symptoms and patient may, at the outset, be impossible—may even continue impossible to the end; but that a strict clinical analysis is not always practicable affords no ground, you will agree, for doubting its usefulness, or for omitting it where it can be carried out.

In each variety of aphasia certain exceptional phenomena may be noticed, of which it is of importance to be aware, inasmuch as they may obscure the clinical interpretation. Taking into account ordinary and regular cases only, I have named the first variety "glossoplegia," but, as a matter of fact, the cause is not always to be found in a motor paralysis of the tongue. Lichtenstein has recorded the history of a robust countryman, aged forty-one years, who was seized with shaking palsy in his upper extremities. The disease had resisted all kinds of treatment. After having been to London to consult Marshall Hall, the patient came to Berlin, and when Lichtenstein saw him the tremulousness had reached the tongue, so that whenever the patient wished to speak the organ was thrown into incoherent and involuntary agitation. One may imagine what the articulation of sounds must have been.(b) The case related by Panthel is no less remarkable. A boy of twelve years, after receiving a vivid moral impression, suddenly lost speech. Meanwhile the movements of the tongue and lips were regular, deglutition and respiration normal; but every time that the boy was ready to speak, all the muscles supplied by the hypoglossal nerve underwent contraction, and he became absolutely dumb. On the other hand, whenever somewhat powerful pressure was made upon the supra-laryngeal region—that is to say, over the contracted muscles—the cramp ceased, and the patient was able to speak.(c)

An analogous disorder, also in a child, was observed by Vallin; and Fleury has placed on record the case of a man, who, after removal of one of his tonsils, was seized with symptoms of cerebral congestion and epileptiform attacks, and who, at the same time, lost the faculty of speaking in this manner: at each effort to speak the tongue contracted, and its tip was firmly pressed against the arch of the palate. This functional spasm of the lingual muscles yielded to the influence of an antiphlogistic treatment, and the patient recovered his speech; the epilepsy, however, still persisted.(d)

I wished to point out to you these little known cases, but they are so rare that they may conveniently be disregarded in a general classification; if, however, it be desired to take them into account, it is clear that a more comprehensive name must be given to our first group than that of glossoplegia, and the title *lingual dyskinesia* will unquestionably be the most appropriate.

When the aphasia is dependent upon disorder of co-ordination of the movements required for the articulation of sounds —when, in a word, there is glosso-ataxy—it might be thought *à priori* that deglutition must always be interfered with, inasmuch as both these functions are connected with the same motor nerves. This presumption is not always realised, and this is due to an anatomical fact which must be borne in mind. The motor elements in relatiou with the functiou of deglutition, and those which have to do with the articulation of sounds, are found at the origiu of these nerves in the medulla oblongata, and in their peripheral trunks, both at the same time; so that when the lesion affects one of these regions, both the functions are altered simultaneously: glossoplegia and dysphagia coincide. But this is not equally true of the central tracts which unite the points of origin in the medulla to the cortical layer of the hemisphere; there, of the fasciculi which convey the impulses of the will, one is for deglutition, and another for verbal articulation. In the absence of direct anatomical observation, clinical experience has established the duality of the nervous tracts leading from the hemisphere to the medulla. A case of tumour of the cerebral hemisphere long ago observed by Romberg had already shown abolition of voluntary deglutition, speech remaining unimpaired; and Schulz had a patient in whom defective deglutitiou was for some time the only morbid phenomenon. Eventually this person became suddenly hemiplegic, and he was still alive when Schulz published his communication.(e)

The converse functional disunion, loss of articulation of sounds, with integrity of deglutition, is not less clearly proved by one of Schröder van der Kolk's observations, in which the lesions were limited exclusively to the olivary bodies, enabling this distinguished anatomist to come to this exact conclusion from the case: that if the olivary bodies were connected with verbal articulation, they exercised no influence upon the function of deglutition. You see, gentlemen, that the clinical fact to which I have called your attention is paradoxical only in appearance, and that it is the perfectly natural consequence of the anatomical arrangement.

In the third variety, or logoplegia, the aphasia depending upon interrupted transmission between the organ of the will and the organ of execution, the patients ought to be completely dumb, and as a matter of fact in a large number of cases they are so. In some instances, however, this is not the case, and the patient gives utterance to a certain number of monosyllables which he repeats with greater force and rapidity the more he is irritated by his infirmity. There is nothing mysterious in this phenomenon, although it seems at first sight difficult to reconcile with the suppression of verbal transmission. The motor and co-ordinating centre of speech belongs to the spinal apparatus, it therefore participates in the automatism of that system, and the syllables or words uttered by the patients mechanically are the result of a reflex excitation of the motor centre, which responds in accordance with its normal functional behaviour—namely, by producing the emission of certain articulate sounds. Most frequently the exciting impression is an auditory impression. This automatic emission of words takes place when the patient is being questioned, but it may likewise be a consequence of visual impressions, or of a simple ideal representation of the act of speaking; in other words, of a voluntary effort on the part of the patient to triumph over his inability. What condition determines his choice of words? I cannot tell you, but they remain constantly the same in the same individual, and here you have one more proof of the reflex or automatic origin which I have assigned to this phenomenon.

In the fourth variety, when there is entire verbal amnesia, the patient is, of course, perfectly dumb. How comes it, then, that in a considerable number of cases the patient is able to repeat words that he hears spoken, or that he sees in writing, and that under the influence of various kinds of excitement he reproduces these verbal formulæ, which he cannot lay his hands upon when he seeks them voluntarily and of set purpose? Two things, gentlemen, which ought to be kept distinct are confounded in the term memory—namely, the depository (*dépôt*) and the act of recalling or recollection (*rappel*). The depository, which is memory properly so-called, is the accumulation within the sensorium of impressions, of ideas of all kinds, the word ideas being used in the general physiological sense of images; recollection is an act of the will, of the attention, which draws forth from the depository the image, verbal or otherwise, according to the requirements of the

(b) E. Lichtenstein, "Laloplegie (Glossoplegie der Autoren)" (*Deutsche Klinik*, 1862, No. 7, footnote to p. 62).

(c) Panthel, "Kramp im Bereiche des Nervus hypoglossus mehrlägiges Unvermogen zu sprechen bedingend" (*Deutsche Klinik*, 1855, p. 451).

(d) A. de Fleury, "Mémoire sur la Pathogénie du Langage Articulé" (*Gaz. Hebd.*, 1865, p. 248).

(e) B. Schulz, "Beiträge zu den Bewegungsstörungen der Zunge" (*Wiener Med. Wochenschrift*, 1863-4, Jahrg. xiii., Nos. 17, 18, 32, 45; und xiv., Nos. 21, 39-40).

intellect at the time. That being so, it is easy to understand that, under the influence of certain impressions, some remembrances in the store-house are awakened; or, if you like it better, that the store itself spontaneously takes part in the act without participation of the will, without that voluntary act which constitutes recollection. Notwithstanding the apparent strangeness of the comparison, it is certain that this phenomenon may be likened in all respects to the production of automatic movements, which also take place outside the sphere of the will. Such is precisely the position with regard to the amnesic patients whom we are discussing: in their case voluntary recollection is lost, but the depository is still there, and when the organ of the depository is subjected to an impression, it enters upon its function, although it can no longer do so under the influence of the will. The most frequent exciting impressions are auditory or visual. Amongst the cases that I could cite in support of this interpretation, one of the most convincing is that of the artillery officer of forty years, whose history was reported by Hertz. This patient had an attack of apoplexy which left him hemiplegic, and eventually he got well with the exception of a complete verbal amnesia. He could not speak because he could not find a word; but when a sentence was spoken in his hearing he immediately repeated it, and if a book was put into his hands he read with remarkable correctness and rapidity: once the book was closed, he was unable to repeat a single word that he had just read.(f) This proof is decisive; the auditory impressions, the visual impressions, for the moment awakened the depository into action—that is to say, awakened the memory, which the patient could no longer arouse by an exercise of the will.

An anomaly of the same kind is sometimes observed in those who are aphasic from hebetude. The patient, who does not speak spontaneously, and whom the annihilation of speech renders absolutely dumb, repeats like an echo, or a perfected machine, phrases addressed to him, without comprehending their sense or accomplishing the act demanded of him. Such an one was the woman of forty-nine, of whom Romberg speaks. When it was said to her, "Show me your tongue, raise your arms," she repeated automatically, "Show me your tongue, raise your arms," without, however, making any attempt to execute these movements.(g) This is the phenomenon to which Romberg gave the name of echo or echolalia. In this case the impression received through the hearing brought into play the automatic activity of the memory and of the motor centre of speech, and the phrase was repeated.

Such, gentlemen, are the exceptional or isolated phenomena of the various forms of aphasia. Although they are rare I have dwelt at length upon them in order to show you that they ought not to be handed over to psychology, and that they are amenable, like all the rest, to the higher leadership of physiological analysis.

An examination of the table I have placed before you reveals at a glance the series of acts necessary to the integrity of speech. Reverse the arrangement of the table, so as to represent the natural order of the events, and you will see that the following things are necessary in order to speak:—1st, a thought; 2nd, the translation, the clothing of this thought with verbal formulæ, which I call *verbal ideation*; 3rd, the transmission of the verbal impressions to the motor apparatus, which accomplishes their projection outwards; 4th, the harmonious co-ordination of the complex movements required for this projection; 5th, the carrying out of these movements by the agents at the periphery. These five successive acts may be traced to three fundamental operations—1. Formation; 2. Transmission; 3. Expression. Introduce this original division into our classification, and you will obtain this other table, which forms a complete pathogenic exposition of disorder of speech or aphasia.

I. Disorder of formation or verbal ideation	Hebetude.
	Verbal amnesia.
II. Disorder of voluntary transmission	Logoplegia.
III. Disorder of expression	Glosso-ataxy.
	Glossoplegia.

This table, dictated alike by clinical observation and physiological analysis, reproduces with remarkable fidelity the psychological definition of speech, which may be given thus: speech is thought formulated and expressed by certain conventional signs or words, which in the aggregate constitute language. Whence this briefer proposition: speech is verbal thought. Whence, too, this still more striking formula, dear to the old philosopher: *la parole c'est le verbe*; or yet again, *le verbe c'est l'idée*. Examine this definition for an instant, and you will soon arrive at two very distinct things—viz., translation of the thought into words (a purely intellectual operation, which, as I have already told you, I call verbal ideation); then the expression of the formula so evolved by the intellect: speech is thought formulated and *expressed* through the medium of, etc. Bear in mind that this condition of expression is of the first importance, for it is this which renders speech the instrument of man's education and social intercourse. In vain would he possess verbal ideation or internal speech, if external speech were wanting; he would then have lost the natural medium of communication with his fellows. This expression, then, of the verbal idea, which is the ultimate object of the function, is not an intellectual operation; it is the consequence of an intellectual act, which is a very different thing. But in itself it belongs to the motor sphere of psychical life, it is an act of movement. Whenever, then, verbal ideation is at fault, the disorder of speech necessarily points to some disorder of intelligence; but when, verbal ideation being unimpaired, it is simply expression of the formulæ that is altered or abolished (as is the case in the last three varieties of the foregoing table), the disorder of speech no longer implies intellectual disorder, it only reveals impairment of the motor apparatus.

Psychology, less exhaustive than my analysis, leaves in the background the question of transmission from the formative to the executive apparatus—wherein a very serious error is committed, and one which can only proceed from the supreme disdain of the psychologists for anatomical knowledge. A hackneyed, but at the same time just, comparison will help to make the error clear:—Suppose two terminal dials of an electric telegraph to be at a certain distance from each other, but with the communication interrupted. In vain will the mechanism of each apparatus be perfect; in vain will the first, or formative apparatus, persist in issuing signals. Clearly they cannot reach the second, or receiving apparatus; that needs no enforcing. Re-establish the communicating wire, then every signal will find expression, and the receiver, hitherto dumb, will speak truly. This exemplifies the part played by the transmission which unites verbal formation with verbal expression, and the precise significance of aphasia from logoplegia.

After all, gentlemen, there is nothing in all this peculiar to the function of speech. Take the pains to analyse, a little more carefully than is usually done, the function of voluntary movement, and you will be struck with the identity of the results. It is requisite for the normal accomplishment of a voluntary movement that there shall be—1st. The formation of a desire for movement. 2nd. The motor intuition; that is to say, the determination of the direction, force, and extent that the movement must have in order to realise the desired end (I call this process motor ideation). 3rd. The transmission of the voluntary impulse to the motor apparatus. 4th. The harmonious co-ordination of the entire movement by the help of the said apparatus; the expression or execution of the movement thus elaborated. You have here, then, in the case of voluntary movement, the same operations and the same number of them as in the case of speech; and in fact there are five varieties of akinesia, corresponding in every feature to the five varieties of aphasia.

I have, on several occasions, insisted upon the fact that the varieties of alalia, as I have laid them down, are directly furnished by clinical observation,—they are clinical varieties. Now, then, a question must be mooted which is the necessary complement of this inquiry—Have these clinical varieties corresponding anatomical varieties? In other words, Have the lesions which give rise to these symptoms a defined seat, a distinct localisation for each group? Speaking generally, the answer is yes; but the matter must be looked into a little more closely, if only to acquire a knowledge of the respective limits of these various territories.

Aphasia from glossoplegia has no precise anatomical seat; the paralysis of the hypoglossal, to which it is due, may, like all paralyses of the motor nerves, result from lesion of the nerve itself, from alteration at its points of origin, or, lastly, from lesion of the central fasciculi which link these points of origin with the cortical layer of the hemisphere on the opposite side. In the first case, the lesion affects one or both hypoglossals, between the medulla oblongata and the periphery; in the second, it is situated in the medulla, at the very points

(f) Hertz, *Psychological Magazine*, vol. viii.
(g) M. H. Romberg, "Lehrbuch der Nervenkrankheiten des Menschen." Berl. (See translation by E. H. Sieveking, Syd. Soc., Lond., 1853, vol. ii., pp. 430-432).

from which the nerves take their origin; in the third group of cases, which occur by far the most frequently, the hypoglossal may be affected by any lesion which, having its seat between the medulla and the cortical layer of the hemisphere of the opposite side, influences the central or cerebral fasciculus of nerves—that is to say, the nerve elements whose precise course is unknown, but which, passing through the pons, the restiform body, the corpus striatum, and the optic thalamus, connect the root of the nerve in the medulla with the hemisphere of the opposite side. The conditions are the same, I repeat, as in the case of paralysis of any other moter nerve, *e.g*, the facial. This first variety of aphasia has therefore no precise anatomical seat, but the symptomatic phenomena vary to some extent according to the spot affected by the lesion. When the nerve-trunks to the periphery or the roots of the nerves in the medulla are affected, disordered deglutition is constant, and reflex movements are abolished in the paralysed parts; if the central fasciculus is implicated in any point whatsoever of its course, deglutition remains unimpaired and reflex movements are not lost. Note in passing that in paralysis of the hypoglossal the muscles below the hyoid bone preserve their power of movement, owing to the branches they receive from the cervical plexus.

The anatomical relations of *glosso-ataxy* are much more clear. Relying on the results of his observation, Schröder van der Kolk has assigned to the olivary bodies the function of regulating the articulation of sounds, and consequently he localises in them, in the fibres which pass from them to the points of origin of the hypoglossals, the lesions which impair that function.(h) This statement is too narrow and exclusive. If all the cases are taken into account (the greater part, certainly, are of later date than the memoir of the Dutch anatomist), this further formula is reached: in glossoplegia, the lesions are situated in some point or other of the commissure between the medulla and the cerebellum—namely, the olivary bodies, which represent a purely medullary commissure—and the middle peduncles of the cerebellum, either in their intra-cerebellar portion or in their middle portion, which forms the floor of the pons. The facts on which I base my conclusion are the following:—

In one of Romberg's patients a tumour of large size was found in the right half of the pons Varolii. Anteriorly, this tumour passed an inch beyond the front border of the left half of the pons; posteriorly, it extended below the right olivary body. This tumour had caused considerable disturbance, both of the central organs and of the nerves. The specimen was deposited in the Berlin Museum.

In another case (the autopsy was made by Müller and Romberg), the rhomboidal fossa of the medulla oblongata was the seat of a peculiar alteration: the whole of the portion situated between the restiform bodies was occupied by mamillated projections, of a yellow colour and of the size of a millet-seed; these rough prominences, appreciable to the touch, rested upon the white fibres, which are considered to be the roots of the auditory nerves.

The three cases observed by Schröder van der Kelk show atrophy or fatty degeneration of the olivary bodies. It was in one of these patients (a girl of twenty-two) that deglutition remained normal, notwithstanding the atrophy of the two olivary bodies. In Roëll's case, quoted by the last-named author, the lesion consisted in fatty degeneration of the whole of the medulla oblongata, with atrophy of the right olivary body. In Forbes Winslow's patient a softening of the cerebellum was found; and in the child whose case is recorded by Cruveilhier there was a cartilaginous induration of both the olivary bodies, of one of the restiform bodies, and of both quadrigeminal tubercles; the rest of the brain was intact, and the medulla was healthy above and on each side of the olivary bodies. In Yelloly's case, he had to deal with a tumour in the left half of the pons; this tumour extended as far as the left pyramid.

The case observed by Meynert and Chrastina is specially remarkable; it would be sufficient to prove the correctness of the anatomical formula which I have laid before you. A gouty female, already advanced in years, presented, after having had a great fright, well-marked difficulty in moving her limbs, and a hesitation in speech which rendered it unintelligible, although the movements of the tongue were perfectly normal. The patient died in this condition from mitral insufficiency and disease of the kidneys. The autopsy revealed considerable atrophy of the pons Varolii and the right hemisphere of the cerebellum; the microscopical examination, which detected the presence in the degenerated portions of connective-tissue elements and nuclei of new formation and of amyloid material, showed that the lesion, which was limited to the transverse elements of the mesocephalon and the fibres which connect it with the cerebellum, had left intact the longitudinal white fibres which conduct voluntary impressions to the pons and the medulla oblongata.(i)

Lastly, in the three cases more recently observed by Rosenthal, the speech was also disordered as to the articulation of sounds (*anarthrie* of Leyden), and in all three cases the lesion occupied the lower layers of the pons Varolii.(k)

Such are the facts. They are not numerous; they would have been more so, if I had not been obliged to omit a certain number in which the clinical analysis was so incomplete as to render it impossible to determine the real nature of the aphasia. But the cases quoted make up for their small number by their distinctness, and they verify my formula to this extent: in aphasia from glosso-ataxy the lesions are seated in the commissures between the medulla and the cerebellum.

(h) Schröder van der Kolk, "Over het fijnere zamenstel en de werking van het verlengde ruggemerg," etc. Amsterdam. 1858.

(i) Meynert, "Ueber Atrophie des Pons Varolii und des Kleingehirns" (*Oester. Zeits. f. Prakt. Heilkunde*, 1864).

(k) M. Rosenthal, "Beobachtungen über Störungen des Sprachvermögens sammt bezüglichen autoptischen Befunden" (*Allg. Wiener Med. Zeit.*, 1867). See also M. Rosenthal, "Handbuch der Diagnostik und Therapie der Nervenkrankheiten"; Erlangen, 1870; page 10.

FROM ABROAD.

Intestinal Invagination in Infants.

At the Berlin Medical Society, Dr. Senator related (*Berlin. Klin. Woch.*, August 28) a case of invagination of the lowest portion of the intestinal canal occurring in a boy three months old, the invagination being perceptible on introducing the finger far into the rectum. The intestine was easily replaced, but the invagination kept recurring, until at last, after several repositions, accompanied by injections of cold water, a rectum bougie was introduced, and left in until discharged during defæcation. On the fourteenth day after the commencement of the displacement (which was accompanied by fæcal vomiting and abdominal tenderness and distension) the bougie was introduced for the last time, the invagination not recurring after its expulsion. Dr. Henoch observed that this case only confirmed, what experience had already shown, how little disposition there is in invaginations occurring in early childhood to contract adhesions, and therefore attempts at reposition thus become possible. However, upon the principle *ne quid nimis*, it seems desirable to limit interference of this kind as much as possible, or even to forego it altogether. Even this case is not very encouraging; for signs of diffused peritonitis began to show themselves, which is a very dangerous occurrence in childhood. In adult persons no such attempts would be made; but by the application of ice and the administration of opium we keep the parts as quiet as we can, to await the process of adhesion and separation. He recalled to mind a case which occurred in a child about six months old, in which, after detecting the invagination, interference was abstained from with a most favourable result, a portion of intestine three inches in length being discharged, the treatment being expectant, and consisting in milk diet, the use of opium, and the application of ice. Here attempts at reposition would have disturbed adhesions, and probably induced fatal peritonitis. Dr. Baginsky observed that, although most invaginations are, as in Dr. Senator's case, situated at the lower part of the intestinal canal, and the separated parts quickly discharged, yet they sometimes occur high up; and he referred to the case of an infant recently under his care. There was vomiting, and the stools had a completely dysenteric appearance, while a tumour could be felt deep in the abdomen. At the autopsy this was found to consist in an invagination of a large portion of the ileum into the cæcum. Through a considerable elongation of the mesocolon, the cæcum and the colon ascendens were completely displaced, and a part of the ileum invaginated in the cæcum. The intestinal canal, notwithstanding the numerous adhesions that had taken place, was still permeable to a small elastic catheter, but no attempt at separation had taken place, nor was any exudation from peritonitis present. Dr. Senator

replied that he could not agree with Dr. Henoch's views, but believed that in all cases when the diagnosis was certain, and the obstacle was known to be mechanical, we should attempt reposition, proceeding, of course, in the most gentle manner. He agrees that in adults the use of ice and opium is the best procedure, but that is because the invagination in them is much seldomer situated so low down, and its diagnosis and accessibility for reposition are much more difficult; but in these cases even the opium and ice treatment is only to be recommended because nothing else can be done; and, in spite of it, how often death occurs, although the adhesions have not been disturbed! The fear of disturbing these and inducing peritonitis ought not to prevent reposition being attempted; for when reposition has not been effected, and the adhesions are undisturbed, yet peritonitis in any case, with the subsequent gangrene, will occur. If the parts have been replaced, either there will be no peritonitis or it will be much more manageable, as its cause—the intestinal obstruction—will have been removed. Whenever reposition can be executed, it should never be omitted, in the hope of the rare occurrence of a spontaneous process of healing being set up. In his own case, Dr. Senator believes that he prevented, by reposition, the peritonitis which was threatening; but, of course, it is another question how far extensive adhesions are to be considered as obstacles to reposition. Dr. Henoch said that he related his case in order to show how quickly adhesions take place; for on the fourth or fifth day the portion of intestine was discharged. Had reposition been attempted, peritonitis would have been induced. We see how easily this is induced in diseases of the vermiform process and in perforations of the intestinal canal; and the spontaneous discharge of the invaginated parts separated by gangrene is of frequent occurrence in the adult. It is possible that in some cases reposition may be indicated; but Dr. Henoch's object is to show that expectant treatment, securing quietude to the canal, may succeed in the young as well as in the adult. Dr. Frankel observed that in invagination, as in strangulated hernia or stercoral typhlitis, our first efforts should be to remove the primary cause; but when peritonitis threatens, quietude, before all, is required. When it occurs after reposition opium is the best remedy, and this is more efficacious in preventing a recurrence of the invagination than any mechanical procedure. Dr. Kuster, in a surgical point of view, quite agreed with Dr. Senator, and would recommend reposition even if adhesion had taken place. Invagination is here in an analogous position to strangulated hernia,—and we do not hesitate to replace this, even although adhesions to the sac may exist; and a careful attempt at reposition is always preferable to mere expectation.

The Lectures at the Paris Faculty, 1876-77.

The winter courses of lectures commencing November 6 will be delivered by the following Professors:—1. Medical and Biological Physics, M. Gavarret—General Physics, Electricity and Optics, and the Physical Phenomena of Phonation and Audition. 2. Medical Pathology, M. Ollivier—Diseases of the Lungs. 3. Anatomy, M. Sappey—The Central Nervous System, the Peripheric Nervous System, and the Organs of the Senses. 4. General Pathology and Therapeutics, M. Chauffard—The Common Morbid Elements, Fever, Fluxion, Inflammation, Pain, Spasm, and Disturbance of the Intellectual Faculties. 5. Medical Chemistry, M. Wurtz—Chemical History of the Metalloids, and Examination of the Air, Water, the Principal Acids, etc., in relation to their medical applications; Biological Chemistry—Examination of the Chemical Phenomena of Nutrition and the Secretions. 6. Surgical Pathology, M. Dolbeau—Affections of the Tissues and the Systems: Osseous, Cellular, and Cartilaginous Tissues, the Muscles and Articulations, the Vascular System. 7. Operations and Apparatus, M. Le Fort—Therapeutics of Affections of the Neck, of the Respiratory Passages, the Thorax, the Abdomen, and the Genito-Urinary Organs of both sexes; Hernia. 8. Histology, M. Robin—Examination of the Anatomical Elements and the Humours. 9. History of Medicine and Surgery, M. Parrot—The History of Inflammation and Fever. 10. Clinical Medicine, MM. G. Sée, Lasègue, Hardy, and Potain. 11. Clinical Surgery, MM. Gosselin, Richet, Broca, and Verneuil. 12. Clinical Midwifery, M. Depaul. 13. Diseases of Children, M. Blachez. 14. Ophthalmology, M. Panas. 15. Syphilitic Diseases, M. Fournier. 16. Diseases of the Urinary Organs, M. Guyon. 17. Demonstrations, M. Marc Sée. The following is the distribution of studies for the winter course:—First year, Medical Chemistry and Physics and Anatomy; second year, Anatomy, Histology, and Dissections; third year, Anatomy, Histology, and Dissections, Operations, Internal and External Pathology, Clinical Medicine and Surgery; fourth year, Internal and External Pathology, General Pathology, Practice in Operations, Clinical Medicine, Surgery, and Midwifery.

REVIEWS.

Traité Pratique des Maladies du Larynx, précédé d'un Traité complet de Laryngoscope. Par le Dr. Ch. Fauvel. Avec 144 figures dans le texte et 20 planches dont 7 en chromolithographie. Paris, 1876.

Practical Treatise on Diseases of the Larynx, preceded by a complete Treatise on the Laryngoscope. By Dr. Charles Fauvel. Profusely illustrated by wood-engravings, lithographs, and coloured drawings. Paris, 1876.

The author of this work is well known to the profession as one of the most distinguished laryngoscopists of the day, and the book which has been so long promised will not disappoint those who for several years have been expecting its appearance. When we inform our readers that it is a large octavo volume containing upwards of 900 pages, the greater portion of which is in comparatively small print, the reason for the delay in the issue of the work will be evident, especially when it is borne in mind that the author is a specialist fully engaged in private practice.

The work commences with a short history of the invention of the laryngoscope, and then proceeds with a most complete description of the various apparatus necessary to laryngoscopy. The description of the different modes of illumination is quite exhaustive—we might almost say dazzling, so various and so brilliant do many of the lamps appear. The author prefers direct illumination, employing the *pharyngoscope* of Moura, slightly modified so as to be more manageable and convenient. This consists of a little brass framework, which can be fixed to any lamp, and which supports, at a distance of three to five inches from the frame of the lamp, a bi-convex lens (having a diameter of about two inches), and on the opposite side a small screen of black pasteboard. The lamp is placed on a small table between the patient and the operator, who has one arm on each side of the lamp, the lens being near the patient's mouth, and the screen protecting the operator's face, whilst a small mirror attached to the upper part of the lens enables the patient to make auto-laryngoscopic observations, if he be so minded, whilst he is being operated on.

In speaking of sponges and brushes, of which the author appears to prefer the latter, he strongly recommends that all solutions should be applied during the act of expiration—a precaution which he finds prevents all spasm. An elaborate description of pulverisers and inhalers follows, the author remarking favourably on Dr. Cheron's vaporiser, by means of which oxygenated volatile essences may be employed. The various kinds of insufflators are then fully described. So far the author has dealt with the apparatus required for the ordinary run of laryngeal cases; but in the second section he figures and describes "the instruments necessary for the treatment of tumours of the larynx." Here almost every kind of cutting, crushing, tearing, snaring instrument of almost every well-known laryngoscopist is delineated. The author's own instruments are sufficiently numerous and varied; but, in addition to these, he describes the tube-forceps of Stoerk, the snare and knives of Bruns, the guillotines of Schnitzler and Jelenffy, the antero-posterior forceps of Morell-Mackenzie, the polypotome of Collin, and the various knives and snares employed with the aid of galvanic cautery. The author then proceeds to discuss, with the perspicuity so characteristic of the best French writers, the principal characters of laryngeal growths, analysing most carefully the various signs and symptoms of the disease, and describing their situation, progress, and termination with a lucidity that leaves nothing to be desired. Whilst comprehensive principles are wisely enunciated, the smallest details are not omitted. The author judiciously points out how the danger of growths in relation to the respiratory function depends entirely on the situation of the new formation. "Those which grow from the anterior commissure of the vocal cords, from the upper surface and free borders of the vocal

cords, act like a kind of cork, or valve, allowing the air to be expired, but often making inspiration very difficult. . . . On the other hand, growths springing from other parts of the larynx may acquire enormous dimensions without causing any attacks of dyspnœa." Pointing out how certain tumours especially those of fibrous or mucous structure, may remain completely stationary, he remarks, however, that "whatever may be the nature of the tumour observed with the laryngoscope, the practitioner may be certain that surgical intervention will be necessary, and that he cannot hope to see the disease cured of itself." The author discusses the treatment of growths with a breadth of view which shows that his knowledge of general surgery is both extensive and exact. The 233 cases of laryngeal growths on which he has operated were for the most part treated by evulsion, with large, and what would appear to many exceedingly coarse, forceps. Indeed, for versatility, for removing every kind of growth—from the largest sarcoma to the smallest wart—Dr. Fauvel's forceps can only be compared to the elephant's trunk, or the Nasmyth hammer.

The author almost invariably employs lateral forceps, remarking, "As a rule I prefer the lateral forceps, and it is seldom that I have recourse to the antero-posterior instrument which Mackenzie so frequently employs." The author considers that with antero-posterior forceps the position of the hand is cramped, that the anterior blade of the forceps is apt to strike the laryngeal surface of the epiglottis, that the hand of the operator masks the light, and that the blades of the forceps intercept the luminous rays in the larynx. He concludes by observing as follows:—"I prefer the lateral forceps, and in operating on growths on the free border of the vocal cords it is only necessary to carry the hand outwards, either to the left or the right, in such a manner that the blades of the instrument become literally antero-posterior in relation to the larynx. The movement by which this result is obtained has, in addition, the advantage that the operator's field of vision is entirely free, his hand being no longer opposite the patient's mouth." After the removal of papillary growths, which are so apt to recur, the author is in the habit of using insufflations of a powder consisting of equal parts of savin and alum. Although this procedure has not always succeeded, it has often been attended with great benefit.

The clinical portion of the work is perhaps the most interesting, the cases being related with sufficient detail to cover all that is important, but being free from the trivial particulars which render some of the German descriptions so intensely wearisome. Considering that in pre-laryngoscopic times the whole medical literature of Germany, France, England, and Italy can only furnish forty cases of laryngeal growth, it is most remarkable that a single observer should, since the year 1862, have met with 300 cases, all of which are published, with the names and addresses of the patients. The account of the benign growths is followed by an excellent article on cancer of the larynx—a subject which until now has received very little attention, even from laryngoscopists, who too often appear to prefer displaying manual skill to pursuing pathological researches. The work terminates with a number of chromolithographs, some of which are exceedingly well done. The early plates have, unfortunately, a disagreeable yellow tint which we have never seen in nature, but this fault was remedied as the work advanced, and the later productions are more satisfactory. Even in these, however, we notice an extraordinary development of the laryngeal cartilages, which is rarely met with in this country. A dark shade is thrown on the edges of the ventricular bands too, which gives a very peculiar and diagramatic appearance not met with in nature. In conclusion, however, we can only say that it is impossible to do justice to this important work in the limits of an ordinary review. Every throat specialist is bound to possess it, and the general medical reader cannot fail to obtain much useful information from its perusal, and to be impressed with the zeal and ability of its talented author.

Diseases of the Bladder, Prostate Gland, and Urethra. By Frederick James Gant, F.R.C.S. London: J. and A. Churchill. Pp. 470.

This work is avowedly "The fourth edition of the 'Irritable Bladder,' revised and much enlarged." Mr. Gant heads his book with the following epigram:—"The growth of knowledge is unlike that of other things; for the more it increases, its bulk diminishes."—*Anonym.* And yet, in the face of this dictum, a work which in the first edition numbers 136 pages now numbers 470 in its fourth edition. There is an introductory chapter on the surgical anatomy of the parts concerned. It is illustrated from Heath, Wilson, etc. The text-like the engravings, is a *rechauffé* from various sources. There, is little or nothing concerning the physiology and the microscopic structure of the genito-urinary tract—by far the most important part of the anatomy of this region.

The author then comes to the bladder. He first of all discusses functional disorders; then passes on to organic diseases. This part of the work, though long-winded, and savouring somewhat of compilation, is nevertheless pretty complete. Considerable portions of the chapter on urinary calculus and on lithotomy are taken from the author's work on "Surgery," and have therefore already been reviewed in these columns. They contain little fresh matter, though details are more fully gone into. We find nothing very original or calling for special remark. Diseases of the prostate gland are next treated of, and are well described. Chapter V. contains diseases of the urethra. These are all fully and well gone into, and this portion of the work will repay perusal. The book finishes with a chapter on urinary diseases, deposits, and calculi. Here, again, compilation plays a considerable part.

On the whole, we are bound to state that this book contains a great deal of information; and, although there is little that is new, we are able, thanks to Mr. Gant, to find collected together, and ready for immediate reference, in a book which is well printed and turned out in Messrs. Churchill's best style, all that is at present known on urinary diseases.

Post-mortem Examinations: Method of Performing them; with especial reference to Medico-Legal Practice. By Professor Rudolph Virchow. Translated by T. P. Smith. London: J. and A. Churchill. 1876. Pp. 86.

This admirable little work, which is reprinted from the column of the *Medical Times and Gazette*, is one of the most important additions to medical literature which has lately appeared. Quite irrespective of its distinguished parentage, the work is one which was urgently needed. It seems strange that hitherto no separate work on such an important part of our medical studies should have been published. No doubt it is very essential that students should learn how to make post-mortem examinations downstairs in the post-mortem room; but it will be conceded that it is just as important that they should learn the theory of this art just as they would any other—that is, from books.

Professor Virchow says—"On taking up my appointment in the year 1844, I found that the autopsies were at that time somewhat irregularly and unmethodically performed." We believe if he were to visit the post-mortem rooms of each of our London hospitals, that he would be obliged to repeat this phrase a considerable number of times. There can be no harm in speaking the truth, and we fear the truth is, that there is practically no methodical teaching in this department in any of the metropolitan or provincial schools. (We are now referring simply to the art and method of making autopsies.) It is therefore with great pleasure that we welcome this book. No student ought to be appointed on the resident staff of a hospital who is not thoroughly conversant with every line it contains. The work is both short and condensed; it would be impossible to abstract it in a manner that would do justice to it. Its price places it within the reach of everyone; and we cordially recommend it to the student's attention.

Observations on the Diseases of the Rectum. By T. B. Curling, F.R.S., etc. Fourth Edition. London: J. and A. Churchill. Pp. 244.

It is no disparagement to the fourth edition of Mr. Curling's "Diseases of the Rectum" to say that it differs but slightly from its predecessor; it must always rank as the work of a man who has made himself thoroughly master of his subject, as well as of a simple though powerful style of English which renders his writings both interesting and instructive. A new chapter (No. x.) has been added, but it is very short and on the comparatively rare disease "Catarrh of the Rectum"; and we are told that the whole book has been carefully reconsidered. We notice that on one or two points on which the surgery of the rectum has of late years been somewhat under discussion, Mr. Curling expresses himself rather more explicitly than before. For instance, he describes more fully the method of the

application of the cautery to piles, and though he does not give a very definite opinion as to the merits of the operation, he states quite clearly elsewhere that he continues to have a decided preference for the ligature, both for the sake of the surgeon and the patient. One old operation—the excision of internal piles—now finds no place in Mr. Curling's work; and one new one—the elastic ligature—is mentioned, but only to point out that it is nothing but a new name for an old method, and recommendable only for cases of fistula in ano, in which the patient has an unconquerable aversion to the knife. With regard to stricture, Mr. Curling is not very decided in speaking of the relation of syphilis to the chronic ulceration which so frequently is its precursor; but he seems inclined to attribute syphilitic ulceration, when this does occur, to direct contagion. It is encouraging to hear that Mr. Curling does not consider stricture incurable, and interesting to learn that he has abandoned incision in favour of dilatation by laminaria tent. Perhaps the most striking feature of the new edition is the stress that is laid upon the subject of celotomy, the advisability of which, in cases of cancer and simple stricture, is very fully dealt with. The description of the operation has been considerably altered; but we regret to say that it does not seem to us nearly so clear as in the last edition—in fact, we doubt whether it would serve as a trustworthy guide to the operation. The statistics given are very satisfactory: out of twenty-one cases, eighteen of which were performed by Mr. Curling himself, and in all of which he took part, only seven died, and of these deaths several seem to have been from adventitious or unavoidable circumstances. We can only add that the work is sure to retain its already high reputation.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

September 18.

THE LATE MR. ROBERTON: HIS LIFE AND LABOURS—THE INSANITARY CONDITION OF THE ROYAL INFIRMARY: QUESTION AS TO CHANGING THE SITE OF THE INSTITUTION; APPOINTMENT OF A MEDICAL AND SURGICAL REGISTRAR.

IN the obituary notice of the late Sir James Bardsley, which appeared in your columns a few weeks ago (July 22), allusion was made to the remarkably large number of deaths which had occurred amongst the consulting-surgeons of this city during the past five years; no fewer than six hospital surgeons having, at intervals of but a few months, followed each other to the grave. Meanwhile, the other two great branches of the profession—medicine and obstetrics—had lost none of their leading men. Then Sir James Bardsley's death occurred; and, exactly a month later, we had to lament the loss of Mr. John Roberton, a veteran worker in the field of obstetric medicine.

The names of Charles White, Dr. Hull, Dr. Radford, Dr. James Whitehead, Mr. Roberton, and Dr. Charles Clay have made Manchester famous in obstetric literature; and amongst these distinguished men there has been none who prosecuted his researches with greater energy and enthusiasm than the late Mr. Roberton. His "Essay on the Period of Female Puberty in Different Climates" is a monument of painstaking investigation. Originally printed in the *North of England Medical and Surgical Journal* for 1830, it was afterwards (in 1851) republished, along with other papers, in a volume entitled "Essays and Notes on the Physiology and Diseases of Women, and on Practical Midwifery." This volume was mainly the result of Mr. Roberton's observations and inquiries during the eleven years (1827-38) that he was actively connected with the Manchester and Salford Lying-in Hospital, now known as St. Mary's Hospital for the Diseases of Women and Children. During these eleven years the number of women delivered by the officers of that charity was 43,500; whence some idea may be gathered of the onerous nature of the duties which Mr. Roberton and his colleagues were called upon to fulfil. Besides which there was an important out-patient department for the diseases of women and children.

Need we wonder that men of even the most robust constitution broke down under this enormous burden? In May, 1838, Mr. Roberton's health became so much impaired that he was compelled to resign office; and then, in his comparative leisure, he gave to his professional brethren, as the fruit of his experience, the volume of essays which has been already mentioned.

I cannot refrain from quoting the opening sentences of his preface; they are so true an explanation of the professional career of many besides Mr. Roberton. "Trivial circumstances," he says, "will sometimes give the bent to one's pursuit, and determine the whole career for life. So it happened with me. Early in the spring of 1827 a vacancy occurred in the office of Surgeon to our Lying-in Hospital. Without having at that time a strong leaning towards the practice of midwifery, or the pursuit of it as a science, I was yet induced to offer myself as a candidate, and I obtained the appointment."

Would that every hospital surgeon recognised the responsibility attending upon his appointment as heartily as did Mr. Roberton, and endeavoured with equal conscientiousness to make his professional brethren sharers in his experience!

In addition to his purely professional labours, Mr. Roberton was exceedingly active in the various movements of his time which had for their object the bettering of the condition of the working classes. "The shortening of the then excessive hours of labour, the removal of the taxes on bread, and other kindred matters, occupied the hours that should have been devoted to rest and sleep." It is now many years since this active brain began to fail, and for some time Mr. Roberton's memory, even for the most familiar faces, had been almost entirely lost. He died on August 24, at New Mills, in Derbyshire, having reached his eightieth year.

The managers of the Royal Infirmary are now anxiously awaiting the report of Mr. J. Netten Radcliffe, the inspector specially engaged to inquire into the sanitary condition of the institution. It has become quite evident that either the present building must be enlarged to meet the increasing demands upon its accommodation, or a new Infirmary must be built. The question has been discussed with considerable warmth by the hospital trustees—one party being strongly in favour of retaining the Infirmary in its present central position; the other desiring to dispose of the existing hospital and the exceedingly valuable site on which it stands, and with the money so obtained to build a large hospital, with all the requirements of modern science, at a little distance from the centre of the city, where land is cheaper and the air more pure.

Two committees have been appointed—one to inquire into the sanitary, the other into the financial aspect of the question. The financial committee has prepared its report, but has decided to withhold it until the receipt of Mr. Radcliffe's report shall enable the sanitary committee to complete its labours, when both reports are to be presented together.

Meanwhile, Mr. Radcliffe found the drains underneath the hospital so thoroughly blocked and unserviceable, that he thought it necessary to lay before the authorities an immediate instalment of his report, having reference to this one specially urgent question; and a number of wooden sheds are in course of erection in the Infirmary grounds, for the temporary lodgment of the patients, while the drains are being opened and explored.

An important step has just been taken towards the securing of a more accurate record of the cases treated in the Infirmary, in the appointment of a qualified medical and surgical registrar. No doubt two registrars are really required, one for surgical, the other for medical cases; but we must be thankful for even small mercies. Mr. Thomas Jones, whose good work when pathologist to the Infirmary is a sufficient guarantee of his fitness, has been appointed to this new office of registrar; and Dr. James Ross, late of Waterfoot, well known to the readers of the *Practitioner* and other medical periodicals, as an able contributor on subjects connected with the philosophy of medicine, takes Mr. Jones's place in the post-mortem theatre.

SEASONABLE BENEVOLENCE.—With a view of relieving the Sheffield Infirmary and Hospital from difficulties caused by the falling off in the contributions through the present depression in trade, a well-known brewer of that town has forwarded cheques of £1000 to each of these institutions.

A SCHEME has been duly certified by the Enclosure Commissioners for placing Clapham-common under the control of the Local Government Board. The common has been purchased for a sum of £18,000. It comprises 220 acres, and is to be dedicated to the use and recreation of the public for ever.

GENERAL CORRESPONDENCE.

RETRO-URETHRAL CATHETERISM.

LETTER FROM DR. RANKE.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your impression of July 15, 1876, page 63, there is a notice of my work on "Retro-urethral Catheterismus." Will you allow me to correct the following mistake, which no doubt arises from misconstruction?

In Germany it is generally believed that Hunter was the inventor of this proceeding. To this I must demur. Hunter certainly made the suggestion, but never himself carried it out. Your reporter seems to believe that he did. Hunter cannot even claim priority for the suggestion. Verguin's case is reported thirty years before Hunter's work on Syphilis—in which he casually refers to the idea—was published.

Further, allow me also to remark concerning the last paragraph of your notice, that Volkmann, my esteemed teacher, has never thought even of experiments regarding this operation: these were undertaken by the author of the paper—by myself. I beg to enclose "Separat-abdrücke" of the two papers for your perusal. I am, &c., DR. RANKE,

Docent of Surgery in the University of Halle.

Halle, September 11, 1876.

"BOGUS" DIPLOMAS.

LETTER FROM DR. BAXTER LANGLEY.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am obliged by the opportunity you offer me of "telling the other side of the story" in reference to the case in the Hammersmith Police-court; but I wish that you had consulted me as to the truth of the statements made by Mr. Keith Frith *before* you brought my name in connexion with such a transaction.

"Without evasion, equivocation, or mental reservation of any kind," I beg to state that I never procured, or caused to be procured, for any person, any diploma of any foreign university whatever; and that, as a recognised expert in the law courts on all matters affecting the laws and customs of the medical profession, I never could have been such an ignorant fool as to represent to anyone that he could legally practise, and recover debts, as a medical practitioner under a diploma which could not be registered.

Immediately I heard of the unjustifiable statements of Mr. Keith Frith, I asked him courteously to let me know the grounds for making such an allegation. Mr. Keith Frith pleads "time-honoured customs" as his excuse for refusing any information. I am, &c.,

Medical Transfer Office, J. BAXTER LANGLEY.

50, Lincoln's-inn-fields, W.C., September 22.

OBITUARY.

INSPECTOR-GENERAL JOHN WATSON, L.R.C.P.

THE death of retired Inspector-General John Watson took place recently, at the age of seventy-four. The deceased officer served as Assistant-Surgeon in the *Philomel*, 10, Commander Edward Hawes, in the Mediterranean, from November, 1827, till March, 1829, when he removed into the *Wasp*, 18, also in the Mediterranean; and in November, 1831, was transferred to the *Victory*, 104, at Portsmouth. In October, 1832, he was appointed to the *San Josef*, 110, at Plymouth; and in 1834 was promoted to the rank of Surgeon. As Surgeon he served in the *Ringdove*, 16, from June, 1836, until the close of 1841, on the Lisbon station, and in North America and the West Indies. He was Surgeon and Storekeeper at Jamaica from April, 1844, until 1851; and from 1853 till 1856 was Deputy Medical Inspector at Jamaica. He was awarded the Greenwich Hospital pension, October 11, 1866, and became Honorary Inspector-General, February, 1857. The vacancy thus occasioned in the number of officers on the pension list of Greenwich Hospital (value of pension £80 a year) for a Deputy Inspector-General of Hospitals and Fleets has been filled up by the appointment of Mr. Robert McCormick.

THE LATE PROFESSOR GUSTAV SIMON.

WE gather the following particulars from the *Berliner Klinische Wochenschrift*, No. 38. Dr. Simon was born at Darmstadt in 1824. He graduated at Heidelberg in 1847. He was nominated Extraordinary Professor at Rostock in 1861, and in 1867 he was transferred to Heidelberg, where he remained until his death. He was an original worker, a brilliant operator, and an indefatigable reader. He was greatly esteemed as a teacher, no less than as a friend. Since 1870 he has suffered more or less from ill-health, and had gradually to withdraw from active work. In December, 1875, he resigned his chair at the University, but was able to give consultaions at his house, and even to perform the smaller operations. But the dyspnœa, from which he suffered, grew upon him, although the enforced rest for a while seemed to do him good. On August 27—he had been feeling unusually well this day—an attack of intense dyspnœa came on during the evening; he was quite conscious, and earnestly besought his medical attendant to perform tracheotomy. This was done, and relieved him. He appeared to have been altogether uncertain as to the nature of his own illness, though so acute in the detection of disease in others. At the post-mortem examination there was found extensive œdema of the lungs, the result of an aneurism of the descending portion of the thoracic aorta, which was almost completely filled with clot. Dr. Simon's chief works are the following:—"Contributions from the Clinical Wards of the Rostock Hospital, 1868"; "The Introduction of long Elastic Tubes into the Intestine, and the Forced Injection of Water"; "The Surgery of the Kidneys" (which contains a case of successful kidney extirpation), part 1. He was occupied with part 2 of this remarkable work even on his death-bed, and it is hoped that it will soon be published, as much of it is completed. He invented also as a method of examination of the abdomen the gradual dilatation of the rectum and the introduction of the whole hand. It is impossible to name all his works, but we hope we have given some of the chief.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 21:—

Todd, Howard James McCheary, Kenniugton-road, Lambeth.
Bennett, Arthur, Stawell, Victoria, Australia.
Rule, George Frederick Henry, Elgin-crescent, Notting-hill.

The following gentlemen also on the 14th and 21st passed their primary professional examination:—

Clitherow, Robert Edward, King's College.
Elliott, Horace, Westminster Hospital.
Hodge, Arthur, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

JONES, E. OWEN, M.B., C.M. Edin.—Resident Medical Officer of Hulme Dispensary, Manchester, *vice* A. Emrys Jones, M.B., M.R.C.S., resigned.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon William Edney has been promoted to be Fleet-Surgeon in her Majesty's Fleet, with seniority of September 18, 1876; Staff-Surgeon Henry Rickard has been placed on the retired list from the 18th inst.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major James Edmund Clutterbuck, M.D., to be Deputy Surgeon-General, *vice* T. Moorhead, M.D., retired upon temporary half-pay; Surgeon-Major Grahame Auchinleck, M.D., to be Deputy Surgeon-General, *vice* W. G. Trousdell, M.D., retired upon half-pay; Surgeon-Major Lauger Carey, M.D., is placed upon temporary half-pay; Surgeon-Major Joseph Barker retires upon temporary half-pay.

BIRTHS.

PHILPOT.—On September 23, at Cressingham House, Peckham Rye Common the wife of Harvey J. Philpot, L.R.C.P., M.R.C.S., etc., of twin daughters.

RIGBY.—On September 13, at 31, Winckley-square, Preston, the wife of James A. Rigby, M.B. Lond., of a daughter.

SATCHELL.—On September 25, at Groombridge, near Tunbridge Wells the wife of Walter A. Satchell, F.R.C.P. Edin., M.R.C.S. Eng., of a daughter.

STEVEN.—On September 20, at 38, York-crescent, Clifton, the wife of Alexander Steven, M.D., of a daughter.

VISE.—On September 21, at Holbeach, the wife of Ambrose Blithe Vise, M.R.C.S. Eng., of a son.

WALLACE.—On September 25, at 243, Hackney-road, the wife of Frederick Wallace, L.R.C.P. Lond., of a son.

MARRIAGES.

BROWN—WITTEY.—On September 20, at the Presbyterian Church, Brighton, George Brown, M.D., of Colchester, to Fanny Wittey, only child of Henry Wittey, solicitor, of Colchester.

DREW—DOWN.—On August 17, at the Cathedral, Colombo, Ceylon, Harry, only son of Joseph Drew, LL.D., J.P., of Weymouth, to Georgiana Emily, second daughter of George Down, M.D., of Eardley-crescent, South Kensington.

IVATT—CAMPBELL.—On September 20, at the parish church of St. John, Hampstead, Henry Alfred, eldest son of the late Rev. Alfred William Ivatt, Rector of Coveney-cum-Maoea, in the Isle of Ely, to Margaret, daughter of Hugh Campbell, M.D., of Belsize-park-gardens, and late of Eweland Hall, Essex.

LACON—BRETT.—On September 19, at the parish church, Watford, E. Lacon, Vicar of Nether Wallop, Hants, to Fanny Adeline Brett, eldest daughter of Alfred T. Brett, M.D., of Watford House, Herts.

LINOQUIST—EMBLETON.—On September 26, at St. Andrew's Church, Newcastle-on-Tyne, Oskar Magnus, eldest surviving son of C. H. Lindquist, Esq., of Wenersborg, Sweden, to Alice, eldest daughter of Dennis Embleton, M.D.

MCFADDEN—COLBECK.—On September 14, at St. Mary's Catholic Church, Batley, John McFadden, M.D., of Batley, to Frances, fourth daughter of Simeon Colbeck, Esq., of Boyle Hall, near Wakefield.

MONTEFIORE—DE WILTON.—On August 20 at Wiesbaden, and on September 17 at Paris, J. Gompertz Montefiore, Esq., son of Jacob Montefiore, Esq., of Brighton, to Eugenie, second daughter of Surgeon-Major Gerald de Wilton, M.D., of H.M.'s 29th Regiment.

NEVITT—DACRE.—On September 21, at the Congregational Church, Otley, John G. Nevitt, M.R.C.S., of Chapel Allerton, near Leeds, to Susan, third daughter of the late John Dacre, of Otley.

RIVAZ—TYACKE.—On September 21, at St. Bartholomew's Church, Chichester, Henry Tullie Rivaz, Esq., of the Inner Temple, barrister-at-law, to Fanny Cecilia, second daughter of N. Tyacke, M.D., J.P., of Westgate, Chichester.

SPURRELL—BLAXLAND.—On September 20, at St. John's, Erith, Herbert Spurrell, of Eastbourne, son of Flaxman Spurrell, L.R.C.P. Edin., F.R.C.S.E., of Belvedere, to Harriet Rebecca, daughter of G. Blaxland, Esq., of Lincoln's-inn-fields.

WEIGALL—COWEN.—On September 21, at St. Jude's, Southsea, Arthur Archibald Denne Weigall, 76th Regiment, to Alice Henrietta, second daughter of Deputy Surgeon-General H. L. Cowen, F.R.C.S. Eng., Principal Medical Officer, Northern District.

WILSON—MARTIN.—On September 21, at St. Paul's, Great Portland-street, Arthur, youngest son of the Rev. Daniel Wilson, vicar of Islington, to Charlotte Mary, only daughter of R. S. Martin, L.R.C.P. Edin., M.R.C.S. Eng., of Kemerton, Tewkesbury.

DEATHS.

BULLOCK, ELLEN, wife of Henry Bullock, F.R.C.S., Major 7th A B., Middlesex R.V., at Overton House, Spring-grove, Isleworth, on September 20.

CAROLAN, LAURA ADELIA FLORENCE, wife of James F. Carolan, M.R.C.S., at 10, Westbury-road, Westbourne-square, W., on September 21, aged 28.

CHRISTISON, ANNIE, wife of Alexander Christison, M.D., Surgeon-Major H.M. Bengal Army, at St. Fillan's, Perthshire, on September 21.

CULHANE, MORGAN F., M.D., at 23, Victoria-road, Kensington, on September 22, aged 84.

MUDD, WILLIAM HIBBIT, M.R.C.S.E. and L.M., at 467, New Cross-road, on September 15.

PICARD, HARRIET ELLIOTT, wife of Kirkpatrick Picard, M.D., at 59, Abbey-road, St. John's-wood, on September 20, aged 33.

SANDWITH, GODFREY, M.D., son of the late Humphry Sandwith, M.D., formerly of Hull, at St. Helena Bay, South Africa, on August 3.

WALLICH, SOPHIA, widow of the late N. Wallich, M.D., F.R.S., of 96, Gower-street, at Surbiton, on September 20.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—House-Surgeon. Candidates must be registered in medicine and surgery under the Medical Act. Applications, with testimonials, to John Banks, Hon. Secretary, Wakefield, on or before September 30.

GENERAL INFIRMARY AT HULL.—House-Surgeon. Candidates must be Members or Licentiates of the College of Surgeons of England, Edinburgh, or Dublin. They must be qualified as general practitioners, registered, and unmarried. Testimonials to the Secretary of the Hull General Infirmary, on or before September 30.

NORTH DEVON INFIRMARY, BARNSTAPLE.—House-Surgeon. Candidates must be members of the College of Surgeons, duly registered under the Medical Registration Act, and unmarried. Certificates and testimonials to John Bridgman, Secretary (under cover, addressed to the Committee), on or before September 30.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be legally qualified in medicine and surgery, and registered in accordance with the provisions of the Medical Act. Applications, with testimonials and qualifications, to Mr. F. Whitburn, Assistant-Secretary, on or before October 7.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Testimonials to the Secretary of the Medical Board, the Infirmary, Sunderland, on or before October 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

. The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Ashton-under-Lyne Union.—The Second District is vacant; area 2593; population 9393; salary £20 per annum.

Thingoe Union.—Mr. J. Richardson has resigned the Fourth District; area 8080; population 1552; salary £50 per annum. Also the Fifth District; area 6669; population 1697; salary £42 6s. per annum.

APPOINTMENTS.

Plympton St. Mary Union.—James M. Randle, M.R.C.S. Eng., L.R.C.P. Edin., to the Second District.

Sleaford Union.—Wm. Bower, jun., L.R.C.P. Edin., L.R.C.S. Edin., to the Blankney District.

Southampton.—Arthur H. Hassall, M.D., O. Hehner, and A. Angell, as Analysts for the County.

Stourbridge Union.—Robert T. S. Eagar, M.R.C.S. Eng., L.S.A., M.D. Edin., to the First Oldswinford District.

TO RENDER CASTOR OIL PALATABLE.—The glass should be first rinsed with moderately hot water, and two drachms of hot water, one ounce of castor oil, and one drachm of peppermint-water put in, in the order mentioned. This is easily swallowed, leaving hardly any taste of the oil in the mouth.—*New York Medical Record*, August 12.

DR. WALTER CHANNING.—This once eminent obstetrician, or, as he would have been termed in his own day, man-midwife, died recently at Boston, at the age of ninety. He occupied the highest position in the profession and in society, and was a younger brother of the celebated Unitarian divine, William Ellery Channing. Being once mistaken for his famous brother—"No!" he exclaimed, "he is the man who preaches, but I practise." He was a frequent contributor to the medical and other periodical literature, and his work on "Etherisation in Childbirth" is one of great importance.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Arts Examinations.—The result of the recent preliminary examination for the diplomas of Fellow and Member of the Royal College of Surgeons has just been communicated to the 350 candidates, and those gentlemen desirous of commencing their professional studies can do so at once.

A Tutor and H. M.—We are afraid the list of successful candidates will be too long for publication in the *Medical Times and Gazette*, nevertheless we will see what can be done.

"A Tanner."—Few of our readers know what a "tanner" is. It represents sixpence, the value of the "advice, medicine, and every other requisite," per patient, charged by one T. V. Timothy, L.R.C.P. Lond., M.R.C.S. Eng., L.M. and L.S.A., of Dalkeith-street, Barrow-in-Furness, who, on his admission as a member of the College, signed a "Declaration that he would uphold the honour, dignity, and welfare of the profession." As requested by our correspondent, we have forwarded his handbill to the Secretary.

Mr. Thompson, R.N.—The late Professor Quekett died at Pangbourne, in the churchyard of which a handsome slab records that it is "In memory of John Thomas Quekett, F.R.S., F.L.S., M.R.C.S. Eng., etc., Professor of Histology, and Conservator of the Hunterian Museum at the Royal College of Surgeons of England. Born at Langport, Somerset, August 11, 1815; died at Pangbourne, August, 20, 1861, aged forty-six years. His memory will ever be cherished by all who knew him, and by the thousands who have profited by his wonderful stores of acience. 'There is a spirit in man, and the inspiration of the Almighty giveth them understanding.'—Job xxxii. 8."

John Hunter.—Mr. W. Carder, of Earl's Court-road, the well-known photo artist, continues to publish illustrations of the Hunterian Museum, his latest being an excellent photograph of the fine statue of Hunter, by Weekes, R.A., together with another of the skeleton of the famous giant O'Brien, and a photograph of the large copper in which the body was boiled by Hunter to avoid detection. In this cooking operation he sat up all night.

"ALLOW ME."

Snuff-taking was first naturalised in France, where the favour accorded it by Catherine de Medici made "L'Herbe de la Reine,' as it was called, all the rage among her courtiers. English doctors had at that time great faith in the efficacy of various pungent mixtures called sternutatories, which, being drawn up into the nostrils, caused fits of sneezing, thereby clearing, it was held, the ventricles of the brain of divers gross and slimy humours. Tobacco-snuff was welcomed by them as a mild and safe ster-

nutatory, a noble medicine, if rightly and rationally used. Despite all denunciations, the leaders of society in Europe took snuff out of the domain of medicine, and made snuff-taking a fashionable practice.

ARAB FAITH IN MEDICINE.

The Arabs in general constantly have recourse both to charms and to medicine, not only for the cure, but also for the prevention of diseases. "They have indeed," says Lane, in the notes to his translation of the "Arabian Nights," "a strange passion for medicine, which shows that they do not consider fate as altogether unconditional. Nothing can exceed the earnestness with which they often press a European traveller for a dose; and the more violent the remedy the better they are pleased. I was applied to on behalf of three donkey-drivers supposed to have been poisoned. I gave the applicant three strong doses of tartar emetic, and he soon came back to thank me, saying that the medicine was most admirable, for the men had hardly swallowed it when they almost vomited their hearts and livers and everything else in their bodies."

COMMUNICATIONS have been received from—

Mr. GEORGE BARRACLOUGH, New Wandsworth, London; Mr. C. J. CULLINGWORTH, Manchester; Dr. T. GRAINGER STEWART, Edinburgh; Dr. FRANCIS OGSTON, Aberdeen; Mr. JOHN CHATTO, London; Dr. ANDREW CLARK, London; Dr. THOMAS, Sheffield; Dr. WILTSHIRE, London; Mr. FRANCIS MASON, London; Dr. J. B. LANDLEY, London; Mr. LUNO, Manchester; Dr. E. B. BAXTER, London; Professor BENTLEY, London; Mr. KERSHAW, London; Dr. GORDON HOLMES, London; Dr. J. C. OGILVIE WILL, Aberdeen; Mr. E. NETTLESHIP, London; Dr. MORELL-MACKENZIE, London; Mr. REEVES, London; Mr. FORTESCUE, London; Mr. GODLEE, London; Dr. WM. PEARO, Harrogate.

BOOKS AND PAMPHLETS RECEIVED—

Sir John Rose Cormack, Diphtheria and Croup: What are They?—First Annual Report of the Metropolitan and National Nursing Association—Cassell's Popular Educator, part 1.—Ely van der Warker, M.D., The Treatment of Anteflexions of the Uterus—Cassell's History of India, part 10.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Tunbridge Wells Gazette—Belgian News—The Shield—Students' Journal—New Orleans Medical and Surgical Journal—West London Observer—Toronto Sanitary Journal—The American Practitioner—Gazeta Medica da Bahia.

APPOINTMENTS FOR THE WEEK.

September 30. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

October 2. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

3. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

4. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

OBSTETRICAL SOCIETY, 8 p.m. Mr. C. Godson and Dr. C. Godson, "Midwifery Statistics during upwards of Thirty-five Years of General Practice." Dr. Galahin, "Two Cases of Pregnancy complicated by extensive Malignant Disease of the Cervix Uteri." Dr. Redmond, "On Secondary Puerperal Hæmorrhage." Dr. Elkington, "On Inversion of the Uterus." Mr. Hickman, "On Inversion of the Uterus." And other Communications.

ROYAL MICROSCOPICAL SOCIETY, 8 p.m. Meeting.

5. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

6. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 23, 1876.

BIRTHS.

Births of Boys, 1213; Girls, 1210; Total, 2423.
Average of 10 corresponding years 1866-75, 2163·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	645	635	1280
Average of the ten years 1866-75	647·1	601·7	1248·8
Average corrected to increased population ...	...	...	1336
Deaths of people aged 80 and upwards ...	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	6	1	3	...	3	...	4
North	751729	3	2	7	2	3	3	11	...	8
Central ...	334369	...	...	3	...	...	1	2	...	6
East	639111	...	3	18	...	6	2	5	5	16
South	967692	8	2	14	3	4	2	3	...	11
Total	3254260	11	7	48	6	16	8	24	5	45

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·889 in.
Mean temperature	57·5°
Highest point of thermometer	72·5°
Lowest point of thermometer	41·6°
Mean dew-point temperature	50·6°
General direction of wind	W.S.W. & N.E.
Whole amount of rain in the week...	0·29 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 23, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre, (1876.)	Births Registered during the week ending Sept. 23.	Deaths Registered during the week ending Sept. 23.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2423	1280	72·5	41·6	57·5	14·17	0·29	0·74
Brighton	100632	42·7	72	37	67·7	48·6	56·5	13·61	0·70	1·78
Portsmouth ...	124867	27·8	67	50	63·4	50·6	56·6	13·67	0·71	1·80
Norwich	83430	11·2	57	33	69·2	45·8	56·7	13·72	0·19	0·48
Plymouth	72230	51·8	36	26	67·5	44·0	56·6	13·67	0·64	1·63
Bristol	199539	44·8	84	80	73·3	43·0	57·8	14·34	1·26	3·20
Wolverhampton ...	72549	21·4	48	37	72·8	44·2	57·2	14·00	0·76	1·93
Birmingham ...	371839	44·3	322	147	...	...	...	...	...	...
Leicester	113581	35·5	81	38	73·5	45·0	57·4	14·11	2·02	5·13
Nottingham ...	93627	46·9	67	32	73·7	42·5	56·5	13·61	0·63	1·60
Liverpool	521544	100·1	408	244	71·0	49·1	56·7	13·72	0·26	0·66
Manchester ...	357917	83·4	249	158	75·5	45·5	58·4	14·66	0·42	1·07
Salford	138425	26·8	152	78	75·6	41·5	57·3	14·06	0·66	1·68
Oldham	88609	19·0	69	51	...	...	...	...	...	...
Bradford	173723	24·1	146	64	66·4	48·0	54·6	12·56	0·14	0·36
Leeds	291580	13·5	207	106	71·0	47·0	55·3	12·95	0·27	0·69
Sheffield	274914	14·0	195	122	69·8	45·8	56·2	13·44	0·52	1·32
Hull	136933	37·7	112	42	69·0	44·0	54·8	12·67	0·23	0·58
Sunderland ...	108343	32·8	90	32	...	...	...	...	...	...
Newcastle-on-Tyne	139929	26·1	96	41	...	...	...	...	0·30	0·76
Edinburgh	215146	51·3	132	86	...	...	...	...	...	...
Glasgow	545144	90·4	372	212	66·6	44·9	55·3	12·95	0·47	1·19
Dublin	314666	31·3	183	150	70·5	45·2	57·5	14·17	0·47	1·19
Total of 23 Towns in United Kingdm	8028595	37·7	5668	3146	75·6	41·5	56·6	13·67	0·58	1·46

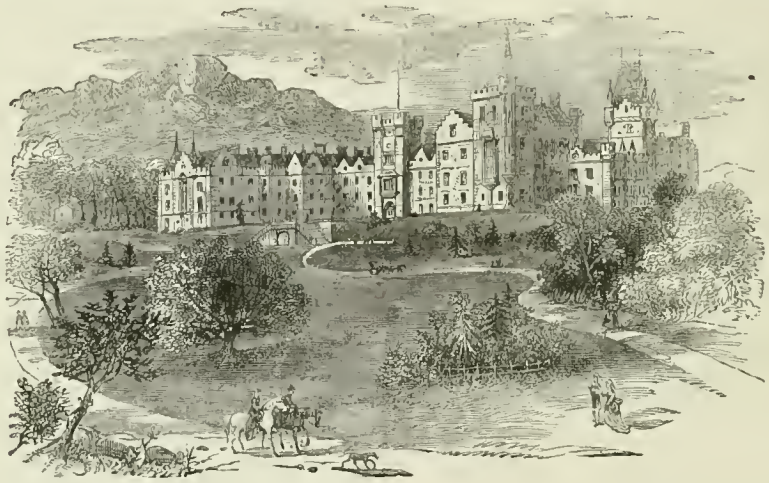
At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·89 in. The lowest reading was 29·46 in. at the beginning of the week, and the highest 30·21 in. on Wednesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

BEN RHYDDING, WHARFEDALE.

HYDROPATHIC ESTABLISHMENT.

Resident Physician—WM. CUBITT LUCEY, M.D., C.M. M.R.C.S. Eng.



BEN RHYDDING is situated on the right bank of the beautiful River Wharfe, and is built upon a commanding eminence, at an elevation of 500 feet above the sea.

The House accommodates 160 patients and visitors, and in its internal arrangements affords them every comfort. The public rooms are very large and handsome, consisting of Dining, Drawing, Reading, and Billiard Rooms, besides eight Bath Rooms and the Russian Bath.

There is a Library in the house.

The beauty of the Grounds and Park is celebrated. The 78 acres which surround the house are laid out so as to afford exercise and recreation of the most pleasing and varied kind.

Archery, Lawn Tennis, Croquet, and Cricket are among the amusements, and besides these there is a very large covered Racquet Court and Skating Rink, which can be illuminated. The Turkish Bath has been thoroughly re-modelled, and adjoining it is a large Concert and Ball Room, in which is a stage for private theatricals.

Ben Rhydding owes its celebrity to the success which has attended the treatment adopted at the establishment, and the benefits which are derivable from the use of Hydro-therapeutics are enhanced by a carefully selected and abundant dietary, pure air and charming scenery, healthful exercise and recreation, and the pleasant society which is always to be found within it.

Full details and terms are given in the Prospectus, for which address—

THE MANAGER,

BEN RHYDDING, near LEEDS.

THE INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE LONDON HOSPITAL MEDICAL SCHOOL.

By ANDREW CLARK, M.D., F.R.C.P.,
Physician to, and Lecturer on Clinical Medicine at, the Hospital.

GENTLEMEN,—I occupy this place to-day by the desire of the College Board, to bid you welcome to the London Hospital; to offer to you who are beginning, and to you who are resuming your studies, some words of counsel as to their management; and to express the hope that you will here worthily qualify yourselves for your future work in life, and that hereafter you will so do that work that you will maintain, as in times past your predecessors have maintained, untarnished the name and fame of this beneficent institution.

Twenty-two years ago this College was opened by Dr. Little, the senior physician to the Hospital, and now a member of its Executive Committee. That event was an important epoch in the educational history of the School. And now that we have touched another epoch, it will certainly be interesting, and it may not be unprofitable, to look back along the time which has passed; to note the more important changes which have marked its passage; and to observe whether they have tended to help or to hinder the work of healing the sick, of increasing our knowledge of disease, and of grounding our students in the principles and practice of our art.

Let us, in the first place, examine the Hospital. Special departments have been instituted for the study and the treatment of diseases of the eye, the ear, the skin, the throat, the teeth, of venereal diseases, and of diseases of women and children. Modern instruments for the investigation as well as for the treatment of disease have been added without stint to the Hospital armamentarium. A new post-mortem theatre has been built, and furnished with every appliance for study, for demonstration, and for research. Acknowledging the fact that hospitals exist not only for the reception of patients, but for the advancement of knowledge and the education of medical men, the governors have from time to time met, with enlightened liberality, the financial needs of the College. The addition of the Alexandra wing in 1866, and of the Grocers' wing in the present year, has made the Hospital the largest in the metropolis. And now, with its 800 beds, and its yearly tale of more than 40,000 out-patients, with its dense and busy population around, and the great Port of London at hand, there can never be lack of abounding means for studying, in all their variations and degrees, the accidents, the disorders, and the diseases of mankind.

Turning now to the College, and the educational work which it regulates, we shall observe that although the changes of the last twenty years are here less striking than those which have happened in the Hospital during the same period, they are neither less numerous nor less important. For the most part, they consist in giving a more practical turn to the teaching of the students, and in making easier for them the difficulties of learning.

The College building has been enlarged. A reading-room has been given to the students. The contents of the museum have been re-arranged and catalogued. A gallery of models and drawings of skin diseases has been added. The teaching of every chair has been supplemented by a class for demonstration and working. There have been originated courses of instruction for the application of chemistry, of the microscope, of the laryngoscope, and of the ophthalmoscope to the diagnosis of disease. Lectureships have been established on special classes of diseases. Particular wards with exclusive teaching have been set apart for clinical instruction. Examinations have been organised to test, and prizes have been created to reward, the progress of the students in their studies. Arrangements have been made by which every student attached to the Hospital is expected, and will soon be required, to take a share in the work done within its walls. And, lastly, scholarships have been instituted in order to encourage a high preliminary training in general knowledge, and to foster diligence, thoroughness, and accuracy in clinical work.

Such are the chief changes which have been effected in the Hospital and in the College during the last twenty years; and, reviewing them with as much critical impartiality as can be expected in one who has been concerned in them, and making allowance for the antagonistic views with which some of them may be regarded, it must be admitted that, in the main, they tend to promote the attainment of the objects for which these institutions exist. But it is not pretended that those changes have yet enabled us to achieve an entire success. It has been felt and confessed that there is still room to make our education more efficient and complete, and to adjust our ample means with more exactitude to the varying wants and capabilities of individual students. We have, therefore, effected recently an important and crucial change in the constitution of the College. Upon conditions which need not now be specified, because they cannot now be here discussed, its management, hitherto conducted by the staff, has been transferred to a College Board, composed in greater part of representatives of the governors chosen from the House Committee, and in lesser part of representatives of the staff, and of the teaching body elected by the Medical Council. In fact, for a definite time of trial, with power at the end thereof to ratify or to terminate the engagement, the College has been "taken over" by the Hospital; and, in virtue of their subsidies to educational work, the governors will have a ruling majority at the new Board. To its deliberations the medical element will bring its technical knowledge, its educational experience, and its high responsibilities to the profession; the lay element, its larger leisure, its business habits, its freedom from the disturbing influences of professional jealousy, and its moral obligations to the interests of the Hospital and the well-being of society, which there it will virtually represent. From their united counsels we expect fresh accessions of administrative strength, unity of plan and of action, a closer supervision, and, therefore, a more efficient working of our educational machine; and, lastly, a higher kind and larger measure of educational success.

It is obvious that the working of this new constitution is necessarily beset by great perils; and, did we not believe, as we do, in the sincerity and in the zeal of those engaged, we should justly fear lest the partial counsels of merely personal interests or of partial intrigue should prevail over broader, juster, and wider views. Happily we are without grounds to justify indulgence in such fears. Happily also, if the scheme should fail,—if, contrary to our expectations, loss and not gain should be the issue of the trial,—we can still return to our former state, and resume our work upon the ancient lines.

But whilst reckoning thus our gains, our losses must not be overlooked. They are neither few nor light; and it is only the strong vitality of the Hospital organisation which has enabled us to refill the gaps which time has made, and to show now so little of its scars. Of the staff of twenty years ago, only one remains to connect the active list of that day with the active list of this. Some by length of service have been promoted to the ease and dignity of the consultative office. Others have turned aside into different spheres of work. Death has had his share. And here gladly would I recall the names and services of those who helped to make, and in their time maintained, the reputation of the London Hospital, and whose names and services ought never to be forgotten in this place. But time will not permit me now to dwell upon this subject; and I must limit myself to a brief notice of one who, in the prime of life and at the height of his activity, has been taken recently and suddenly from amongst us.

For over thirty years Dr. Letheby was Lecturer on Chemistry in this College. Full of his subject, lucid and orderly in his thoughts, a fluent speaker, gifted with the power of popular exposition, an admirable experimenter, and abounding in illustrations of the applications of chemistry to medicine and to the domestic arts, he was, and he was justly, one of our most popular and successful teachers.

One of the first to bring to light the prevailing practice of systematic food adulteration, to set forth the injurious influences exercised by certain modern manufactures upon health, and to point out the consequences and the remedies of our noxious gas supplies; an accomplished chemist, an acute medical jurist, an admirable sanitarian, to whom we owe numberless improvements and contrivances in almost every department of public health—Dr. Letheby, although standing high in the estimation of the public, never received from the profession that entire recognition of his merits which he had fully won. Dr. Letheby had made few original investigations; but certainly they are not the only measure of a man's usefulness to his college or to the community. If he was outspoken, we must not forget the respect which is due to a fearless independence. If he had enemies, is there not reason to suspect the sincerity of him who has none? If he erred in judgment, where is the man that is infallible? If he had weaknesses many, and faults many, where is the human

excellence which is greatly privileged from them? Making full allowance to his detractors, we can still say of Dr. Letheby that he was an able and an honest man—a loyal colleague,—a true and genial friend,—a benefactor to this College,—a successful promoter of the applications of knowledge to the practical business of life,—a valuable servant to the public,—and that his memory deserves, here at least, some more lasting expression of gratitude than this that I can offer it to-day.

The profession which you have chosen is one of the noblest, the most important, and the most interesting of all those occupations to which the highest human endeavours are turned. But it is also the most self-denying and the most arduous. Exacting the largest internal sacrifices, it returns the fewest external rewards. Neither wealth nor rank waits upon its longest or its best services; and he who is not prepared to find in its cultivation and in its exercise his chief and sufficient recompense, has mistaken his calling and should retrace his steps. To prevent and to cure disease, to prolong life and to put back death,—these are the broad objects of our art. Thus stated, how narrow they seem! and yet, when we penetrate their meaning, how vast are the interests which they are found to cover; into what conditions or relations of human life do they not enter! The well-being of the individual, as it is affected by development and education, by the regulation of labour and the formation of habit, by the discipline of the emotions and the control of the will; the continued existence of society, made increasingly difficult by growing complexity in the conditions of civilised life; and even the safety of the State, in so far as it may be imperilled by the ravages of epidemics, the evil effects of manufactures upon the health of crowded populations, and the improper hygiene of fleets and armies;—are all, more or less, dependent upon obedience to laws which it is the business of our art to discover and proclaim.

But medicine not only involves vast interests,—it establishes, and for its existence it must maintain, and for its progress it must continue to multiply, the most intimate relations with every other form of knowledge. There is none into which it does not lead us; none with which it does not necessitate some degree of acquaintance; none which does not lend it aid. Nor is the entire domain of the physical sciences sufficient for its needs and purposes. With the facts of the mental and of the moral worlds it seeks as close, and it holds as necessary a relation. And thus throughout the whole realm of nature to its utmost bounds medicine lays down its lines of inquiry, and establishes its channels of communication. It is the metropolis of the kingdom of knowledge, and we are the privileged denizens thereof. Here we are brought face to face with the mysteries of nature, of life, of man, and of the Eternal which enfolds them. Here, in the light collected from every lamp of science and converged into a focus upon them, we may discuss the loftiest problems which can engage the mind of man. And here, in the seeking after truth, and in the doing of good, we may open for ourselves sources of interest and of happiness, greater and more enduring than any other that the world can supply.

In feeble and broken outline such is the art of medicine, and such are the relations which it maintains. And as year by year it grows in importance and increases in influence, our responsibilities become more numerous and solemn. Even in a moderate sense it is neither a short nor an easy duty to discharge the obligations herein imposed, and in the highest sense it is impossible,—our knowledge, and our power of using it being both, although unequally, inadequate. For medicine, with all its teachings and appliances, is still an imperfect art, in which the known suffers restriction from the unknown; and, for all the light which has been cast upon it, it is still burdened with errors and superstitions, still blind to the modes and measures of its ignorance, distracted by false aims and shackled by imperfect methods. But to these external difficulties, which time will take away, we must add others, which seem to be inherent and ineradicable. It is true that here, as elsewhere in nature, there is in like conditions an unalterable uniformity of action, and that in proportion to our knowledge of exclusive successions of actions is our power of controlling their direction, when it is capable of control, and our freedom from error. But the conditions in which nature acts under the phenomena of health and of disease admit of such infinite variations from such minute disturbances, that in the midst of a constantly moving equilibrium of multitudinous forces, essential to the life of every organism, the causal relations of things or states are with only the utmost difficulty caught and demonstrated. There is, too, in at least one region of nature, a sense in which this absolute and eternal uniformity of action must be denied. For although from the standpoint of logic it may be held that the *causal nexus* exists unbroken throughout the universe, from the standpoint of medicine it may also be held that it is certainly interrupted in man. Logic is neither the exclusive test nor the final measure of truth, and there are conditions in which strictly reasoned conclusions must suffer refutation from empirical observation. In the mystery of the human will,—in the play of thought which connects the visible with the unseen,—in the emotions which agitate the human breast,—there is an element of disturbance which, in the phenomena of disease, is almost always in action, and which, in the calculations of causality, can never be precisely estimated.

Again, in studying the history of pathological actions, we can sometimes observe that a certain malady, recurring from time to time in the same individual, in apparently the same conditions, assumes new characters and a different quality of action under the influence of differentia so subtle as to elude the narrowest scrutiny. Even our advancing civilisation creates its difficulties, as the human organism perforce responds to its progressively changing environments. The nervous system cultivated in every direction, strained, excited, hurried by the baleful exigencies of modern life, assumes an almost fresh relation to the other parts of the body, recasts its solidarity, and not only alters the complexion of accustomed diseases, but engenders new and puzzling disorders. Hence it sometimes happens that the accumulations of experience become valuable only for their suggestive uses and their personal discipline. On fresh occasions, still far too frequent, our knowledge must be discovered, and our practice framed anew; and our desire to help, fettered by the fear that we may harm, falls short both of its object and its end.

Nor should we here overlook those difficulties of medicine which lie in the personality of its cultivators. Inaccurate and sufficient observation, ignorance of the collateral knowledge necessary to a just interpretation of fact, narrowness of view, the substitution of names for ideas, lack of accuracy and method in setting down results, the confusion of things accidental or accessory with things essential, the disturbing influences of desire, the bias of preformed opinion, hasty and erroneous generalisations,—these are all difficulties which seriously hinder or misdirect the progress of medicine; and they are difficulties from which no intellect, however trained and disciplined, is wholly free.

But this is not all. I cannot conceal from you that besides these and other difficulties to which I have not adverted, affecting the cultivation of medicine as a science, you will have to suffer many grievous drawbacks in the exercise of medicine as an art. If it is one of the noblest of professions, it is also one of the most difficult; if it is one of the most arduous, it is also one of the worst remunerated; if the sacrifices demanded of it are the greatest, the rewards returned to it are the fewest; if it is sometimes the most praised, it is often the most abused; the homage occasionally rendered to its aims is neutralised by the bitter sarcasms launched at its achievements; and its highest success can be secured only by the sacrifice of almost everything which lies beyond the pale of professional life. Too often you will find the public with which you have to deal selfish, exacting, impatient, fault-finding, credulous, and ungrateful. Expecting from you wonders which it is impossible to perform, it will deny you the merit due to skilful knowledge and conscientious care. Ignorant of the course of disease, it will credit some quack, seeing a case at its close, with the good which you yourselves have done. Too ready to depreciate services exacted at unreasonable times, it is prone to consider our success accident, and our failure ignorance and mismanagement. It will be pleasant enough when recovery accompanies your work and sunshine fills the house; but when death comes, then, too often unable to recognise in it the will of Heaven, it sees in it, or chooses to see in it, only the fault of the physician.

Nor are the dealings of the State with the profession much more just or much more generous. We are not like publicans—those ardent promoters of health, morality, and happiness—a numerous and powerful body which can turn the tide of political battles or decide the fate of Cabinets, and whose interests, therefore, at any cost must be conciliated. We are still political nobodies, to whom nothing is to be conceded which can possibly be denied. We are even without a social or civil status, except such as we may possess accidentally in virtue of

our academic degrees. Thus we, who as a body give gratuitously to society the largest services, receive from the State in return the least consideration. Our formal remonstrances remain too often unheeded, and the recommendations of our official representative have been on several occasions either ignored or opposed. All its regulations for civil and military service are framed on the principle of securing the cheapest rather than the best material; and thus, whilst the profession is straining every nerve to raise the educational and personal qualifications of its members, the State is practically, if not intentionally, undermining its efforts.

All these and many other drawbacks we must continue for the present to endure. Nor have I any hope of their removal until the profession becomes more loyal to itself, and more active in the assertion of its just rights; until every member of it feels, and acts as if he felt, that upon his own efforts as much as upon the efforts of any other person, the future position of medicine will depend. When we are sufficiently represented in Parliament, and upon the Privy Council, and when we have a Minister of Health, who shall be also a member of the Cabinet, we shall probably take our just place beside the other professions in society and in the State.

But all such considerations, whilst they forbid us to expect perfection in our art, require us to aim at it, that we may reach the utmost limits of possible improvement. Happily they are yet beyond the range of human vision; and to bring them within it, the distance to be travelled over is practically immeasurable. Here, then, is room for almost endless pursuit, and for almost endless progress; and surely on the earth there can be no higher satisfaction for man, than when, having undertaken a noble work, he finds himself day after day advancing therewith.

As I have said a little while ago, medicine is advancing with rapid strides in every direction. The whole field of work has been enlarged; freer communications with bordering sciences have been established. New lines of inquiry have been opened; fresh interests have been created; unthought-of agencies have sprung into importance; unexpected problems are pressing for solution; and the hum of a busy and fruitful activity has been pervading all its ranks and filling the air around. The discoveries of the last twenty years surpass in number and importance those of the preceding century; and to-day we are so full of the promise of others that it would seem as if the immortal Descartes was not dreaming, but prophesying, when he said, that, if ever it became possible to perfect mankind, the means of doing so would be found in the medical sciences.

We need not go far afield to find the causes of this great and happy change. In the readier diffusion of knowledge through more numerous bodies of investigators, in truer aims and correcter methods, in the disregard of scientific creeds, and in greater readiness to revise our opinions and recant our errors,—in limiting the points and simplifying the conditions of particular inquiries, in more delicate instruments, in finer and exacter calculations, and above all, in the greater number of more skilfully conceived and carefully executed experiments upon animals, we shall find the main secrets of the progress over which we now exult.

When we cast our eyes along the past, to mark the manner in which medicine has advanced in the later periods of its history, we observe that the scientific army has never moved with more than one leader at the van. In the beginning of the century it was chemistry which led the way and carried on the work; and when chemistry was exhausted, morbid anatomy took its place. To morbid anatomy succeeded histology; to histology, pathology; and now in the forefront we see experiment, young in command, but skilful in strategy and successful in conquest.

It is to experiment, in some shape or another, that we owe the bulk of our recent gains; and for at least a generation to come it is to experiment, assisted by chemistry and physiology, that we shall have to look for the most substantial additions to our knowledge of the nature and treatment of disease. The importance of experiment indeed cannot be overrated; for through it we shall often have to look for the criterion of uncertain doctrines, the solution of unsettled problems, the organisation of fresh inquiries, the annexation of outlying truths, the discovery of unknown facts and laws.

But experiment has also its other side; and, disregarding its inherent difficulties, which are neither few nor slight, it is beset with dangers which must be watched with a jealous eye, and guarded against with a firm hand. By the prestige of precision, often unmerited, which they carry with them, experiments sometimes cover the most flagrant errors and give currency to false or inadequate generalisations. Even when every precaution has been taken to secure precision and accuracy in every particular, it cannot safely be inferred that the results of certain experiments upon animals will be identical with those which would happen in man submitted to like conditions; nor, without other authority, would it be justifiable to use those results in the explanation of physiological or therapeutical facts. Let me pause to give you a single illustration. The insertion of a thread-seton into the neck of a guinea-pig produces what is alleged to be, and what in some respects resembles, although I do not believe it to be, acute tuberculosis. Now, I shall not insinuate that this experiment is barren in its bearings upon human pathology, because the insinuation would be unjust; but I contend that it cannot in any special and important sense be applied to it. For either a seton in the neck of a man will not produce tuberculosis, in which case the point of the experiment is broken, or else, if it does, then from what must be the frequency of its occurrence, the absence of symptoms, and the certainty of recovery, acute tuberculosis in the human subject, thus induced, cannot be a disease of any moment. For what practical physician would accept this as a just account of the acute tuberculosis with which he is familiar? Surely there could be no greater abuse of experiment and of language than to identify the tuberculosis of the seton with this tuberculosis, which, sudden in its origin, febrile in its character, profound in its constitutional effects, and rapid in its course, ends always, or almost always, in death.

It is in the facts of such an appeal as I have just made that we shall find the only sure means of protection from the dangers of experimental pathology. For however numerous may be the results of experiment, however important may seem their bearings upon the progress of science, they will be of no avail to medicine, and it will not be safe to use them in its service until they have been filtered through the checks and counter-checks of clinical experience, and have responded to the tests and counter-tests of clinical trial.

Connected with this subject there is one other consideration which must for a few moments engage our serious attention. Experiments cannot be performed upon animals without the infliction of suffering; and we, whose lives are spent in its relief, ought not to be indifferent to this painful and inevitable fact, nor regardless of the solemn responsibility which its existence imposes upon us. I rejoice to believe that we are not; and that as a body we have never transgressed the limits set to our inquiries by the order of nature, the exigencies of human suffering, and the sanctions of wise and good men. But of late a large part of the public has thought otherwise, and the right of experiment upon animals has been called in question and angrily denied. In consequence of the circulation of statements, either exaggerated or false, a tumult of emotion has swept over the public mind, its powers of reasoning and its sense of justice have been alike disturbed, and on the plea of an outraged humanity there has arisen an hysterical outcry for action, which has precipitated the Government into a hasty and repressive legislation.

To me this seems one of the saddest things that has happened in this country for generations: and as it is certain that inquiry cannot move with much useful freedom in fetters, I confess to the fear that the progress of medical knowledge will be seriously interrupted; that medical education, crippled at home, will seek refuge abroad; and that England, from lack of courage, disloyal to the rights of science, will lose her place in the intellectual hierarchy of the nations. But these fears may be ill-founded; and it may eventually happen that the legislation which now threatens to impede, will only regulate and protect. In any case, laws having been framed and guarantees given to prevent the possible recurrence of "experimental atrocities," it might be justly expected that whilst we were conforming in good faith to the conditions imposed upon us, our adversaries would leave us undisturbed. But rumours of a contrary character fill the air, and I am informed that means are being collected for a fresh crusade; that no quarter will be given; and that no peace will be concluded until the liberty of experimental inquiry is unconditionally extinguished.

It is hard to understand the reasons of such a passionate antagonism, and still harder to believe that it has no other foundation than the desire to protect inferior animals from unnecessary suffering. For if this be so, why do our antagonists confine their warfare within such narrow limits? The infliction of suffering for ulterior ends, everywhere manifest

in nature, now adjusting the balance of nations or establishing the autonomies of peoples, pervades the whole structure and relations of civilised life. What is all the suffering inflicted by all the vivisectionists of all the world in comparison with those hecatombs of suffering which political experimenters have inflicted upon mankind in their attempts to settle the question of the balance of power in Europe? Are the sufferings of men of less account than the sufferings of brutes? Or is their blood less precious? Are the countless woes of countless human hearts to be reckoned but as dust in the balance against the wounds of guinea-pigs and frogs? Why is it, then, that the assault is not co-extensive with its object? Or, if it is the plan of our assailants to defeat their enemies in detail, why have we been made the first and bitterest objects of attack? It is not from wantonness, nor is it for esse or pleasure, or gain, that we make the subjects of our experiments to suffer. It is assuredly for the advancement of science, and it may be for the good of mankind. Surely the love of knowledge is as true a human desire as the love of sport! and whilst the fruits of *this* die with the individual and his interests, the fruits of *that* live for ever in growing uses to the race.

If this question is to be reopened, it must no longer be confined within the narrow limits which our adversaries desire. Discussed with judicial calmness and impartiality, in the full light of its relations to the facts of nature, to the sentiment of benevolence, and to the rights of inferior animals as they are qualified and conditioned by the exigencies of human knowledge, and of human suffering, we shall neither gainsay the wisdom or justice of the discussion, nor shall we refuse to abide by its conclusions. But if it be otherwise; if hostilities are to be renewed on the old lines with the old tactics; if again the freedom of experiment upon animals is to be the sole object of attack,—then I trust that every member of this great profession, and every thoughtful man beyond its pale, will have the courage to make this cause his own, and will offer to threatenings of fresh legislation such an united, earnest, and implacable opposition, that the statute-book of England shall never again be sullied by penal enactments against the just liberties of men. The highest heritage of humanity is in our keeping—all the past and all the future conspire to keep us loyal to the sacred charge; and, at whatsoever cost of whatsoever kind, we must hand down the right and the freedom of inquiry unmortgaged to future generations.

But I have wandered so far from the highway of my subject as to forget that you are still learners; and that it is only by your continued patience in learning that you are yourselves to become the practitioners, the teachers, and the investigators of the coming generation.

Your curriculum is crowded with subjects: and when you turn from their number to your few short years of study, any efforts that you could make to master them seem hopeless. But the hopelessness is on the surface only. For when you resolutely grapple with the subject, you begin, with the help of good counsel, to find that there is a certain attitude of mind and a certain method of work, which enable you to get over all the ground, and to gather by the way enough for your present needs and something for your future uses.

There are three great divisions of your curriculum, to each of which you must carry in an especial manner untiring diligence and the exercise of your highest powers. They are physiology, including anatomy; pathology, including morbid anatomy; and clinical work, including therapeutics. I say nothing of physics, of chemistry, or of materia medica, or of botany or of zoology,—they have their use and place; but neither is sufficiently high to require notice here and now.

Physiology is the chief foundation of rational medicine. For disease, the penalty paid for conscious or unconscious violation of physiological laws, is neither an essence nor a thing. In the beginning, at least, it is but a series of alterations, mostly in mere degree of physiological states. In their evolution no new laws are brought into operation, nor is the character of those already existing altered. It is only the conditions of action which are changed; and, however different from those of health these results may seem, physiological laws preside as truly over growth of a tubercle, as over the development of a tongue. Hence it follows, that the true and complete understanding of disease is to be reached only through mastery of the statics and dynamics of health, and that there can never be a great physician, who is not at the same time a good physiologist. Throughout the past, every forward movement of physiology has marked an epoch of improvement in the science and art of medicine. And, even to-day, the study of the seemingly barren question of germ-development has, in respect of wound-dressing, revolutionised the practice of surgery throughout the world. Let me take for illustration a case of indigestion. The practical man, as he loves to be, and with exquisite irony is sometimes called, considers whether the attack is asthenic or sthenic, congestive or irritable; and calling to mind the remedies for these respective conditions, he attacks the one in fault with antiphlogistics, or sedatives, or tonics; and if eating or drinking be worthy of special notice, with full diet or with low. The mere anatomist, claiming to be *par excellence* the man of science, endeavours with great form of procedure to determine the particular gastric tissue which is structurally at fault; and, localising the malady with marvellous precision in epithelium or gland, in bloodvessel or nerve, in connective tissue or muscle, he proceeds with a different working hypothesis to use somewhat the same means of cure. Last of all comes the physiological physician, who is as empirical and anatomical as either, and more physiological than both. Believing that the malady is due to some violation of the conditions of healthy digestion, he investigates the manner of their fulfilment. Is the dietary too liberal or too restricted? Is the food proper or improper? Does the patient drink too much or too little liquid, at too high or at too low a temperature? Are the meals too far apart or too near? Does the patient waste his saliva, and yet indulge his taste for starchy messes? Is his urine loaded with gravel, and is he nevertheless clinging to beer? Is the stomach halting, because defrauded of its rightful share of nerve-force by undue work and worry? Does want of free elimination keep the blood impure with waste, and the secretions foul with decomposing stuff? Proceeding after this manner, the physiological physician discovers where the conditions of healthy digestion are incomplete or broken, and then by some simple suggestion he recalls the patient to physiological obedience, and, often without help from drugs, relieves him from his trouble.

Give the strength of your minds, then, to physiology. First in the dissecting-room, that you may master completely the relations of parts and organs to each other; next, in some quiet corner, with your microscope and reagents, that you may learn the minute structure and chemical relations of tissues and organs; afterwards, in the laboratory, with your teacher, and in solitude with your book, that you may comprehend the whole functions of the organism in life and health; and, lastly, in the wards, where you will exercise and strengthen your new-got knowledge in the physiological thinking-out of disease.

In studying histology, remember always to proceed from the more simple to the more complex tissues; and, in every tissue, to investigate the earlier before the later stages of growth. Development is the only complete solvent of the residual obscurities of physiological inquiry. In making yourselves acquainted with function, have a quick regard to your future work; and give especial thought to the circumstances which disturb, and, when disturbed, to the circumstances which restore the physiological equilibrium. It is by virtue of this knowledge that, as practitioners, you will be at once scientific among the empirical, and empirical among the scientific.

Pathology will make you acquainted with diseased structures, and with the conditions under which they arise and live. It is the science of diseased actions; but it is still in a sense physiological, and to be studied after the same manner. It conveys to the mind ideals of the states with which we have to deal, unfolds their relations to each other and to the organism, explains their course and tendencies, and if it does not supply us with therapeutic power adequate to our knowledge, it preserves us from inflicting injury, and teaches us when we may confide in the healing power of nature, and when, and in what manner, we must have recourse to art.

To learn morbid anatomy, you must often be in the post-mortem room: to learn pathology, you must often be in the wards; and to learn their mutual relations and uses, you must often pass between the two, and connect by thoughtful synthesis what you see and hear in life with what you see and handle after death.

Here let me remind you that the object of these studies is not to make you mere physiologists or pathologists: it is, with sufficient general knowledge and culture, to make you practitioners of Medicine. Hence, your next and chief place is the wards; your next and highest work—clinical. To it all other work and culture, of whatsoever kind, must be secondary;

for Medicine will neither share her supremacy nor suffer a rival near her throne.

Be much in the wards. Confine your study to a few cases at a time, and work them out thoroughly to the end. Deal with each case as if it were the only one you had. Adopt a uniform plan in the examination of your cases, and pursue it exhaustively throughout every part of the body. Neglect no means, chemical, mechanical, or instrumental, which may reveal otherwise unattainable knowledge of your patient's condition, and help you to the discovery of his disease. Above all things practise yourselves in the habit of minute, precise, discriminative, methodised observation: without it, nothing good can be done; with it, nothing ill. Make your notes and write your descriptions at the time of observation. Record them in the fewest words, and in the simplest terms. Avoid hypothetical phrases; and to severe precision of thought join literal fidelity of expression. In each case endeavour to form, not a mere verbal diagnosis, but such a diagnosis as will cover and explain the facts of the patient's condition, and let your reasons for it be stated at length. Watch with a questioning mind the administration of drugs, and, in the events which follow, take heed lest you set forth as their effects phenomena which belong only to the period or progression of the disease. That you may know hereafter in what conditions you are to act, and in what to refrain from acting, and that you may possess some just criterion for measuring the effects of drugs in the cases in which you may employ them, seize every opportunity of becoming familiarly acquainted with the course pursued by acute and chronic affections uninfluenced by any but the simplest hygienic means. Observe the new associations and relations of diseased states in every case, and study with special care the procession of events which brings the endurance of the organism to an end. When death terminates your case, follow it to the dead-house. Compare the results of the autopsy with the course of your clinical observations, and with the interpretations which you have put upon them. Consider wherein you have erred, and then, with the courage which marks every lover of truth, set down your errors, naked as they are, for future warning and guidance.

As in this way you become familiar with the coarser, you will make acquaintance also with the finer, manifestations and distinctions of disease. You will learn how often permanent pathological changes grow out of long-continued little disturbing things, and how greatly all of them are influenced by trivial changes in the conditions of the atmosphere and of the soil. You will discover how to distinguish structural from functional affections (which so often assume their guise), and to discriminate between maladies arising accidentally in the healthy, and apparently similar maladies which are the inevitable outcomes of long-continued textural decay in sickly people. You will note how different often are successive examples of the same disease, and you will cultivate the faculty which, in each case, will enable you to decide how much belongs to the malady and how much to the man. You will pursue the personality which you have isolated, and ascertain how the course of its disorders is influenced by inheritance, by type of constitution, by mental and moral peculiarities, and by physical habits and occupation. At last you will become personally interested in your patients, and then, out of the sympathy which you give to them, as well as out of the knowledge which you get from them, you will gather your first experiences of the precious gift of healing power.

But however well it may be done, or however long-continued, this hospital clinical work will not only leave imperfections, but will even suggest faults in your knowledge which only the experience of private practice can make good.

In hospital you miss the wider information accessible in private practice—that knowledge of personal habits, surroundings, antecedents, and family tendencies which often make clear things otherwise hopelessly obscure in the nature and course of disease.

In the next place, your hospital experience will dispose you to make much more gloomy than is necessary the prognosis of organic disease. As you walk along the wards and note case after case in which heart, or lung, or kidney is diseased, and learn that each will soon end in death, a habit of fatal prognosis attaches to the name instead of the stage of the malady, and hereafter you transfer to the private patient at the beginning of an illness the experience you have gained from the hospital patient at its close. There is, therefore, perhaps, some ground for the opinion that the prognostics of hospital physicians are unreliable. Assuredly the prognosis of disease, as it is commonly taught in the schools, is much too grave, and requires to be remodelled on a more favourable foundation. You will find it anything but a satisfactory proceeding to receive the apologies of patients for being alive years after you have, with unhesitating confidence, condemned them to die.

Thirdly, you will be here in peril of forming false judgments of the true position of drugs in the treatment of disease. Many of our patients before admission have been for years fighting with their maladies, until at last, unable to fight any longer with them, or with work, they take reluctant refuge in the hospital. And as drug after drug is tried for their relief, seldom with good, and often with ill effect, and as day after day the disease, despite of all that is done, pursues its natural course unhindered to the end, you begin to believe in the fatality of disease, and, doubting all curative power in drugs, you commit yourself at last to the therapeutic nihilism of the day. But this is a false and paralysing conclusion, which, as it seems to me, has a closer alliance with indolence, imperfect observation, the habit of incredulity, and a certain defect of judgment, than with the vaunted enlightenment which is claimed to be its founder.

When I reflect upon the true nature of disease, when I am told that in some of the acuter forms its characteristic phenomena result from the action upon the organism of poisons for which antidotes are expected to be found; when I see that in many of its chronic forms it is but the result of long-continued petty violation of some simple physiological condition; when I find that by the action of certain agents, with sufficient time, similar states may be artificially induced and afterwards removed; when I observe that rational therapeutics, as now cultivated upon a physiological basis, is not only overtaking and correcting the results of empirical observation, but also deductively discovering new remedies; and when I remember that, in order to influence the character of nutritive processes, drugs are still frequently administered in an unphysiological manner, and not, as mostly they ought to be administered, in small doses, at short intervals, over long periods, I cannot but believe that it is not an inexorable necessity, but an ever-yielding ignorance, which hinders the increase of our therapeutical powers.

These, then, are the three divisions of your curriculum which are chiefly to occupy your attention; and the best means of making the results of it fruitful and permanent are *reading*, *discussing*, and *doing*. Let me say a word or two concerning each.

Read the best books, and only one, or at most two, on each subject. Read slowly, thoughtfully, and critically; and be sure that you have mastered one sentence before you begin another. Never skim the surface, nor skip from place to place. More than half the difficulties of students, and indeed more than half the battles of *savants*, spring from superficial and disconnected reading. Commit to writing in a note-book the pith of every important paragraph. Test your reading by observation, and occasionally your author's conclusions by placing yourselves in an attitude of literary antagonism to them. Do not read too long at a time; and when your brain rebels, submit and stop. Take in no more material than you can easily digest: it is worse than useless to put upon the fire more coals than can be burned.

Discuss with and frequently examine each other upon the subjects of your studies. Rightly conducted, this habit will rouse you from indifference, sustain your interest, and excite your emulation. If it will reveal your weakness, it will also increase your strength. It will teach you how to give ready expression to your ideas; what to keep, and what to cast away. And whilst it will cherish in you the ingenuousness which acknowledges defeat, it will inspire you with courage which makes its renewal improbable. But it must be rightly conducted with singleness and sincerity of purpose for mutual help. If other and lower motives enter into your discussions, there will come forth only wasted time, contentions, and bitterness.

But before reading or discussing comes *doing*. You may read and discuss hereafter, but if ever you are to learn the manipulations necessary to the exercise of your art, you must learn them now. Few things can be done by the help of mere descriptions, and fewer still can be done well. You must see to do, and you must do often to become skilful in doing. One of the great advantages of this Hospital is that here everyone has unfailing opportunities for practical work, and counsel at

hand to guide him in its performance. Leave nothing undone, then, that you have the chance to do. Never be ashamed of doing badly what you are determined to do better. And whether it is dressing a sore or setting a fracture, analysing urine or examining the chest, looking into the larynx or tapping a pleurisy, do it as often as you can, and always with all your might.

And now for the gaining of the knowledge necessary to the earliest exercise of your art, and for the training of the hand and the judgment to use that knowledge aright: you will have here, as I have said, abundant opportunities and skilful guidance. But neither these, nor any conceivable external aid, will suffice without your own co-operation in the work; and just in proportion to the share which you take in it will be the worth and the endurance of your future success. And this necessity for self-education need cause you no discouragement; for, although in carrying it on you must meet with many difficulties, you will find none which may not be overcome without greater effort than is just necessary to increase your strength for fresh encounters. Your hindrances will become thus your helpers. Special gifts are not essential to your progress. Nor will the issues of your endeavours turn upon robust health, or superior abilities, or exceptional opportunities, or powerful interest, or a favouring fortune. Doubtless, these are precious advantages. But, without them—nay, in despite of the reverse of them—there is in every one of you a somewhat which, if you choose to cultivate it, will more than compensate for almost every disadvantage, and will bend the most adverse circumstances to your uses. But it is now that this somewhat is to be cultivated; it is now only, in the pliability, the plasticity, and the passion of youth, that you can practise the discipline and form the habits essential to its development and preservation. This is the discipline of self-denial, the sacrifice of the lower to the higher nature. Every idle moment which you redeem—every weak indulgence which you refuse—every evil habit which you conquer—every disturbing temptation which you resist, will form a step in that sacred stair, which alone conducts you to the highest life. And as you mount thereon over your slain desires, a nobler prospect will meet your view, a higher enjoyment will fill your hearts, larger ends will come within your reach, a greater power will nerve your arm. And thus it comes to be that by loving interest in your work, and by patient diligence in following it,—by observing, handling, asking, contending,—by taking at second-hand no knowledge which you can get at the fountain-head,—by the thinking out of things for yourselves,—by submitting to no ignorance which books or teachers can remove,—by knowing no shame in asking or being informed,—by recourse to physical amusement as a necessary relaxation, and not as an engrossing occupation,—by making the best rather than the worst of the circumstances in which you are placed,—by a just deference to authority in matters which must be accepted on the testimony of experience,—by independence tempered with humility, and by resolution tempered with caution,—there is no knowledge which you may not acquire, there are no methods which you may not master, there is no professional position which you may not achieve.

Yet one thing more. I am now old enough to claim the privilege of reminding you, before we separate, that professional knowledge and practical dexterity, the habit of observation and the faculty of judgment, are not the sole objects of the highest education. Unquestionably they are indispensable. But more than half their value will be lost if you miss the influences which your studies ought to exercise in developing that spirit of sacrifice, sincerity, and faith which should rule your ways and works in life, and be the lustre of all your days; that spirit which will keep you at all times loyal to your work, even at the cost of recompense, of comfort, or of health; which will prevent you from covering with the cloak of professional sanction the weak indulgences or vicious habits of your patients; which will enable you to resist the sacrifice of your convictions to the tyranny of dominant opinion or the seductions of popularity; which, keeping you conscious of your own infirmities and errors, will make you candid and generous to the infirmities and errors of your professional brethren; which will teach you "to admire without envy," and to suffer without bitterness; and which, lifting you above the highest region of human interests and passions, and showing you how human freedom, like a "swimmer shaping his course in the stream which carries him along," is but a limited activity in the hands of overruling power, will place you in filial relations to the Eternal Mind.

This is the spirit which you should strive to cultivate in yourselves, as one of the most precious results of the knowledge which you will acquire and of the discipline which you will practise within these walls. This is the spirit which will redeem you from failure and be your sure support in every time of trouble. Wealth may fail, friends may fail, you yourselves may fail, but this spirit, living and fructifying in you, will never fail. In the hurry, the turmoil, and the conflicts of life, in fears that might dismay, and amid calamities that might overwhelm, it will abide with you and it will fill your hearts with the peace which passeth understanding—the peace which the world cannot give.

THE INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.

By GEO. FIELDING BLANDFORD, M.D., F.R.C.P., etc.
Lecturer on Psychological Medicine at the Hospital.

After some words of welcome to his audience, Dr. Blandford observed that, when considering what should be the subject of his address, it seemed to him that, inasmuch as his connexion with the school of St. George's Hospital is due to a special subject, it was fit that something in respect of that subject should be the theme of his discourse; and then went on to say:—There is an old adage that "There is nothing like leather." There is a still older—"*Sutor ne supra crepidam.*" Leaving, therefore, the science of medicine in general, or surgery in general, or physiology in general, let me say a few words about nervous disease. Do not imagine, however, that I am going to give you a lecture on insanity. Very few of you are likely to devote yourselves to the special study of what is called "psychological medicine," or to become what is called in the vulgar tongue "mad doctors." But, although you will not become specialists, yet psychologists, in a certain sense, you all must be, as well as physiologists. There is a mental side in all disease, for the simple reason that our patients have a mind and nervous system, no less than a heart, or a liver, or lungs. You will have to study the mental peculiarities of patients, both in sickness and in health, or you will neither cure them in the one, nor retain their confidence in the other.

But my subject will neither be so special as the consideration of insanity only, nor so wide as that of mind in general, its nature, composition, or growth. I want to direct your attention to that circle or group of neurotic diseases which under one form or other afflict a great number of our fellow-beings. I have heard it said that, according to the evolution and development of our organisation, it is to be expected that the most highly developed portion of all—viz., the brain and nervous system—is that which will in the future give us the most trouble, and make the greatest demands upon our skill. Other diseases, it is said, which formerly taxed our care and treatment will be stamped out. Cholera will be kept out of this happy land; typhus and typhoid will flee before advancing hygiene, and retire before sanitary inspectors and cold water, as Comus and his rabble rout fled before "Sabrina fair." Students in our hospitals will read of such things, but see no more of them than they now see of plague, ague, or scurvy. But the nervous system will be the weak point. Its structure, ever growing more and more complex with advancing civilisation, will be more and more prone to disorder. There may be some truth in this. Let us look for a moment how we stand at present.

According to the last report of the Commissioners in Lunacy, there were in the asylums and workhouses, or otherwise under restraint, on January 1 last, 64,916 patients, being an increase of 1123 over those of the preceding year. There were also discharged recovered during the year 4909, and 4592 died. So that during the year no less than 74,417 insane persons were under legal restraint. To these we must add the great number who are treated at home and recover, or who live at home taken care of by their friends for the term of their lives. Probably there are few in this theatre who are not acquainted with some harmless imbecile, or crazy person, who lives under the care of his or her friends, and never comes under the notice of the Commissioners in Lunacy. However, the large number of 74,417 did come under them last year, and this number increases at the rate of something like 1500 a year.

But, you will say, what have we to do with this? If the

mad doctors cured their patients, there would not be this vast number shut up in asylums. To which I reply that this number represents the last result and termination of the various nervous disorders. It includes idiots, imbeciles, chronic epileptics, the victims of alcohol, those suffering from paralysis, and all kinds of brain diseases, as well as the insane, ordinarily so called. The great majority are hopelessly incurable before they are placed under legal restraint. They represent the degenerations of the human race. They cannot be cured. These disorders, like others, must be prevented. And I trust that each one of you, when you become physicians, surgeons, or general practitioners, will, according to your opportunity and ability, do all that you can to stem this terrible tide of nervous degeneration. I want now to draw your attention very briefly to the origin and outcome of this degeneration.

There are some causes which will come before you in your social rather than your medical capacity. For instance, long-continued want of food, or unwholesome food, must necessarily produce its effect upon descendants. It may show itself in various ways, but inasmuch as the nervous system is the most complex and specialised, the inference is that here we shall first find the results of insufficient nutrition. In the well-known work of M. Morel, an eminent French physician, on the "Degenerations of the Human Race," much stress is laid on defective food; he enumerates various nervous disorders due to the exclusive use of maize, or rye, or potatoes, especially in a diseased state. It certainly is a fact that the largest amount of insanity in this country is found in the agricultural counties, where, at any rate till lately, the rate of wages has been so low that the labourers rarely tasted meat. We read that another predisposing cause of nerve degeneration is unhealthy habitations, and it requires no statistics to prove that crowded and unwholesome houses, or rooms in houses, as they sow the seeds of diseases of all kinds, so must they bring about degeneration in the organisation of the offspring. Dwellings into which the sun never penetrates, where the inmates live almost in the dark, are likely to produce this effect. We do not find them so often in towns as in the country, where windows are closed to keep out the cold, or even the heat; for if you go into Italian hovels you will find them almost totally dark for the latter reason. Then not only may the house be unhealthy; it may be in an unhealthy locality. Witness the cretinism which is found in certain places on the Continent. It does not seem to be settled beyond a doubt whether this degeneration is due to water, to air, or to marsh miasma; but if these cretinous families are removed to other and healthy localities, the cretinism ceases. It is singular that the country which is the great health-resort of Europe, which has gained the name of the "play-ground" of Europe, should be the one most noted for the production of endemic nervous disease. Those who traverse such valleys as that of Aosta and the Valais cannot but be shocked at the goitrous cretins that one meets at every step. To go to Switzerland merely to pass one's time in Swiss valleys is a very doubtful method of seeking health.

Occupation, no less than residence and habitation, must have its effect upon offspring. That which makes a great and incessant call upon the nervous system, which shortens the hours of sleep and relaxation, and entails perpetual worry and responsibility, must have its effect upon children as well as upon the individual himself. On the other hand, there is the blank idleness of the mind, which rusts from want of occupation, and this is nearly as bad. There are minds which are never developed because fortune has placed the owners above want, and they have not the energy to strike out a career or a pursuit for themselves. These are the brainless "swells" so often and so well depicted in the pages of *Punch*. And then look at the life of the agricultural labourer, who for generations has been totally without education—to the shame of our legislators,—and whose vacant mind is almost as lacking and devoid of ideas as that of an idiot.

But in truth, gentlemen, much that may be said with regard to the evil effects of bad food, bad lodging, harassing occupation, or mindless and monotonous work, may be summed up in one word; and that is—poverty. People have insufficient food and miserable homes, and are driven and jaded by their work, and work when they are quite unequal to it, because they are poor. And we find that the great increase of the insane in England is amongst the pauper, and not amongst the private class. Your efforts will be able to do little to alter all this, for doctors cannot make men rich. Legislators may compel landlords to keep their houses well drained and to have a proper water-supply; may prevent overcrowding, and may regulate the hours of toil; and the necessity of all these things you can impress upon legislators; and the amendments which have taken place have been due in no small degree to the labours of our own profession. But there are some causes of this degeneration which concern us more nearly.

There is the health of the mother, especially during pregnancy. You will have something to say concerning this. If human beings were bred with the care that is bestowed on racehorses and shorthorns, mothers would be compelled to lead very different lives from those they lead now. It is quite certain that if there is a great demand and drain made upon the nervous energy of a woman who has a child *in utero*, the nervous system of that child will suffer. There is no treatise on idiocy which you can take up in which you will not find fright given as one of the causes; and in popular language and amongst all classes you will hear that a fright or a shock to a pregnant mother is apt to bring about idiocy or some allied disorder in the child. Now, not only a sudden fright or shock, which probably is accidental or unavoidable, but long-continued emotional excitement and brain-work will have a baneful effect on the offspring. It is another illustration of not being able to do two things at once. A woman cannot breed healthy children and devote herself to other and harassing pursuits. Dr. Seguin, an eminent American physician, who has specially studied such subjects, says that idiocy is increasing in the State of New York, and he ascribes it to the social conditions of the women in that country. "We overburden women," he says, "they overburden themselves, and choose or accept burdens unfit for them. As soon as women assumed the anxieties pertaining to both sexes they gave birth to children whose like had hardly been met with thirty years ago—insane before their brain could have been damaged by their own exertions; insane probably by a reflex action of the nervous exhaustion of their mother." If women combine the bearing of children with the work, the anxieties, and the responsibilities of callings which, as a rule, are undertaken by that sex which does not bear children, there can be no question, in my opinion, that the children will suffer. If such vocations are to be undertaken by women, let them be left to such as are unmarried or are past child-bearing. If it does not agree with them, it will at any rate not interfere with the next generation. The nervous system of woman is very liable to disturbance, and that of the women who seem to be "strong-minded" is often the most liable. Look at Lady Macbeth. She might be said to be a strong-minded woman; certainly her husband thought her one: "Bring forth men children only," he says—

> "For thy undaunted mettle should compose
> Nothing but males."

Yet she takes to sleep-walking, which is a nervous disorder, and then goes out of her mind, and straightway dies. Macbeth is a good deal troubled with hallucinations of sight, and his nervous system is all wrong; but at least he dies "with harness on his back." We are not told what the cause of death was in the case of the children. We know there had been children, and that they were dead. Had they lived, probably they would have been the victims of nervous disease.

I now come to the last great cause save one of the degeneration of nerve-tissue and nerve-force which you will meet with, and it is so potent and so prevalent that I am sure you will feel with me that no efforts that we can make can be too strong to withstand it. This cause is intemperance,—chiefly, though not exclusively, alcoholic intemperance. Favoured as our country is in many ways—exempt from cretinism, from malaria, from the heat of the tropics, or the cold of a Canadian or Russian winter, richer than any other country on the earth, paying more attention to cleanliness and sanitary precautions,—we are yet conspicuous more and more by our excesses in drink. It may be accident, or it may not; but I seem year by year to be brought into contact with a greater number of persons, not amongst the labouring, but in the upper classes, whose whole lives are blasted by habitual drinking. It is commonly said that the advance of knowledge and education has abolished drinking among the educated classes. It is certain that nowadays it is not the fashion to drink after dinner till all are intoxicated, and a man appearing before ladies in that condition would be thought an ill-bred fellow. But I question whether there is not for this very reason more private and secret drinking now than formerly, more partaking of drams, sodas-and-brandies, and glasses of sherry between meals. Of one thing there

can be, I think, no doubt, and that is—that there is more secret drinking now amongst ladies than there used to be in the days of the Georges. And when we come to the lower classes, it is to be feared that, so far from a decline in this habit, a great increase is to be found. When, some four or five years ago, the sudden rise and increase of wages took place, what was the result? Did the working-man lay by out of his earnings a provision for less prosperous times? Did he give his children a better education? Did he improve his habitation, or his furniture, or his garden? Not a bit. But he drank the nation out of the *Alabama* difficulty, and has now subsided again to lower wages, and to a worse state than he was in before. Now, it concerns us all, not only as members of the medical profession, but as citizens of the English Commonwealth, to do all in our power to discourage this scourge of nations. But it is, besides, our duty as doctors to keep before our eyes, in the concrete as well as in the general, the tendency which many people have, especially the nervous, to slide into drinking. It is a charge often made, that doctors encourage drinking, and lead patients to habits of drinking, by the profuse administration of stimulants. It is a charge easily made, hard to disprove, and made frequently without cause, recklessly and rashly. Yet it was not altogether without cause that a protest was put forward a few years ago by a considerable number of our profession against the large and indiscriminate administration of alcohol. You cannot be too careful how you order stimulants to a large section of people who are tainted with nerve-disorder—to the hysterical, the hypochondriacal, the neuralgic. Many of them owe their condition to the intemperate habits of their ancestors, and there is a proneness in these habits to recur in the offspring. Whatever were the drinking habits of our grandfathers, they did not owe them to the doctors of that generation. If they suffered from the vapours, or the spleen, or the windy colic, a calomel pill and a black draught were what they got to relieve them. If that did not relieve their symptoms, why they lost a little blood—perhaps a little more; they did not get rum-and-milk or whisky-and-potash-water. If we examine the medical literature of the time, we do not perceive that alcohol and alcoholism had acquired the importance which it has in our own day, and it is much to be feared that in the higher development of our times our nervous systems are more prone to contract the habit of resorting to habitual stimulants, and at the same time are more easily affected and degraded thereby.

I might dilate upon this theme for the rest of the afternoon, but I forbear. You will not need to go to special hospitals or asylums to see the effects of alcohol. In every ward of this hospital, among the in-patients and among the out-patients, you will see maladies directly traceable to gin and beer. And when you enter into practice, and see not the isolated cases you do here, but become acquainted with a whole family and several generations of a family, you will trace the effects of drink not only on the individual, but on his or her descendants. And in dealing with the latter you should try and discover whether they are in the habit of using stimulants to relieve nervous distress, hysterical depression, or sleeplessness. We do not smoke opium in this country, nor eat haschisch. But there is a vast amount of laudanum and morphia taken by patients that never was prescribed for them; the morphia syringe is becoming much used, and it is a habit that grows most rapidly. Then there is chloral, which is prescribed and sold enormously by chemists, to say nothing of all the warming tinctures, ethers, and pick-me-ups that are so much in vogue. There is also too great a tendency nowadays, in my opinion, to consider all habitual drinking a disease. It may be a disease; it may have reached the stage of disease in some, and in others it may be a symptom of insanity; but that which ends by being a disease is often, I am persuaded, in the first stage nothing but a bad and self-indulgent habit, which, like other bad habits, may be prevented by proper coercion and punishment.

I now come to the great source and origin—the *causa causarum* of nervous disease,—hereditary taint. By the side of this all the others fade into insignificance. Whether we look at idiots or epileptics, at hypochondriacs or the insane, we find that a very large proportion of them are thus afflicted because their fathers or mothers have been in some similar way afflicted before them. The question of heredity is an intricate and complicated one. We cannot say off-hand what that is which is so implanted in the spermatozoon that the offspring of one person transmits the phthisis, and another the syphilis of its parents. Neither can we say why the features, or the walk, or the tone of voice are transmitted. But nothing is more certain than the transmission of nervous disease. Idiocy may be due to the health of the mother while carrying the fœtus *in utero*, or to injuries received at birth, or to convulsions, fits, or other illness occurring soon after birth; but when we meet with insanity in girls and boys under twenty years of age, who have never known care or sorrow, or bad health, or any of the ills that flesh is heir to, we may be sure that their fathers or mothers, or grandfathers or grandmothers, have handed down to the subsequent generation this evil heritage.

But all nervous disease is not transmitted in the same way. There is the avoidable as well as the unavoidable transmission of it. The one may be guarded against, the other often cannot. As insanity is not always begotten of insanity, we cannot always predict the malady which will appear in the children when the parents have suffered from one or other of the neurotic disorders. According, however, to the strength of the inherited evil, the fate of the family will tend to one of two directions,—either the type of the disease will get worse and worse, till the stage is reached of idiocy, insanity, sterility, and extinction; or the cloud may lift, and by the admixture of more healthy blood the race may be restored to health. And it often happens that it is not till after children are born that insanity or epilepsy shows itself in the parents; or they may have been born at a time when so great a demand and strain was made upon the mind and nervous powers of one or both parents, that the children's nervous organisation suffered accordingly, and remained permanently in defect. It may have been a time of war, revolution, political trouble, or great religious excitement, or a time of plague, pestilence, and famine; or the anxieties of business, of speculation, and the like, may have been overwhelming. It has even been said that the children of great geniuses are inferior to others in nervous power—

> "Great wits are sure to madness near allied,
> And thin partitions do their bounds divide."

And this is not only true of them, but of their children. There are certain great names that are ever in our mouths—Dante, Luther, Shakespeare, Milton, Bacon, Cromwell, Newton, Goethe, Napoleon. But who ever hears of their sons, if they had any?—and many had none. Nature exhausts herself in the perfecting of one of these great minds, and the next generation suffers accordingly.

But these are all the accidents, so to speak, of the inheriting of nervous disorder. Men cannot help being geniuses, cannot help having children in times of trouble, cannot help being poor, cannot help their children being badly housed, badly fed, badly taught. But men and women can help marrying when they themselves have already had attacks of insanity, or when their families are so tainted through and through with this disorder that the chances are enormously against their own children escaping scathless. Yet this happens every day. Friends are glad to marry a man or a woman to some one or other who will take care of him or her if there should be any return of the attack, and relieve their own shoulders of the responsibility and trouble. And the sufferers will come and consult the medical profession as to the advisability of such a marriage. If our opinion coincides with their own, they will take it; if we give an adverse opinion, they take their own way, and marry in spite of it.

Gentlemen, it is hard to imagine any feeling more terrible than that of a man or woman who sees a child sunk in melancholic gloom, or raving in the fury of maniacal delirium, and knows that this is inherited from himself or herself, that he too or she was once like this, and has handed down the fatal taint. This is a thought that may well turn a stronger brain; it may well bring back the disorder to a brain already predisposed to disease. Yet there must be many in this land of whom such things may be said; and if these people are thus to be blamed, whose brains, perhaps damaged by former attacks, are hardly able to form an accurate judgment as to their chances of transmitting disease, how much more do the friends deserve blame who encourage and promote this kind of union! Not the friends of the patient only who may deem it beneficial, but the friends of the other person, who, for the sake of an advantageous match, or a home, allow the marriage to go forward. How much more would you deserve blame if you, by your advice, countenanced such a disastrous event! These marriages will take place in spite of the strongest advice you can give: on this you may rely. You will, at any rate, be able to say that it was contrary to your advice.

There is a popular notion that matrimony is a cure for insanity, and for all that semi-insanity which is so constantly met with in people who just manage to keep clear of restraint, but are peculiar and eccentric in their ways and conduct. This is especially held with regard to women, who when peculiar and nervous are looked upon as hysterical; and the advice of one mamma to another is to "get the girl married." I have again and again been asked, in the case of absolutely insane girls, and men also, whether I did not think that the best thing would be for them to get married. Now, in the first place, I do not think it the best thing for them. I think that matrimony is an event of great trial and anxiety, especially to a girl, and I have known not a few of both sexes go completely mad within the honeymoon. But, in the second place, I hold it morally wrong to promote the marriage of these people—to doom their partners to perhaps a lifelong misery, by being tied and bound to such a being, and their children to every form of nervous disorder from idiocy to insanity. As long as they breed and multiply, insanity will increase; for one father or mother may have a considerable number of insane children or grandchildren, and new asylums will still be demanded, and those numbers which I read out just now will swell more and more. Recollect, the chief way to stamp out insanity is to prevent the propagation of insane children. It is not to be supposed that insanity will never occur in our highly complex civilisation. There must be losses and anxieties, reverses of fortune, poverty, and misery. It will be long before we see the extermination of drunkenness; but if we could confine the primary insanity to to its victims, and prevent its being handed on to the next generation, we should go a long way towards diminishing its present rate of increase. It will be for you to do your utmost to prevent such marriages, by pointing out the dangers to which those who contract them are exposed. Much, I am sure, may be done by our profession in this way. We ought not to wait till the parties are already engaged; it is then very difficult and painful for friends to break off an engagement, and stop an impending marriage. Rather ought we, before matters get to this point, advise the relatives, and it may be the individual himself or herself, that it is his duty and his interest not to marry, unless it be at a time of life or to a person of such an age that the chance of bearing children is past and gone.

Though education and the external surroundings of a man may do much for him, yet there is a limit to what may be done in this manner, and this limit is fixed by his inherited potentiality of nerve-development, which depends on his inherited organisation. If we take a child of one of the lowest races—the Fuegians, the Veddahs, the Papuans,—no amount of training will raise him to the level of the lowliest of European children; no, not to the level of Ginx's baby. The latter, miserable little waif that he was, was the heir of centuries of civilisation, and his lowest level is higher than the highest of savage nations. The fairest heritage that can come to a man is that of a healthy nervous organisation.

And now let us consider for a few minutes the crowd of people who from their cradles to their graves will come under your care, the victims of a defective nervous system. They form a circle which may fitly be called the Inferno of this life and this world, and may be ranked as not less pitiable than those circles which the great Florentine poet has depicted in his divine comedy. Some of them you will be able to study in this hospital, but many you will not meet with till you enter on the wide field of general practice, and see all ages and all degrees of men and women. You will from your knowledge of the history of parents have reason to question the soundness of the nervous system of the children from a very early age. Some you will find are idiots, and these too will vary in degree, from creatures who are below the level of animal life, who cannot walk or stand, or feed themselves, much less talk or think, up to sharp and cunning beings who can be taught many things, but are incapable of education beyond a certain point, and are wholly devoid of the higher powers of mind, reasoning, reflection, judgment. Now, where idiocy is congenital there is not very much to be done. There are institutions where such children can be sent, and some of them derive considerable benefit from the education they receive there. They are taught the use of their limbs, to walk, to use their hands, to make various articles which may even in some cases earn them a livelihood, but idiots in a greater or less degree they will remain through life. But there are other children of neurotic parents who are not born idiots, but may become so. Such children are very likely to have convulsions while teething. They may have epileptic fits at any early age—in fact, whatever ailment they have, their nervous system will show itself to be the weak point. A comparatively slight attack of measles or other febrile disease will make them delirious. Some trifling circumstance brings on chorea, and in all the chances and changes of life they suffer more in their nervous and mental systems than other children. For some time they may seem like the rest of their companions, and if the maladies they have suffered from have been slight, and they have escaped the diseases of childhood, they may even appear to be superior to their fellows: they are precocious,—precocious in learning, little geniuses. The late Dr. Austie considered that one sign of morbid precocity in a neurotic child is an unexpected development of intense artistic feeling. Then there is sexual precocity—the premature occurrence of puberty, which may occasionally be noticed in both girls and boys at a very early age, and this not merely as the result of bad habits taught by others, but developed unaided in the individual. And we, unhappily, find also in such beings a marvellous precocity of the habit of telling lies and wrongdoing of all kinds, and this in spite of close watching and careful supervision. Out of this class will be brought to you a number of weak-minded and more or less imbecile boys and girls, who are an incubus to parents, a pest to teachers, and the perplexity of medical men. Rarely are they precocious in learning anything that is good, but their aptness in becoming proficient in everything that is bad is truly wonderful. From lying they pass to stealing, often at a very early age: from stealing their next step is to drinking and low company. If they belong to a humble station in life, they go at a very early age to prison—nowadays, most probably, to a reformatory. And here they are placed in the most favourable situation that can be devised for their redemption. The health is improved by hard and wholesome exercise, and the mind is trained by discipline and habits of obedience. Happy is the little pauper whose evil career is thus cut short, and who in this fashion may be shunted to a line that may lead him to a new existence. But if we are consulted about the child of rich parents whose moral and intellectual development has been stunted in this fashion, it is most difficult to deal with him or her. One thing is certain: we cannot make an average boy or an average man out of what is below the average. It is hopeless to set him to work or callings for which he is entirely unfitted; and we must by careful investigation find out that of which he is capable, and have him trained and instructed with this end in view.

But all neurotic persons are not so deficient. They may tend to insanity rather than imbecility. The age of puberty is a trying time for them, and you ought closely to watch them, and to caution their parents how they expose them to such dangers as over-study, great emotional excitement, and the like. If they get through this time of trial safely, they grow into men and women who may escape insanity throughout life, but may present the symptoms of various neuroses, or may be peculiar and eccentric, of an insane and nervous temperament, but nothing more. Who does not know these odd and peculiar people—peculiar in temper, peculiar in dress and appearance, peculiar in ideas. Though not insane, they may be so near insanity, dwelling on the borderland which divides the latter from the prose of everyday life, that we are not astonished at anything they say or do. We may never be professionally consulted about the minds of such people, and we should be quite unable to alter them if we were. We may, however, be consulted about the choice of a profession, or about the marriage of such people. In advising as to the selection of a profession we should dissuade them from entering upon one which entails great harass and responsibility, great emotional excitement, hard work with little rest or holiday. With regard to marriage, we may not feel that the individual is one whom we can positively forbid ever to marry: but it is of the utmost consequence that he should not unite himself to another of the same kind, or to a relative. Married to a strong and sensible helpmeet, he may escape himself, and his children may inherit the constitution of the stronger parent, and throw off the neurotic taint. But from the union of two neurotic people there is likely to be a fostering and increase of the disorder, and dire will be the result.

Among the odd and peculiar people, we often see some who imitate, so to speak, the characteristics of various kinds of insanity. They are afflicted with a mild form of the complaint. Thus many of the insane are sanguine, inventors of wonderful

schemes for making money; though they cannot get out of an asylum-ward, they are kings and princes dwelling in palaces. So, many who are not reckoned insane are sanguine under all adversities, and, however unlucky their speculations, they are ever ready to enter into others equally rash, equally foolish. Like Mr. Micawber, they always think that something extraordinary is going to turn up. Then, like the insane who are gloomy and depressed, we see some who take a black view of everything; like Mrs. Gummidge, to take another example from the same work, they are "lone, lorn creatures, and everythink goes contrary." Others of the insane are suspicious, thinking that everyone is plotting against them, and going to rob or injure them. Some people not yet insane we meet with also who look on all with suspicion, and always imagine they are going to be "done." To take an example from another of Dickens's books, I may instance the elder Martin Chuzzlewit, "doomed to try the metal of all other men, and find it false and hollow."

You need not wait, however, till you commence practice to see some classes of neurotic patients. Some you will see in this hospital—nay, even in the surgical wards thereof. There are the hysterical, as they are called; and under this name a very large number may be ranged, for it is made to include many varieties of persons who only have this in common—that their nervous or mental system is in defect. There are, of course, the patients who have hysterics proper, hysterical fits of laughing and crying; but besides these you will from time to time see men and women—chiefly women—who suffer from what Sir James Paget calls *neuromimesis*, or "nervous mimicry." You will find them in both surgical and medical wards; you will come across hysterical cough, dyspepsia, and paralysis; but you will also see hysterical disease of joints and spine, and these will tax your diagnosis not a little. Sir James has printed some admirable lectures on this subject, with which doubtless some of you are already familiar. And what he says of these patients so fully bears out my own view that I must quote it here. He says that the family relationship between the nervous mimicries and mental insanity is specially worth considering. He believes that a large majority of the worse cases of nervous mimicry occur in members of families in which mental insanity has been frequent. The fact is important, not only for diagnosis, but for pathology. And, to conclude, he tells us that perhaps the most important part of the treatment is the mental part. The minds of these patients are rarely common-place; some are far above, some far below the ideal standard average, and it would probably always tend to the remedy of nervous mimicry if the mind could be brought to an average and uniform level. Another set of hysterical patients are those who have been at various times victims of great religious fanaticism and spiritual possession. Under this mental exaltation they have endured tortures and bodily injuries which in their normal condition would have caused death. Such religious hysteria is peculiarly infectious, and epidemics thereof have existed in various countries from the middle ages down to the "revivals" of our own day. Hysteria of this character is doubtless in many cases closely allied to insanity, and the hallucinations and visions which these people suffer from are often genuine, and depend on an exhausted state of brain which is almost identical with that of the insane. But as on the one hand it verges on insanity, so on the other it merges into the mere silly credulity which is a prey to the whole tribe of spiritualists, mediums, and the like. To argue and reason with the believers in these things reminds us strongly of arguing with an insane man on his delusion.

Then there are the hypochondriacal. And what is hypochondriasis but mild melancholia? It is a most real and terrible disorder, however, and it is one which you must not merely recognise, but must also cure; and to do this you must fully realise that it is a mental disorder, and often ends in unmistakable and confirmed insanity. Although treating the bodily symptoms as if they were real is of no avail, yet you must not pooh-pooh them, for they are real enough to the patient. In the same lectures of Sir James Paget you will find an admirable chapter on a complaint which will often come under your notice—viz., sexual hypochondriasis. Such patients are the riches of quacks, and I trust you will rescue many from their clutches. What you are to do for them, Sir James will tell you. What you are to do for hypochondriacs generally is to substitute new ideas for the morbid thoughts perpetually centred on their ailments. And this is practically the way to cure insanity, due attention being of course paid to the general health.

There are two other neurotic disorders which are usually ranked among bodily rather than mental diseases. One is neuralgia. A most suffering class are the neuralgic, and one hard to cure. And I don't think you will cure many without keeping this in mind: that most neuralgics come of a neurotic stock, and that, before the neuralgia shows itself, their nervous condition has become defective, either through mental worry or bodily ill-health. While writing this page, a patient came to me suffering from excruciating cervico-occipital neuralgia. He was the captain of a steamer, and had had great anxiety coupled with exposure to cold. Well, it came out that he had had a brother who had died in an asylum. And almost the same thing may be said of the other disorder, which is epilepsy. It is one of the group or circle of nervous diseases, and you will often find it existing in a family along with its congeners, bred of the same parents, nurtured and fostered under the same conditions.

Of alcoholism and its victims I have no time to say more than has already been said. They are a large and an increasing class, and one which will cause you infinite trouble, anxiety, and disappointment when you have to deal with them. I trust that one of these days our legislators may enable us to apply that which for many is the only remedy—compulsory abstinence. I believe that by this many might be reclaimed who are now ruining themselves and all around them. I trust that each one of you may aid in bringing about this legislative interference.

As we started from idiocy in the circle of neurotic disorder, so we end with insanity. All these diseases I have enumerated may, and often do, terminate in insanity. In youth, in middle age, in old age, your patients may become insane. I will only make one remark concerning it. If there is one thing which experience has rendered more certain than another, it is that insanity to be cured must be taken in time. Do not let friends, because they dislike the name, ignore the disease till all hope of cure is gone. Here, as elsewhere, let your rule be to prescribe for your patients, and not for your patients' friends.

I suppose that the study of mental disorders was so long omitted in our medical schools because it was thought that mind was a metaphysical something to be pondered and argued about by philosophers in the closet, not to be investigated by students in a hospital. We now know that mind-study and brain-study are synonymous, and that disease of the brain in our hospitals does not merely imply loss of power to the right or left side. I think you will find the brain as interesting an object of study as many others—as interesting as the heart, or the lungs, or the liver, or the kidney, to say nothing of other parts of the body which are devoted to still lower uses. There is plenty yet to be done, plenty yet to be discovered, with regard to it. And there are methods of investigation to suit all tastes. Are you given to chemistry?—look at those important papers on the chemical constitution of the brain, by Dr. Thudichum and Mr. Kingzett, published in the "Reports of the Medical Officer of the Privy Council," and in the *Chemical News*. Are you anatomists?—there are dissections of the white fibres of the brain, by Dr. Broadbent, of the utmost interest. Are you physiologists?—there are Dr. Ferrier's experimental researches on the functions of the cortex. As science advances, new light is being thrown on nervous disease as on others. Mysterious as is the union of mind and matter, our knowledge must advance slowly. The more need, however, is there for work. As I began, so I will end, by saying that without being specialists you ought all to give much thought and work to the study of the nervous system. It cannot be without profit or without interest that you should study "that noble and most sovereign reason," hard as the study may be. Here, if at all, we may say that *Ars longa, vita brevis*. Of this study we must be content to remain "perpetual pupils."

Civic Honours for Medical Men.—We have much pleasure in noticing that Mr. Buckmaster Joseph Tuck, J.P., has been elected Mayor of Seaford for the ensuing year.

Desiccation of Eggs.—Among the recent experiments that have been made in Bavaria relating to the preservation of animal food, the military authorities have derived great satisfaction from those made on the desiccation of eggs. These, it appears, can be perfectly preserved in a dried state, retaining all their nutritive qualities in a much smaller space, admitting of ready transport, and furnishing an excellent addition to the soldier's food during a campaign.—*Union Méd.*, Sept. 30.

THE INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE CHARING-CROSS HOSPITAL MEDICAL SCHOOL.

By JOHN MITCHELL BRUCE, M.D., M.A., etc.,
Assistant-Physician to the Hospital.

After bidding the students welcome, and referring to the recent changes in the medical staff and the rebuilding of the Hospital, Dr. Bruce proceeded to say: Under such circumstances, then, gentlemen, we have come together to-day; and it will become us to pause for one moment, after shaking hands, to ask ourselves for what purpose we have met, and to regard ourselves and our relations from a favourable point of view, before we take our respective places in the programme of the session.

On this occasion I will not dwell upon the mutual relations of teacher and student: I prefer to address you as a friend, and to consider the other great bond by which we are, and will be, united—namely, our profession. Nor will I speak of its nature, its position, its rewards, its penalties, its difficulties, or its drawbacks. With students before me, I prefer to speak of its advance, of its progress with the sciences, and particularly of the first essential for the improvement of Medicine—the Education of those who profess it. Besides the *means* of medical education, and the *result*, the process involves a third element, which must be considered before any intelligent account can be given of the others—namely, the *material*. Gentlemen of the first year, it is to you that I would specially address myself to begin with, if you will not resent the somewhat matter-of-fact title of "material." Enough has been written and said already on the necessary qualities, mental and bodily, of the medical man. As far as I am aware, this has been generally done from the side of the profession. The full-fledged practitioner has been considered, and the question asked whether he is a credit to his calling, whether he is intellectually and physically fit for his work. But there is another side from which the result has to be considered. Besides the finished article, there is in the process of every manufacture what is vulgarly known as "*waste material*," or "*bye-product*"; and the process of making medical men is no exception to the rule. It is this "bye-product," gentlemen, that I would prefer to consider. The finished article—which, goodness knows, is often poor enough—has received sufficient attention elsewhere. It is hardly creditable to our profession how little regard has been given to this residuum; how ignorant we seem to be of its amount. It is a fact, which I have not seen previously stated, that 20 per cent. of the men who are registered as medical students never register as medical practitioners;(a) that exactly 20 per cent. of those who begin as you are doing to-day, the study of medicine, never complete it.

I ask you, gentlemen candidates, have you ever considered this truth? Do you appreciate the importance of the statement, which I am able to make from the best data, that twenty out of every hundred of you before me will probably never gain your end? There are, obviously, many possible causes to be found for this failure—death, bad health, change of tastes, and a multitude of other circumstances; all of which are uncertain, and may be considered unavoidable. I am aware that men may qualify, and for one reason or another never register; but these are comparatively few, and may be balanced by those who register as practitioners without having been registered as students. But the chief cause of the high percentage of failures remains to be mentioned; and about it there can be no uncertainty. I find that last year, at the College of Surgeons, 36 per cent. of the candidates failed to pass the primary examination; and that more than 24 per cent. were rejected at the pass. These proportions are higher still, and support the preceding. Roughly speaking, then, I may repeat, 20 per cent. of the men that begin medicine never become qualified; and the majority of these because they fail to pass the examinations. Consider, gentlemen, for a moment, this wretched residue, this bye-product of medical men. I will not inquire into the nature of their examinations, nor ask at present the character of the men that pass. I turn to those who seem to be systematically neglected, occupying the attention of the profession for a moment as the unfortunate percentage, and then dismissed and forgotten. What comes of them? They have passed at the hospital years of precious time; they have learned vice, but are certified not to know their profession; their confidence is shaken; their self-respect is reduced; they have reached the first stage in the career of the wretch known as an unsteady man. With the loss of precious time, and heart, and health, and it may be character, they are driven back upon the world. Here at Charing-cross Hospital, the result, as I have found from a careful investigation of our records, is no better than the average. Gentlemen, what is the cause of this distressing result? Examinations are moderate, and certainly as fair as can be; they ought to be passed by every man that is fit to enter the profession. Teaching, I submit, is honest; it is certainly abundant: and never in all time, or in any profession, I do believe, did students do so much work. But one cause remains—the student himself; within him lies the source of failure: we are driven to conclude that the material will not make into professional men. The student entering his profession is unfit to follow it; and, being allowed to enter it, his final disappointment is well-nigh assured.

Do facts agree with this important conclusion? Are men admitted as students only to be deceived? Let us see. The entrance examinations are notoriously imperfect; and the most humiliating accounts are given by examiners and others of the performances of candidates. It was stated by Dr. Haldane, at the last meeting of the General Medical Council, that a very small proportion of the candidates that present themselves at Edinburgh are able to pass on the first trial; that the deficiency in Latin is positively deplorable; and that the attainments in arithmetic, algebra, and geometry are so far unsatisfactory that the large majority of the candidates are just within the line which enables them to pass. He added that it was through a sort of desperation that such persons were admitted as students; and I have myself been assured by a distinguished examiner in arts in a Scottish university, that in the preliminary examination in medicine the result would have been simply ridiculous if he had insisted on any reasonable standard of knowledge. He had therefore to pass all that reached or exceeded the average attainments of the candidates themselves. We have all heard of the candidate who, in reply to the question, "What great political event happened in the reign of King John?"—said, "In the reign of this king the 'Magna Charta' was wrecked in the Wash." The ignorance of some candidates is, indeed, of a more natural cast than this, such, for example, as that of the subject of the following remark of one examiner to another:—"I don't know what to do with this fellow; he spells 'thigh' t-h-y; and the worst of it is, he insists that he is right."

Gentlemen, these entrance examinations are conducted under the authority of the General Medical Council, whose duty it is to see that practitioners are regularly educated in their profession, and duly registered. With the character of the men that pass their ordeals we are not at present concerned,—it is with the men that fail; we do not hear that they are ever considered. While every intelligent manufacturer does not rest in trying to improve his process until he has reduced the bye-products to a minimum, the profession of medicine seem to care nothing about waste of life and character, provided the article is, as they call it, finished.

It is with the General Medical Council that the whole responsibility must be held to rest, of allowing hundreds of young men to register every year as medical students who can positively never hope to pass another examination. The remedy for this unhappy state of matters is not far to seek, and may be easily administered. It consists in raising the standard of the entrance examinations; in stopping uneducated men at once; in allowing no one, under any consideration, to squeeze through the portal. It must not be forgotten that, if this be done, the number of men that actually finish need not be greatly reduced; only the majority of those will be stopped who are morally bound to be rejected. I will not at present inquire what the precise character of this preliminary examination should be; but so much is certain—that it should test, as Sir William Gull says, "the intelligence as well as the acquirements." Most fortunately the material, be it ever so poor, can be greatly improved by careful and judicious handling. A student should have been taught how to learn before he comes here; but I believe that it is our principal duty, as your teachers, to continue and perfect this particular education—to train your minds, rather than fill them with facts; to increase the breadth and acuteness of your

(a) For this information the writer is indebted to the courtesy of Mr. Bell, Clerk of the General Medical Council.

reasoning faculties. Therefore it is that I specially make these statements before those of you who have joined the school to-day; and I beg of you, if you have appreciated their importance, to hear me patiently in what I still have to say, and in which I will try to consider the means by which not some only, but if possible all of you, may become doctors; and, as such, intelligent men.

Having said so much about the *material* of which medical students and practitioners are made, I will now pass on to the *means* and the *method* employed in the process. Believing, as I do, that these are very far from perfect, I will try to indicate wherein they are so; and to offer you, as students fairly engaged in your profession, some counsel that may be of practical value. For we must confess that it becomes our school, like every school of medicine in London, honestly to try its ways, and to mend them where mending is possible. Wherein is it that the fault lies—for serious fault there must be, since failure is so frequent? The student of anatomy, for example—how is it that at the end of two long years of study he is, in nearly four cases out of ten, referred to the dissecting-room? He has material; he is industrious, as I can testify; he is exercised in writing papers till his style must approach perfection; and yet he fails.

When one inquires into the circumstances of such rejection, one is struck with the remarkable fact that very good—sometimes the very best—men are among those who fail. This fact is, I believe, the key to the problem that I desire to solve; and opens up to us a state of things that demands our most serious consideration. I believe, gentlemen, that the prime cause of the inability of so many of our good men to acquit themselves before their examiners is to be found in the system of learning presently in vogue, and of which the direct outcome are three serious evils, leading to failure—(1) unscientific, non-rational, unreal acquaintance with the subject; (2) an undeveloped or misdeveloped mind; and (3) want of mental resource and confidence. Let me try to put this matter fairly before you, for the defect is one that is amenable to treatment.

I will take, to make my meaning clear, the process of learning Anatomy and Physiology. Observe how many things the student may be taught by these. First, he becomes acquainted with the structure and functions of the human subject—the subject of his future practice. Secondly, knowing one animal well, he is in the best position to proceed to the study of others, and so to Comparative and General Anatomy and Physiology; thus appreciating the significance, if not the nature, of life, which he can never do from a knowledge of one body alone, were it ever so perfect. And, thirdly—and, as I believe, most important of all—he has an opportunity of cultivating his reasoning faculties, which it will be the business of his future life to use, and by the exercise of which he will have to make his bread. Is it too much to say that the student of anatomy and physiology lays down during these first two years the lines of his future intellectual structure? Here is abundant opportunity for a plastic mind. According to the plan he follows now, a man may manifestly make or mar himself. Let us see how the student of the period proceeds.

First, he neglects, in a great measure, physiology. I am speaking matter of fact when I say that our student comparatively disregards physiology—just as certain of the examining bodies have until recently systematically underrated its importance. I do not blame the student for this, nor the teachers. It must not be forgotten that the acquirements of the student conform as nearly as possible in quantity and kind with the requirements of the College. The struggle between examining bodies and teachers in these days reminds one of nothing in all the world so much as of the contest between the builders of armour-plated ships and the manufacturers of rifled cannon. The loss to the student by this systematic neglect of physiology, such a precious means of mental culture, is incalculable. In the second place, having magnified anatomy into unreasonable importance, the student proceeds to make himself acquainted with it in the following fashion. He finds two provisions for acquiring a knowledge of this subject—(1) Personal Investigation of the human body by dissection, as pure Human Morphology; and (2) Lectures and the perusal of Scientific Literature, where Human Morphology is treated as a branch of General Anatomy, and considered in all its numerous relations and applications, scientific and practical. Now, if I try to describe the system generally followed in these days, I do not know that I can better or more briefly express my belief than by saying that the student, making light of lectures and scientific works, spends his days in the dissecting-room in being drilled by the demonstrator; his evenings over some wretched "compilation" or "condensation" of his subjects, or in being crammed by his tutor. This, gentlemen, is an evil against which I would raise my voice amongst you: put in a single phrase, it may be called *the abuse of the tutorial system of education*. It is but a few years since so-called "practical" teaching by the tutor and demonstrator, in lieu of excessive lecturing, became at all general, and already the method is seriously abused, and the evils of excess are everywhere visible. And *first*, as I believe, the student does not use his opportunities in the dissecting-room to the best advantage; he forgets all but the immediate purpose of the study of human anatomy; he thinks only of accumulating facts; and he most seriously disregards his own intellectual training. In the practical study of human anatomy he has, as I have said, a great field for personal investigation, such as he can find nowhere else but in Botany,—a remarkable opportunity for the combined exercise of his objective and subjective faculties: his own eyes and hands are employed in searching nature, while the system of work and occasional corrections and suggestions are supplied by the demonstrator. I ask you, gentlemen, whether you regard your practical anatomy in this light? Do you consider it a matter of your personal investigation? Do you enter this region of *res incognitæ* prepared to reduce it for yourselves, with the direction and correction of your demonstrator? or do you not too often take him as your indispensable attendant? Do you not on the one hand make your practical anatomy too objective—a matter of mere recognition—of knowing things by sight when they are indicated? and, on the other, is not the dissecting-room too often converted into a grinding-shop, where men repeat to each other and the demonstrator, in weary round, the masses of facts that they have learned by rote? Gentlemen, this is a misapplication of time and of faculties. It is, I repeat, an abuse of the tutorial system—the student is not directed how to work and to think, and then let alone; but has everything, even thinking, done for him; and he ends by being unable to act when it is needful; he cannot think for himself. In the hour of examination the result cannot be doubtful; he has no self-possession or confidence, for he does not know himself; his faithful demonstrator or tutor is no longer by his side. Poor fellow! he is said to "lose his head" before his examiner, but the truth is—he has never had one.

The remedy for this state of matters is obvious, and will be presently suggested; but first let me consider the subject from another point of view. I have tried to show that the student follows *a bad system* in the dissecting-room; but I believe that, beyond this, in spending *so much of his time* there, he seriously neglects the second provision for study—lectures and sound reading. It is a matter of the greatest concern that anatomy (and, indeed, so many other subjects), as learned nowadays, is but a mass of facts; that with many examiners excellence is estimated by amount of information, and intelligent acquaintance comparatively at a discount. The anatomy of to-day is too often but a bundle of description written or heard, and an unconnected succession of appearances learned by dissection and demonstration. Even the method of description by "systems," rude though it be, is comparatively neglected for that by "regions." But, gentlemen, is this anatomy? Will the student thus fulfil the *second* end of his training, beyond the acquirement of a series of local facts? Will he know what Structure and Life really mean? Let me remind you what Anatomy signifies. It treats of the structure of organised beings, in the perfect state, in the stages of development, and in the process of evolution. How widely different this from the concrete facts of Morphology of an adult human body! Only the first of the three ends that I have mentioned as accessible through a proper study of anatomy is gained by such education, which, I fear, is too common. "Life" and "Evolution" remain mysterious sounds. The mind is made a mere storehouse of facts, while it is ignorant of scientific Biology; incapable so far of reasoning; as helpless before a sharp examiner as would be Woolwich with all its iron arsenal against a serious assault. Examples of variation are called "abnormalities," and either learned by rote, or, more frequently, neglected. If there be a more wearying subject of human anatomy than these, it is Development as commonly taught. There is no attempt to trace principles; to try to discover the spirit that works within the body of facts with which the student painfully becomes acquainted. For Anatomy and Physiology, in their widest sense, are pervaded by two mighty

principles—the principles of Evolution and Energy; and after these the student must strive, just as he refuses to rest at the image or the rite in his religion.

But, beyond an acquaintance with Human Morphology and General Biology, the student of anatomy has, *thirdly*, an opportunity of cultivating *the practice of the scientific method*. Disease is a process, not a chaos of phenomena; and patients possess, beyond their bodily frames, a constitution and a character. When you come, gentlemen, to the bedside; and still more when the chronic sufferer comes to you; you will have to put facts together more than to do anything else. A heap of signs and symptoms, elaborate analyses, historical details, and other information, will serve but to bury the truth out of sight, unless by previous training the mind have acquired the scientific method. I need hardly remind you that the first necessity for a step towards induction is variation: without alteration of circumstances reasoning would be impossible. Essentially allied to the method of observation of variation is that of experiment, the method by which Nature is compelled to display her variety. Practical medicine takes these two directions—the observation of complex phenomena, and therapeutical experimentation. Disease is never uniform; no two cases are alike, any more than are the faces of the subjects. And experimentation is equally universal. The amount of intelligence exhibited by the public in the late anti-vivisection outcry may be correctly expressed if we say that they were totally blind to this fact. For whether the public know it or not, they are being constantly experimented on—none the less so that the doctor himself may not be aware of it. In the future practice of his profession, the present student will have to deal with pathology and therapeutics: given effects, he will have to discover causes: given causes, he will have to observe effects; and he will have so to combine and apply this dual knowledge that he shall, if possible, prevent, arrest, and remove, by certain causes—therapeutical measures, certain effects—pathological states. How far, I ask you, after what I have said, do you think is the average junior student of the day being trained for such a future? As a student of mere human morphology, his work is simple observation of unvarying nature; and even such observation is too frequently not his own. As for experiment, we are told nowadays that the student learns together the principle and the art of experiment by exercise in "practical chemistry." I fear "practical" chemistry is not much more practical in the scientific sense than "practical" anatomy. The boy of the chemical laboratory will probably find arsenic as cleverly in a test-solution, and that without the table of directions before his eyes, as the dissecting-room porter will hit the femoral artery. The medical man that has been trained on this system—which I may call *the system of practical cram*—looks only for what, according to his formula, should be; will be blind to other circumstances; or neglect them as subsidiary, unimportant, non-material. Ignorant of the value of variation, blind to all but uniformity, he will not wait for nature to vary. It is not that he fails to form theories, and to reach seeming-wise conclusions: he can "explain" every case and "cure." Hasty generalisation, premature result, is perhaps the most discomfiting feature of the medicine of to-day; it is the equivalent in our profession of the "high pressure" that characterises the present rate of life in society and business. The publication of ill-considered, and so often totally incorrect, results, especially of "preliminary" outlines, such as is encouraged by the professional press in Germany, and even to some extent in England, turns a comparatively harmless mistake into wide-spread error. The effect of this, under the stamp of such authority, is most alarming. For a busy profession, which cannot find time to read more than summaries, accepts all such as gospel; and it may take a lifetime to shake a faith that has no better foundation than the word of a microscopist who swears by himself, and the seal of an editor in search of a novelty.

And now, gentlemen, the most important question arises: Can this state of things be remedied? and, if so, how? I believe that all true progress is slow; but if I had not thought that it lies in the power of every one of you to insure a greater chance of success, I would not have wasted an hour of your time in fault-finding. Let me suggest a remedy for the various causes of my complaint, in the same order as I have made them. And, first, you must devote more of your time to other subjects than human anatomy. I would insist upon your studying botany and zoology; and doing so, as the eager students of nature ever must, by your own personal investigation, directed and corrected by your teachers and the best written authorities. As for physiology, I trust that, after what I have said, I shall not be counted prejudiced when I estimate its importance to you, as young students and future medical men, above even that of anatomy. Physiology as taught to-day is no longer a matter of belief and bookwork. As the science of life, it presents to the student a succession of the grandest natural laws, and a collection of the most interesting problems that observation can illustrate or experiment assail. Secondly, I would have you to study anatomy as a science; to advance beyond human morphology; to learn the meaning of the words Embryology, Evolution, General Anatomy. You must think more, even if you look and read less. Remember that beyond mere observation, and beyond even the abstraction that enables you to picture parts and phenomena when they are no longer before your eyes, lies generalisation. Exercise your imaginations and other intellectual powers by following the steps by which great biological inductions have been reached. You will reply that you have no time for this,—that you cannot read Darwin, Spencer, Huxley, Tyndall, and Helmholtz. Gentlemen, I agree with you; although I should like to hear that Darwin's great works and Spencer's "Biology" were in every student's hands. Then he might be expected to travel through the rich region of biology as an intelligent observer through the countries of history; and to be as independent of his tutor as such a traveller is of the professional guide. But as it is, you are not helpless; you have yet a clear remedy. You have lectures to attend, and you have wards to visit. What do your lecturers do, but at the cost of much time and trouble choose the best fruits of the field of labour; and, making them both palatable and easy of digestion, offer them freely for your present enjoyment and permanent good? Gentlemen, this is one of the outcomes of what I have been saying at such length, and I pray you to listen to it. Do not neglect lectures. I know that there is a great and yet growing tendency to neglect lectures, as comparatively valueless; and, for the good of English medicine, I am deeply grieved to have to say so. Let it not be so at Charing-cross Hospital; but let the student come and be filled with well-chosen knowledge, and with the enthusiasm that surrounds every master of a subject that embodies great principles. The advantages of the wards and of the out-patients' rooms are of the same kind; there the student, young or old, is taught, and carefully directed how to think as well as to observe; there he finds constant illustrations of the knowledge he is acquiring in the classes of anatomy, physiology, and chemistry. He no longer, as in the last-named, deals with a definitely limited number of entities, according to a series of tabulated exercises, but with conditions and processes; and has endless opportunity for the exercise of his highest intellectual faculties. He no longer occupies himself with the dead bones of anatomy, nor with the equally lifeless artifices of a "cram book" on physiology. He is introduced to the practical application of these, which ward-work truly is. The clinical teacher, keeping this steadily before the student, neither deludes him with the phantom called disease, nor misleads him by the mysteries of medicine. He shows him, instead, that he has before him the highly complex machine of which he has learned the structure and working; and that his business is chiefly to modify these, whether by regulating the ordinary influences under which it exists, or by introducing others extraordinary.

And lastly, gentlemen, I would have you—in the study even of human morphology, apart from form and function, and apart from general structure and evolution—follow a more independent line of work. Use your own eyes and your own heads. Do not ask the demonstrator to do more than direct you. Do not trust to him and his descriptions; trust to your own observation, and exercise your imagination and reasoning faculties, that you may be ready against the day of trouble, when the demonstrator is no longer by your side. And I beg and pray of you to keep away from "coaches." Start with the determination not to be crammed—not to be mentally wet-nursed, as if your own mother-reason had forsaken you. I repeat, gentlemen, what we want in our profession are thoughtful men; and thinking capacity, rather than amount of information, should be tested at the pass examination. The profession of medicine is one that cannot be entered by birth, by interest, or by wealth. The sole qualification for it is sufficient education, and on this the country insists. For

medicine watches over all the other professions, and keeps them going; and it need not be urged that this responsibility demands intelligent men. Neither the rich nor the poor can always preserve his health, any more than he can add a cubit to his stature; and it is our greatest glory that the intelligence of the profession is exercised to the advantage of those who cannot pay for it. It should be our highest aim to raise the standard of professional excellence, and that universally in our country. I am guilty of no exaggeration when I say that those who now direct medical education in England hold potentially in their hands not only the health and happiness of the coming generation, but the whole future fortune of this great land.

ORIGINAL COMMUNICATIONS.

NOTE ON A PECULIAR FORM OF "GASTRIC CRISIS" IN LOCOMOTOR ATAXIA, AND ITS TREATMENT.

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Among the less frequent phenomena of cases of locomotor ataxia, none are more interesting than those to which Charcot(a) has applied the term "gastric crises." It is by the writings of that distinguished observer that they have become best known; but ever since, in 1866, Delamarre(b) drew attention to them, all writers on the subject of sclerosis of the posterior columns of the cord have admitted their existence, and more or less minutely described them.

The phenomena occur, according to Charcot's experience, during the earlier stage of the malady, and, as a rule, disappear when it has become well pronounced. They may recur every few months, or at shorter intervals. The attacks are very distressing. Coming on abruptly, usually during an exacerbation of the "lightning pains" in the legs, there are severe pains starting from the groins, and darting up each side of the abdomen, to become fixed in the epigastrium. At the same time there are pains between the shoulders, darting down to the gluteal region. The beating of the heart becomes violent and rapid, but is unattended by fever. To these symptoms there becomes superadded vomiting, which is often incessant and intensely painful: the food is ejected, and even, when food has not been taken, watery mucus, either colourless or stained with bile or blood, is brought up. At the same time there is always profound malaise, and frequently vertigo. The crisis usually lasts for two or three days, the suffering varying somewhat from hour to hour, and commonly disappears rapidly. The patient is perfectly comfortable in respect of digestion during the intervals between the attacks.

The best marked instance of this affection which I have met with occurs in the case of a man who has frequently, during the past few years, been an inmate of my wards, and whose case presents several other features of great clinical interest. His locomotor ataxia showed its first symptom about eleven years ago, and since then the disease has been steadily progressing, till it has reduced him to his present helpless condition. His lower extremities are utterly devoid of muscular sense, and deficient in ordinary cutaneous sensibility. Though he can move his legs with considerable vigour as he lies on his water-bed, yet they are, in consequence of impaired co-ordinating power, entirely useless as regards locomotion. It is unnecessary to describe his general condition in detail, but it is important to observe that the disease involves the cilio-spinal region of the cord, and that there is some degree of ptosis.

The "gastric crises," from which the patient frequently suffers, are ushered in by a dull throbbing pain in the lumbar and sacral regions. For three or four days this is the only symptom, and during that period the pain gradually increases in severity, until it reaches a very high pitch. The abdomen then becomes swollen and tender, the urine scanty, and micturition painful. Coldness and rigors set in, the latter so intense as to resemble convulsions. These muscular twitchings, though not absolutely confined to the right side, are most intense there, the tongue also sharing to such an extent as to interfere with its voluntary protrusion. The jerkings of the right arm are very marked, and become much more so when the patient attempts any voluntary motion—the movements closely resembling those of multiple cerebro-spinal sclerosis. He is thus quite unable to carry a cup to his lips without spilling its contents over his bed. And now the nausea, which had been gradually increasing simultaneously with the muscular jerkings, passes into most intense sickness and retching.

At this stage the patient's sufferings are extremely distressing. His face is pale, of an ashen-grey colour, and his expression peculiarly indicative of pain. The pupils are much contracted, and the ptosis is more marked than usual. If one is able to catch a glimpse of his tongue, it is seen to be quite devoid of fur. After vomiting any food which may happen to be in his stomach, he brings up large quantities of watery mucus tinged with bile or with blood. The heart's action is rapid, but there is no elevation of temperature.

His "gastric crisis," if untreated, usually lasts two or three days, and then passes off, leaving him perfectly well—as far, at least, as his digestive organs are concerned. A slight increase of paralysis of the eyelid and the right arm always lingers for a few days after an attack. These "crises" recur irregularly, usually every few weeks. The only remedy which has been found useful in the treatment is opium; its effects have been most striking. In order to obtain its beneficial action it must be given very freely, and the best mode of administration seems to be the hypodermic injection of bimeconate of morphia (one-third to one-half of a grain) at the seat of greatest pain. Such a dose is followed in a very short time by relief of pain and of vomiting, and the patient falls asleep, to awaken refreshed and quite relieved of his painful symptoms.

The points worthy of notice in this case are—1. The time at which the attacks occurred—not during the earlier stage, but after the disease had been for many years thoroughly established. 2. The neuralgic accompaniments of the attacks—not affecting the legs, the groins, or the epigastrium, but the dorsal and lumbar regions. 3. The muscular jerkings, closely resembling those seen in cases of multiple cerebro-spinal sclerosis, and disappearing entirely on the subsidence of the crisis. 4. The effect of treatment in the almost instantaneous relief afforded by the hypodermic injection of morphia.

(a) "Leçons sur les Maladies du Système Nerveux faites a la Salpétrière." Par J. M. Charcot. 1874.
(b) "Des Troubles Gastriques dans l'Ataxie Locomotrice Progressive." Thèse de Paris. 1856.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NORTHERN HOSPITAL, LIVERPOOL.

TWO CASES OF DISEASE OF THE HEART.

[For the following notes we are indebted to Mr. James Barr, M.B., L.R.C.S. Ed., late House-Surgeon.]

Case 1.—*Dilated Hypertrophy of the Left and Right Ventricles of the Heart, with Double Aortic Murmur and Secondary Mitral and Tricuspid Regurgitation.*

(Under the care of Dr. DAVIDSON.)

M. C., aged thirty-one, labourer, admitted under the care of Dr. Davidson, November 19, 1874, with cardiac dyspnœa.

History.—About three years ago he had a chancre, which was followed by a skin eruption and nodes on the head, for which he was under medical treatment for three months. With this exception he always enjoyed good health up to three months ago, when he was "suddenly seized with palpitation and shortness of breath." His work as a dock-labourer has always been very heavy. He has been a very intemperate man, often drunk for weeks in succession, and frequently sleeping in the open air wherever he chanced to fall. He continued at work till ten days ago, when he was obliged to give it up on account of the shortness of breath.

He is a stout, well-built man, with large, powerful muscles, but which have somewhat lost their firmness.

Physical Examination.—Heart: Apex-beat in the fifth interspace, in a line with, and one inch and a half below, the nipple. The percussion measures five inches transversely, and four inches vertically. Aortic obstructive and regurgi-

tant murmurs are well marked along the whole sternum. There is also a ventricular systolic murmur of much less intensity, audible at the apex and the lower angle of the left scapula. Pulse 86, regular, full, throbbing, and visible; respirations 30. With the exception of a few bronchitic râles the lungs appear healthy. Hepatic and splenic dulness normal; digestive system good; urine non-albuminous.

Ordered a mixture containing carbonate of ammonia and spirits of ether.

He improved considerably, and was discharged on November 30, when the following note was made:—There is a loud musical ventricular diastolic murmur heard over the greater part of the cardiac area, but most intensely at the xiphoid cartilage, and only indistinctly at the apex. Along the sternum there is a ventricular systolic murmur, which is also audible at the apex, but not at the lower angle of the scapula. Pulse 90, full and jerking; respirations 24, quiet. General condition very much improved.

Readmitted December 7, 1874, in a rather worse condition than on the previous occasion. Heart phenomena much as before noted, and the ventricular systolic murmur is again audible at the lower angle of the scapula. Pulse 102, full and bounding; pulsation visible in all the superficial arteries. There are physical evidences of considerable lung congestion, attended with abundant expectoration. Other systems normal. Urine specific gravity 1020, non-albuminous; contained a few pus cells, which were found to be from a gonorrhœa. He remained for a few weeks in the hospital, during which time he greatly improved, but then, contrary to advice, he left and resumed his heavy work. He was again admitted on March 16 in a dying condition. Cardiac dull; percussion greatly enlarged. Heart's impulse very diffuse. Apex-beat in the sixth interspace, and about an inch beyond nipple line. In addition to the direct and indirect aortic murmurs, that of mitral regurgitation is very pronounced and rough, both at the apex and at the lower angle of the scapula. Over the right ventricle the ventricular systolic murmur is softer toned than elsewhere, which, taken in conjunction with distinct pulsation in the veins of the neck, leaves no doubt but that there is also tricuspid insufficiency. Great congestion of lungs; abundant expectoration of frothy mucus; hepatic dulness enlarged; tenderness in the right hypochondrium and in epigastrium; almost constant vomiting of mucus, bile, and blood; urine albuminous. Died March 22.

At the autopsy, on opening the chest, the heart was found to be immensely enlarged, displacing the left lung. Pericardium contained about three ounces of bloody serum. The heart, which weighed twenty-six ounces when free from clot, had a "milk patch" on its anterior surface; all the chambers were filled with blood. Both ventricles were enormously dilated and somewhat hypertrophied; both auricles dilated; aortic semilunar valves thickened and incompetent; mitral orifice admitted four fingers, valves somewhat thickened; tricuspid orifice dilated, valves normal, as also the pulmonic; aorta very atheromatous and much thickened. Lungs congested and œdematous; liver weighed four pounds fourteen ounces, and presented the so-called "nutmeg" appearance; spleen, fourteen ounces, firm and congested; kidneys congested, but otherwise normal; stomach greatly congested, and coated with a thick layer of mucus and blood.

Remarks.—This case belongs to that class of diseases of the heart which arises from mechanical injuries, and which has been so ably depicted by Dr. Clifford Allbutt, in *St. George's Hospital Reports*, 1870. We have here got the whole eight conditions which he pointed out, but we have no strong positive evidence to show whether or not they arose in his order of sequence, but strong presumptive evidence to the contrary, viz.:—1. Dilatation of the right heart. 2. Dilatation of the left heart. 3. Hypertrophy of the left ventricle, or of both ventricles. 4. Chronic inflammation of the aorta and aortic valves. 5. Dilatation of the aorta. 6. Incompetence of the aortic valves. 7. Further compensatory hypertrophy of the left ventricle; and 8. Loss of compensatory hypertrophy, with consequent rapid failure, and often with consequent mitral regurgitation. To which we might add—9. Tricuspid regurgitation. From this and many other cases which I have seen, I am strongly inclined to doubt this order of succession, and believe that in many of those cases of heart disease due to overwork the left ventricle is primarily, and the right only secondarily affected. Dr. Allbutt's sequence does and will hold good in the case of soldiers who perform their drill with constricted chests, where consequently there is an obstruction to the pulmonary flow, which throws a great strain on the right heart. In the case of labourers, their dress in no way hinders the free expansion of the chest, and consequently there is no more extra obstruction to the pulmonary flow than that occasionally caused by the fixture of the chest during a more than ordinary effort, which is easily met by a slight hypertrophy of the right ventricle; whereas there is great obstruction in the systemic circuit, owing to the violent muscular effort, but which, so long as it is sufficiently compensated by hypertrophy and dilatation of the left ventricle, may give rise to no symptoms whatever, so that the disease may have passed to an irremediable extent before the patient is aware of it. Such is the history of the present and many other cases. The patient does not know that there is anything the matter with his heart until insufficiency of the aortic valves takes place, and then he is "suddenly seized with palpitation and shortness of breath." How different is the history with primary dilatation of the right ventricle. The functional disturbance comes on early, and is marked. There is no mistaking the sinking of the epigastrium, the anorexia, and other symptoms of general venous congestion. The patient is soon obliged to seek medical aid, and that before there has been much degeneration of cardiac fibre. Even on the first admission of this case into hospital, there was no marked dilatation of the right ventricle, and I believe that, at least, in this case it should not have an earlier place than the seventh in Dr. Allbutt's sequence.

Case 2.—Dilated Hypertrophy of the Heart—Dilatation and Atheroma of the Aorta, with Incompetence of the Aortic Valves—Angina Pectoris—Death—Autopsy.

(Under the care of Dr. DICKINSON.)

E. K., aged forty, single, sailor, admitted under the care of Dr. Dickinson, September 20, 1874. He presented the appearance of one in great anguish, and little examination is required to show that he is suffering from angina pectoris.

He complains of "very severe pain about the heart," and feels as though he "could not get breath," yet his respirations are quiet. He considers himself to be in a state of imminent peril, and does not care to speak.

His history may be briefly stated as follows:—He has always been healthy, and has led a seafaring life for the last twenty-one years. He could run up the rigging perfectly well until last April, when he first noticed "the shortness of breath," which has since then been getting gradually worse. He is not aware of having been subjected to acute strain at that time. He never had venereal disease.

He seems a stout, well-formed man, but his muscles are rather soft and flabby.

Physical Examination.—Heart: Apex-beat in sixth interspace, and two inches to the left of nipple line. From this point the dull percussion extends to the left border of sternum, and measures six inches and a half transversely and six inches vertically. There is a diffuse heaving double impulse over the whole cardiac area and in the epigastrium. There is retraction of the epigastrium and intercostals—markedly of the fifth—during the systole, with corresponding expansion and perceptible impulse during diastole. The heart-sounds are dull at the apex, and not attended by any murmur; over the right ventricle they have a clear ringing tone. Along the sternum and in the vessels of the neck can be heard a coarse, double bellows murmur, the ventricular diastolic part of which is most intense and almost masks the second sound. Along the upper part of the spine the first sound is sharp and clear, and not attended by murmur. There is no murmur at lower angle of left scapula. Pulse 120, regular, full, and bounding; respirations 20. There is evidence of slight effusion into right pleura. Hepatic dulness rather large, measures four inches in line of nipple. Digestive system tolerably fair. Urine slightly albuminous.

September 22.—He is very frequently troubled with spasmodic attacks of cardiac anguish, at which times he scarcely knows in what position to put himself for most relief; but he is generally found in the sitting posture, with his head bent on his chest. He says that the pain is very severe, that he cannot get breath, and that there is a sense of tightness about the breast. The pain does not run into the arm, nor shoot through to the back. He describes it as a "dead, dull pain," which must soon and inevitably "kill" him. His countenance is very anxious, and expressive of much suffering. His lips are pale, and not livid. Pulse 116, feeble, but still retains its former character, and remains quite regular, even during an attack

of angina. The spasms are pretty quickly relieved by nitrite of amyl. He is taking six ounces of gin, and ℞. Sp. etheris ʒvj., tinct. cardam. co., sp. chloroformi āā ʒv., aq. camph. ad ℥vj., ʒj. 4tis horis.

Died September 23.

Autopsy, twenty-four hours after Death.—Body well nourished. On laying open the chest, the heart is seen to be very large, and only slightly covered by the left lung. There is some fluid in the right pleura, and a portion of the posterior part of the lower lobe of right lung is collapsed. The The portion of the left lung in contact with the heart is compressed, and contains no air. The lung structure is otherwise healthy. The bronchi are lined with a considerable amount of glairy mucus. The heart is very much enlarged, especially the left ventricle, and weighs twenty-eight ounces. All the cavities contain a quantity of dark clotted and fluid blood. Left ventricle is enormously dilated, and its walls hypertrophied; aortic valves diminished in size, and greatly thickened at the margins; mitral orifice dilated, and posterior cusp slightly thickened. The papillary muscles are very pale and mottled. The right ventricle is dilated, and the tricuspid orifice admits five fingers; there is here only comparatively slight degeneration of the muscular fibre. At the commencement of the aorta the inner coat is almost entirely ulcerated away, especially around the origins of the coronary arteries. About an inch from the origin of the aorta there are two aneurismal dilatations of about the size of large peas. The aorta is rather dilated, and its walls are enormously thickened and atheromatous. Liver of normal size; the surface presents yellow and purple mottling. On section, the substance is found to be indurated. The centres of the lobules are pale yellow, and the margins are slightly darker; there are portions of red atrophy towards the margins of the organ. Spleen normal. Right kidney: The capsule strips off easily, leaving a smooth surface. On section, the cortical substance is seen to be slightly increased. Left kidney healthy.

Remarks.—In this case, again, I believe the side of the heart to primarily suffer was the left. The patient, although suffering perhaps for years from chronic inflammatory changes in the aorta, and dilated hypertrophy of left ventricle, had no symptoms referable to the heart so long as the balance was maintained; but once the aortic incompetence took place, and the compensatory hypertrophy began to fail, the downward progress of the case was rapid. Regarding the diastolic impulse, which was markedly present in this case, I would offer the following explanation, although I know it differs from that which is generally believed. Hope was the first to point out the true diastolic impulse, and his interpretation of that condition, under the name of the "double jogging impulse," is in the main commonly accepted even in the present day. He said, "It is occasioned by the diastole of the ventricles, during which action the heart sinks back from the wall of the chest, and this sinking back terminates in a jog or shock occasioned by the refilling of the ventricles, and constituting the diastolic impulse in question." As this is not the place to enter into a discussion on the merits and demerits of the above theory, I will just state that I believe the diastolic impulse to be due to a rebound of the chest-walls, which is simply an abnormal exaggeration of the normal recoil which gives rise to the inverted cardiographic tracings at a certain distance from the apex. When the heart contracts it tends to assume a more or less globular form, and so, when the apex impinges on the chest-walls during systole, all the other points of the globe recede from the parietes; but as a vacuum cannot occur owing to the atmospheric pressure, the globe is more fully embraced by the lungs, and there is also a partial retrocession of the chest-walls, as clearly shown by the inverted tracings obtained beyond the apex area. As this retrocession of the parietes is due to atmospheric pressure, and partly fills up the vacancy, it follows that it will be greater the larger the heart and the more the lungs are hampered from embracing the globe, both of which conditions we had eminently in existence in this case. The greater the retrocession of the chest-walls during systole, the greater will be their rebound during diastole when the heart assumes its flattened shape.

THE new waterworks at Warwick were opened last week. A constant supply of good water, more than sufficient for the requirements of the town, has been obtained from a bed of sand, which is believed to extend for a distance of twenty miles, and is supposed to be practically inexhaustible.

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Medical Times and Gazette.

SATURDAY, OCTOBER 7, 1876.

THE INTRODUCTORIES.

WE do not agree with those who hold that the ceremony of opening the medical session at our various schools each year by a general introductory lecture is one of those customs which are "more honoured in the breach than in the observance." We regret, therefore, that the authorities of Guy's Hospital Medical School have now followed the example set a few years ago by St. Bartholomew's, and have abolished the introductory lecture. It must of course be supposed that those two great schools have been induced to take this step by good and valid reasons; but, so far as we know, they have never made those reasons public, and we are, unhappily, entirely ignorant of them. It is well known, indeed, that it is said by some that the custom of delivering inaugural addresses or lectures is a senseless one; that the task is a difficult, burdensome, and perhaps thankless one; that it is a waste of time; that the lectures are wearisome, stupid, and useless; and so on. Now, we know, of course, that we in this generation are much wiser than our forefathers,—that goes without saying; but we submit that in this case the custom is hardly old enough to be condemned on that account. That the task is a difficult one to perform well cannot be accepted as a good reason for giving it up altogether, if, when well done, it is good and useful. And we must hold that if the introductory lecture is stupid and useless, the fault lies with the lecturer, not with the custom. It ought to be a very good and useful thing to collect together, once a year, all the students, young and old, of a medical school, and speak to them of the greatness of the profession of which they are striving to become members; to explain to them the map of their studies, and the reasons why those studies are to be prosecuted in a fixed and certain order and connexion; to point out the spirit in which they must work in order to succeed as students and practitioners; and to warn them of the various difficulties, dangers, and temptations which will beset them in the several stages of their career.

The lecture affords also opportunity for speaking on subjects that cannot so fittingly be brought into any of the special courses of lectures, and cannot, at any rate, in any other be brought before all the students together; and yet are subjects of which it is both interesting and useful to treat before the students in general.

Of course it is given to some men to be able to deliver a good introductory with less labour and difficulty to themselves than others can; but we cannot think that the task can be a very hard one to any man who has his heart in his work as a teacher; who remembers his own student-days, and his own student-difficulties; and who possesses any sympathy with the students he has to address.

We might be content, however, to rest the defence, if any be really needed, of the introductory lecture on the addresses delivered this year, some of which we publish, in full or in abstract, this week, and abstracts of more of which we hope to give in our next number. Dr. Bruce's address to the students of the Charing-cross Hospital School is an admirable example of the excellent purpose the lecture may be made to serve. It will be seen that he took for his theme the "residuum"—the failures—of our schools. He drew attention to the startling fact that "20 per cent. of the men who are registered as medical students never register as medical practitioners"; that, even when we eliminate all other factors of this high percentage, it is true that 20 per cent. of those who commence the study of medicine fail to become qualified, and that the majority of these so fail because they fail to pass the required examinations; and these unfortunate men are driven back on the world, "with the loss of precious time, and heart, and health, and it may be of character." In a large proportion of cases of failure the cause is that the student is simply a mistake, as a student of medicine. He is utterly incompetent by lack of education and intelligence; and with the General Medical Council rests the responsibility of "allowing hundreds of young men to register every year as medical students who can positively never hope to pass another examination." The remedy here obviously is to raise the standard of the preliminary examination so as to bar the entrance against these hopelessly unfit candidates. But, further, really good and hard-working students fail; and failure here is due, Dr. Bruce believes, to great faults in the system of learning, leading to three serious evils: "unscientific, non-rational, unreal acquaintance with the subject; an undeveloped or misdeveloped mind; and want of mental resource and confidence,"—in other words, practical cram, and abuse of the tutorial system. The student does not work out things for himself, does not learn to think and reason, but depends so much on the demonstrator and tutor that he cannot run alone, and in their absence from his side "loses his head." The evils of this system, and the remedies, Dr. Bruce sets forth clearly, forcibly, and well. All students, though students of medicine especially, will do well to read and seriously ponder his address.

Dr. Andrew Clark, in his forcible and eloquent address, delivered at the London Hospital, gave a general description of the science of medicine, setting forth its relations to other forms of knowledge, the difficulties met with in its cultivation, and the methods to be pursued for its advancement; and then he gave his hearers practical directions as to how to pursue their studies, and portrayed the spirit which they should strive to cultivate in themselves, and which should be the ruling influence of their lives. Dr. Bruce closed his address by saying, "I am guilty of no exaggeration when I say that those who now direct medical education in England hold potentially in their hands not only the health and happiness of the coming generation, but the whole future fortune of this great land"; and in a like spirit Dr. Andrew Clark dwelt, at length, on the extensive ground covered by medicine in its relations to the individual, to society, and to the State. "Medicine," he said, "not only involves vast interests—it establishes, and for its existence it must maintain, and for its progress it must continue to multiply, the most intimate relations with every other form of knowledge. There is none into which it does not lead us; none with which it does not necessitate some degree of acquaintance; none which does not lend it aid. Nor is the entire domain of the physical sciences sufficient for its needs and purposes. With the facts of the mental and of the moral worlds it seeks as close and holds as necessary a relationship. And thus throughout the whole realm of nature medicine lays down its lines of inquiry, and establishes its channels of communication. It is the metropolis of the world of knowledge, and we are the privileged denizens thereof. Here we are brought face to face with the mysteries of nature, of life, of man, and of the Eternal which enfolds them. Here, in the light collected from every lamp of science and converged into a focus upon them, we may discuss the loftiest problems which can engage the mind of man. And here, in the seeking after truth, and in the doing of good, we may open for ourselves sources of interest and of happiness greater and more enduring than any other that the world can supply." It is difficult to resist the temptation to quote from many parts of his able address, but the space at our command forbids us that indulgence, and we may be well content without it, as the address is given in full elsewhere in our pages. We must, however, specially commend to our student-readers the practical suggestions as to their methods and objects of study, and the directions how to elevate and ennoble their lives; and to our general readers the eloquent vindication of experimental inquiry as absolutely necessary to the advancement of the science and art of medicine, and the indignant protest against the vivisection agitation and legislation. Dr. Andrew Clark thinks there is reason to fear that a fresh attack upon us is contemplated, when "no quarter will be given, and no peace concluded until the liberty of experimental inquiry is unconditionally abolished." In such a case, he says, and "if hostilities are to be renewed on the old lines with the old tactics—if again the freedom of experiment is to be the sole object of attack, then I trust that every member of this great profession, and every thoughtful man beyond its pale, will make this cause his own, and will offer to threatenings of fresh legislation such a united, earnest, and implacable opposition that the Statute Book of England shall never again be sullied by penal enactments against the just liberties of men. The highest heritage of humanity is in our keeping. All the past and all the future conspire to make us loyal to the sacred charge; and at whatsoever cost of whatsoever kind we must hand down the freedom of experimental inquiry unmortgaged to future generations."

Dr. Blandford, in addressing the students at St. George's Hospital, took for his theme the great group of nervous disorders; pointing out that all medical practitioners must, in a certain sense, be psychologists as well as physiologists. "There is," he observed, "a mental side in all disease, for the simple reason that our patients have minds, and nervous systems, no less than hearts, livers, or lungs. You will have to study the mental peculiarities of patients, both in sickness and in health, or you will neither cure them in the one, nor retain their confidence in the other." His lecture deserves high commendation as a most interesting and instructive description of the widespread relations and influences of nervous disorders; of their causes; and of the means that may be taken to prevent them, and so to prevent insanity, "the last result, and outcome of the various nervous diseases—of nerve degeneration." On the treatment of insanity, Dr. Blandford contents himself with one remark, but it is a pregnant one. "If there is one thing," he says, "which experience has rendered more certain than

another, it is that insanity to be cured must be taken in time. Do not let friends, because they dislike the name, ignore the disease till all hope of cure is gone. Here, as elsewhere, let your rule be to prescribe for your patients, not for your patients' friends."

Want of space compels us to stop here, and we must be content to defer any notice of the rest of the Introductories till next week.

THE CHAIR OF MEDICINE IN THE UNIVERSITY OF EDINBURGH.

By the lamented death of Professor Laycock the Chair of Medicine in the University of Edinburgh becomes vacant. How eagerly such a post is sought after we need hardly say. It is the first position of the kind in the British Islands. No lack of candidates is therefore to be anticipated, and already some are fairly in the field; some only currently spoken of as probable competitors. Of those who have long been looked upon as likely and eligible candidates, no one can take rank before Professor Gairdner, of Glasgow, whose talents and teaching acquirements are of the highest order. We have, however, heard it doubted that he would care to give up the chair he now fills so well, even to return to the scene of his early labours and triumphs. We are not in a position to say how far this may be true. Assuredly there could be no worthier occupant of the Edinburgh chair.

The Edinburgh candidates we have heard named are Dr. Rutherford Haldane, Dr. Sanders, Dr. George Balfour, and Dr. Grainger Stewart. Out of such an array it is easy to pick a good man, for they are all good, far above the average; but it is not so easy to say which is best. Dr. Rutherford Haldane was at one time accounted the best lecturer on, and teacher of medicine in Edinburgh, but it is now a good many years since he ceased to lecture and to have any connexion with the Royal Infirmary. Without the slightest disparagement, therefore, to Dr. Haldane, his claims, great as they are, might be passed by for those of one more immediately engaged in teaching and working.

Such a man might be found, one would say, in Dr. Sanders, the present Professor of Pathology. We had occasion to remark, at the time of Professor Sander's appointment to his present chair, that there were certain objections to the course which was then adopted, and we think that it will be found that the objections we then raised have, upon the whole, been well founded. Unfortunately, since his appointment to the chair of Pathology, Dr. Sanders' rare native talent has hardly had an opportunity of displaying itself, owing to the ill-health from which he has suffered. How far the more severe duties of Professor of Medicine, and the clinical teaching which these imply, would be compatible with Dr. Sanders' health and strength we are hardly the proper judges. Nevertheless, this is an element not to be lost sight of.

In the two youngest candidates we have before us men of the most marked ability—men both skilled and trained in the work of teaching, more especially the art and science of medicine. Dr. George Balfour's "Lectures on Heart Disease," originally published in the *Edinburgh Medical Journal*, were so good that we took the liberty of transferring whole pages of them to our columns. Now that they are published in a separate volume we cannot do better than advise our readers to study it, as, perhaps, the best book on the subject available to their hands.

Nevertheless, taking every factor into consideration, we are, upon the whole, inclined to think that the claims of Dr. Grainger Stewart are the greatest for the new vacant chair; and in this we imagine we are backed by the opinion of the profession in Edinburgh, and, in fact, in the whole of Scotland. This, we take it, has been demonstrated by Dr. Stewart's great, we had almost said unparalleled, success as a teacher and as a consultant. As a teacher of medicine Dr. Stewart has within a few years made for himself one of the largest extra-mural classes in Edinburgh; and since the lamented death of the late Dr. W. Begbie he has rapidly risen to the foremost rank of Scottish consulting physicians. Had Dr. Warburton Begbie lived, there might have hardly been a contest for the Edinburgh Chair of Medicine. Himself an old and well-skilled teacher of medicine, a model hospital physician, and undoubtedly the first practitioner in Scotland, his claims were of the strongest; nor would, we are sure, Dr. Grainger Stewart have elected to stand against him as an opponent; but Dr. Begbie is no more. That being so, out of the many really first-class men we have mentioned, we are inclined to think that the best appointment, take it all in all, would be that of Dr. Grainger Stewart. It is, however, a matter for congratulation that, on whomsoever the choice may ultimately fall, out of all those we have enumerated, it cannot be a bad one. It is very seldom indeed we can say so much.

OUGHT FIRST AND SECOND YEARS' MEN TO VISIT THE WARDS?

It would probably be difficult to find a more important subject for consideration at this season of the year than the question placed at the head of this article. The hospitals have just re-opened after the long vacation, and at no period of the year is there a larger gathering of students, both old and new, than at present. The question naturally arises, At what period of a student's career should clinical instruction commence? This is practically the gist of the matter.

Even supposing that hospitals are to be looked upon simply as schools, and their wards as class-rooms, is it either desirable or necessary that raw students should frequent them from the very commencement of their studies? And, arguing still from a student's point of view, we would ask, Is it well that the more advanced students should be cramped and crowded by a mass of men who are present more out of curiosity than for any other reason? Should the advanced students be distracted and harassed by the small practical jokes which are only too frequently being perpetrated on the outskirts of a large class crowding round some popular teacher?

But hospitals serve other purposes than these. They are public institutions, supported by the charitable, where the sick poor may receive such medical aid as their necessities may require; and while the hospitals are rightly made available for teaching purposes, it should always be our aim to teach in such a manner as shall be the least disagreeable to the patients concerned.

It must be admitted, we think, that, both from the student's and from the patient's point of view, it is undesirable for the new students to "go round" during the first few months of the session. We shall discuss this a little more in detail.

In olden times it was usual for students to serve a long apprenticeship before entering the hospitals, during which period the pupil was made familiar with dispensing and with minor surgery. He also acquired some personal acquaintance with midwifery, and with the elements of practical therapeutics: he learned how to diagnose roughly such mischiefs as scarlet fever, measles, broken bones, etc., and gained some familiarity with their treatment. Thus, when he began to "walk the hospitals" he was far from being a novice, and under these circumstances was in a position from the very commencement of his hospital career to appreciate what he saw in the wards: so that the visit was really an important part of his day's work. But now all this is changed; and probably not one student in ten of those who have just begun their studies will have gone through such a preliminary stage. The great majority are come fresh from school, and utterly unfamiliar with anything relating to the study of medicine. How, then, can such men profit from a visit to the

wards? Besides this consideration there is another, and one of still greater importance to the student—*he has not the time to spare;* and the sooner this fact is pointed out to him the better. He will have to attend an average of at least three lectures a day throughout the first session, and the dissecting-room will, or at least ought, to claim the remainder of his available working-day. There is no part of a medical education which is of greater importance than dissection; and if this be neglected during that part of the curriculum which is set apart for it, the loss cannot, without great sacrifice, be "made up." Dissection can only be carried out properly in a dissecting-room, in broad daylight, and with the help of a demonstrator; whereas many of the subjects of lectures can be read up at home during the evening. It will be conceded, then, that a student cannot afford to give two or three hours during the best part of the day to accompany the surgeon or physician in his "round" through the wards. We think that, even were this the only ground, the school and hospital authorities ought to be careful as to who goes on his rounds with the physician or surgeon.

We referred earlier to the disadvantages of the present system of going round: third and fourth years' men, besides any visitors who may be accompanying the physician and surgeon, find it exceedingly difficult to get near the bedside, and hence the clinical instruction given is lost to those to whom it is more especially addressed. These remarks refer chiefly to the larger schools. Many of our readers will remember the old Hôtel Dieu in Paris when Trousseau was still alive. Students were obliged to go on in advance, and sit down near the bed of some patient in whose case they were interested, and there wait till the master came. His class of hearers was latterly so great that without some such plan it was impossible to get within hearing of his remarks. In a smaller degree this takes place in the London hospitals; and especially at the beginning of the session, almost every day—the greater the reputation of the clinical teacher, the more obvious does it become. Almost as a natural result, the mass of students outside, and beyond the limits of either hearing or seeing, endeavour to pass the time as quickly as possible—in short, the time is spent in anything but what is useful; and the result is that the students not only waste their own time, but distract the attention of those who are really anxious to learn, and are present for that purpose. From the patient's point of view, we should strive to make the wards as nearly like a private room as possible, and suppress every manifestation which we should consider out of place in our sick-room if we were ill.

Again, is there not positive danger in such wholesale visits? May not disease-germs be carried from the dissecting-rooms to the wards? May not infection—erysipelas, the exanthemata—be thus carried from ward to ward, and even to the students' homes or lodgings? And may not our death-rates—favourably modified though they have of late been, thanks to improved drainage, increased caution, antiseptics, and a wider knowledge of contagion—still be perceptibly influenced by such causes as these? We have gradually come to recognise the immense value of scrupulous cleanliness in all our surgical dressings, and Lister has taught even those who cannot wholly accept his views as to the origin of decomposition and its consequences, that success depends less on the brilliancy of the operator than on the absolute purity of the surroundings in which an injured part is placed after an injury. He has shown that the minutest details of cleanliness are not unworthy the surgeon's attention and personal supervision. It is now well known that the contagion of one of the most virulent forms of pyæmia may be carried about—even in spite of all attempts to get rid of it—for weeks, and that it may set up mischief when and where it is least expected. We are gradually being influenced by these and other considerations, and our great operators rigorously exclude from many of their operations those who are much engaged in pathological research. Let this principle be carried still further; and let our hospital wards, our operation theatres, and all our hospital staff be purged from every possible source of contagion, however remote this may be.

Our remarks apply, be it well understood, to attendance in the wards, and most especially to attendance in the medical wards; not, except in a minor degree, to attendance on the casualty and out-patient practice. There good may be got earlier; and we have already, in our Students' Number, advised students to attend as constantly, and for such time as they can well spare, the surgical out-patients' rooms.

THE WEEK.

TOPICS OF THE DAY.

The outbreak of small-pox in the neighbourhood of the Caledonian-road is reported to have assumed a serious character. Fifty-two cases have already occurred, and six deaths have resulted. Last week, the Islington Guardians, at their usual weekly meeting, had under consideration a report by the Vaccination Officer, Mr. J. Broome, stating that during the week twenty-nine fresh cases had occurred, all, with one exception, being in the same locality. The majority of them had been sent to the Homerton Hospital, and some were being treated privately. Mr. Broome submitted two specimen handbills calling attention to the epidemic, and the necessity for vaccination—one for circulation in the infected district, and the other for the remainder of the parish. Mr. Furlong said that small-pox was, unfortunately, not confined to the neighbourhood of the Caledonian-road; a case had occurred in Windsor-street, Essex-road, and another in Halton-road, Canonbury. Mr. Young hoped that bills would not be published, as it was not necessary to alarm the inhabitants: and, after some discussion, it was resolved not to circulate any handbills or notices on the subject at present.

The fatal cases of small-pox in London, which had been sixteen and eleven in the two preceding weeks, were fifteen last week, of which eleven were registered in the North group of districts. Nine fatal cases occurred in Islington, including three recorded in the Homerton Small-pox Hospitals; one in North-street (King's-cross), one in Kentish Town, one in Kensington, and three in the Stockwell Small-pox Hospital (admitted from Brixton-hill and the Old Kent-road). Nine of the fifteen deaths from small-pox were of unvaccinated children and adults, and one of a vaccinated woman, aged thirty-six years; in the five other cases the medical certificates gave no information as to vaccination. The two Metropolitan Asylums District Small-pox Hospitals at Homerton and Stockwell contained 128 in-patients on Saturday last, against 72, 95, and 101 in the three preceding weeks; 62 cases were admitted during last week, of which 45 were vaccinated and 17 unvaccinated.

At Kingston County Court, last week, an application was made by Mr. Frere, solicitor to the Thames Conservators, for a summons against the mayor, aldermen, and burgesses of the borough, for disobedience of an order to cut off the flow of sewage into the River Thames, whereby they had incurred a penalty of £100,000—namely, £50 a day for 2000 days. The summons was granted, and made returnable in a fortnight. It is understood that a similar application will be made against the Surbiton Improvement Commissioners.

Dr. Blaxall, the Government Sanitary Inspector, has been engaged for four days at Redruth in a careful investigation of the complaints laid before the Central Board by some of the inhabitants of Redruth as to the insanitary condition of that town. The present system of drainage, and other means in existence for the protection of the public health, were minutely inquired into.

In regard to the steps taken by the Society of Arts for obtaining information on the health and sewage of towns, a correspondent, writing to a contemporary, suggests that it should be compulsory on the owners of all new houses to have the drains examined and certified under supervision by the surveyor of the Board of Health or some other constituted authority, and it should not be legal for him to delegate the work to a subordinate. He further suggests that it should be compulsory on all persons, before laying any new drain or making any alteration in an existing drain, to give notice to the proper authority, in the same way as is now obliged to be done in the metropolis to the district surveyor if it is intended to erect any new building, or make any addition to, or alteration of, an existing building; and that no house should be allowed to change hands, no fresh lease be granted, or agreement entered into, unless evidence can be given that the drainage has been examined and certified within a given time by the proper authority, or unless it be so examined and certified. By such a plan all existing dwellings would, in process of time, come under the provisions of such an Act of Parliament as is suggested. In the meantime, he remarks, it is most important that all householders should endeavour to gain some technical knowledge of the sanitary arrangements of the houses they inhabit.

The managers of the South Metropolitan Schools, at Sutton, where the pauper children of Greenwich, Woolwich, Lewisham, Camberwell, etc., are brought up and educated, have purchased the Pier Hotel, at Herne Bay, for use as a branch school, where children suffering from ophthalmia can be taught, and at the same time treated for the disease. Any surplus accommodation existing at this establishment is available for children belonging to other metropolitan unions and parishes outside the district comprising the area allotted to the South Metropolitan Schools.

Some efforts have been made during the past season to improve the condition of the hop-pickers, who annually make a descent upon the county of Kent when the crop is ready to be gathered. Much still remains to be done, but it is at least satisfactory to find that a beginning has really been made. Inspectors have visited the hop districts, and reports have been prepared showing the urgent necessity for sanitary interference. One of the sections of the Sanitary Law Amendment Act of 1874 empowers sanitary authorities to make by-laws for regulating the lodging and other treatment of persons engaged in hop-picking. By-laws under this Act were drawn up and submitted to the Local Government Board by the Rural Sanitary Authority for the Bromley Union; these, after careful revision, were confirmed, and have since been recommended as a model for adoption in all sanitary districts to which hop-pickers resort, the various authorities being urged in rather a significant manner to give them early and attentive consideration. These by-laws contain every provision necessary to secure the health of the hop-pickers, and, if carried out vigorously, will do much to prevent the recurrence of fevers and other diseases which annually present themselves in the hop districts at the time of gathering the crop.

It is stated that the authorities at the Admiralty intend to introduce some improvements in the method of preparing provisions for the Royal Navy. The preparation of meat for the ensuing year will shortly commence at the Royal Victoria Victualling Yard, Deptford. For some years past the practice has been to bring the beasts, sheep, and pigs into the yard ready slaughtered, but this year it is proposed to buy the cattle alive, and have them killed in the yard by the Admiralty butchers. This involves an additional cost in the price of the meat of about 1d. per lb., but it will have the advantage of enabling the Government inspectors to see the animals alive, and to judge better of their health and condition, the object being to obtain the best quality of meat with the option of rejecting all inferior animals. The preparation of preserved meat in hermetically sealed tins at the Victoria Yard has been abolished, the Admiralty having established a large victualling yard in Australia, where upwards of a million tins of beef and mutton are annually preserved at a cost of 3d. per lb. less than they can be prepared at Deptford. The preparation of rum for the Navy involves the necessity of the Admiralty keeping a very large stock. As it arrives from the contractors it is poured into open vats, and allowed to flow from vat to vat for a period of two years. The hot spirit, or volatile oil, is thus disengaged, the action of the spirit on the human system being then altogether different when the fiery portion has been got rid of.

Sunday, the 24th ult., was fixed for the annual collections in the local churches and chapels in aid of the Portsmouth, Portsea, and Gosport Hospital. The weather, especially in the morning, was most unfavourable, and, in consequence of the diminished attendance, the collections were not up to the average. On the previous Friday evening the Mayor entertained at dinner the Working Men's Hospital Saturday Committee. At the conclusion of the dinner, the proceeds of the Hospital Saturday collections, commenced in March last, were handed over, amounting to £191 2s. 3½d.

The Constantinople correspondent of our contemporary the *Globe*, writing on the 25th ult., states that the previous week more than a dozen English doctors left Constantinople for the Turkish army at Senitza, Nish, Novi-Bazar, Widin, Hitrovitzo, and Philippopolis.

The St. Pancras District Medical Officer has reported to the Vestry with reference to the alleged prevalence of fever in Fitzroy-place, Euston-road, that, instead of its being a den of fever, there has never been so little illness in that particular place during the last six years as during the present year. With regard to scarlet fever, only three cases have come under his notice. They all occurred in the same house, and were all removed to the Fever Hospital on the day on which he received notice of them.

THE WATER-SUPPLY OF THE METROPOLIS FOR AUGUST LAST.

The report submitted to the Local Government Board by the water examiner, for the month of August, shows that the water in the River Thames at Hampton, Molesey, and Sunbury (where the intakes of the West Middlesex, Grand Junction, Southwark and Vauxhall, Lambeth, Chelsea, and East London Companies are situated) was good on eighteen days, and slightly coloured during the other days of that month. The highest temperature of the water taken at Seething Wells was 74°, and the lowest 59°; while the highest temperature of the air at the same place was 95°, and the lowest 62°. The condition of the water in the river was good on twenty-three days, and indifferent on eight days, when it was slightly stained. The rainfall for the month was 1·35 inches. The Lambeth Company have completed the extensions and improvements in their new works at Molesey, and a reservoir is to be made at Norwood. This company is giving a constant supply in a number of courts and alleys in the district they serve. The alterations in fittings under the Board of Trade rules and regulations are being gradually effected as occasion offers, and are carried out in all new buildings. This Company require an extension of their area of filtration to enable them to efficiently filter water during the prevalence of floods. The Chelsea Company's new works at Molesey are progressing rapidly. The erection of the necessary engine-power is being proceeded with. Meanwhile, temporary engines have been fixed to afford supply from the new intake. Major Bolton again calls attention to the fact that the water delivered for domestic purposes by the metropolitan water companies is

frequently deteriorated after leaving the water companies' mains by the dirty state of cisterns on the premises of the consumers. Many of the cisterns and tanks for containing water in small tenement houses in the metropolis are in a disgusting and filthy state. An opportunity for inspecting these presents itself when travelling on some of the metropolitan and suburban lines of railway. Cisterns will be seen without lids, full of rank and decaying vegetation, which, on closer examination, would show more or less organic deposit, and under the microscope would be found to abound in unwholesome life.

THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

At a meeting of this Corporation, held on the 2nd inst., the following office-bearers were elected for the ensuing year, viz.:—*President:* Andrew Fergus, M.D. *Visitor:* J. B. Cowan, M.D. *Treasurer:* John Coats, M.D. *Honorary Librarian:* James Finlayson, M.D. *Vaccinator:* Hugh Thomson, M.D. *Councillors:* The President, *ex officio;* The Visitor, *ex officio;* The Treasurer, *ex officio;* J. G. Fleming, M.D.; William Leishman, M.D.; Henry Muirhead, M.D.; J. D. Maclaren, M.D.; James Morton, M.D. *Board of Examiners:* Alexander Lindsay, M.D., Chemistry, one year; George Buchanan, M.D., Anatomy and Physiology, one year; James Finlayson, M.D., Clinical Medicine, one year; J. D. Maclaren, M.D., Clinical Medicine, one year; R. D. Tannahill, M.D., Midwifery, one year; R Scott Orr, M.D., Medicine and Materia Medica, two years; James Dunlop, M.D., Clinical Surgery, two years; Alexander Patterson, M.D., Clinical Surgery, two years; P. A. Simpson, M.D., Medical Jurisprudence, two years; James Dunlop, M.D., Surgery and Surgical Anatomy, two years; H. C. Cameron, M.D., Surgery and Surgical Anatomy, three years; Eben. Watson, M.D., Anatomy and Physiology, three years; J. G. Wilson, M.D., Midwifery, three years; Matthew Charteris, M.D., Clinical Medicine, three years; R. Scott Orr, M.D., Clinical Medicine, three years; James Morton, M.D., Surgery and Surgical Anatomy, four years; Robert Perry, M.D., Chemistry, four years; A. Wood Smith, M.D., Medicine and Materia Medica, four years; H. C. Cameron, M.D., Clinical Surgery, four years; James Morton, M.D., Chemical Surgery, four years; William Macewan, M.D., Medical Jurisprudence, four years. *Examiners in Arts:* James B. Russell, M.D.; John Pirrie, M.D. *Clerk:* William Henry Hill. *Secretary and Librarian:* Alexander Duncan, B.A.

THE REIGATE AND REDHILL COTTAGE HOSPITAL.

The tenth annual report of the Reigate and Redhill Cottage Hospital has recently been published, and shows the continued prosperity and usefulness of the institution. Since the formation of the Hospital in 1866, 650 patients have been admitted, of whom thirty-three, or 5 per cent., have died; but in no case has death resulted from what are sometimes called hospital diseases—namely, erysipelas and pyæmia. The following gentlemen have undertaken the treatment of cases in the Hospital during the year, in addition to the medical officer:—Drs. Hill and Holman, and Messrs. Flood, Hallowes, Kelsey, and R. Steele. By the addition of a new wing to the building the Hospital will accommodate with comfort sixteen beds and two children's cots, and the Committee feel that this will meet the demands on the institution for many years to come. At present the Hospital contains twelve beds and two children's cots in occasional use.

THE AMERICAN GYNÆCOLOGICAL SOCIETY.

The inauguration meeting of the American Gynæcological Society was held at New York on September 14, 15, and 16, under the Presidency of Dr. Ferdyce Barker. The Society embraces the representative men of all the great centres of activity. Admission is conditional on approved work. The choice of honorary members is also strict. At present only four have been elected—viz., Dr. Robert Barnes and Mr. Spencer Wells for England, Dr. McClintock for Ireland, and Mr. Thomas Keith for Scotland.

THE SIMON TESTIMONIAL.

In accordance with the fifth resolution passed at the meeting of the Committee on June 15 last, to the effect "That a meeting be convened of all those willing to assent to the movement for the purpose of determining the form of the testimonial, and to elect a committee to make the necessary arrangements for giving effect to the object of this meeting, and that the meeting should take place at Sheffield during the annual meeting of the British Medical Association," some members of the Committee met at the Cutlers' Hall, Sheffield, in August; J. J. Bartrum, Esq., J.P., F.R.C.S., of Bath, in the chair; when Mr. Haviland announced that he was anxious to take the advice of the Committee before calling a more public meeting, as he had received an important letter from Mr. Simon, which, he thought, demanded their serious attention.

Mr. Haviland, at the request of this meeting, acted as secretary, and read the letter alluded to—

"July 26, 1876.

"My dear Haviland,—For the last four days I have had on my mind a matter about which I have been eager to write to you; but my time has been so entirely absorbed in other business (among which not least that of the Vivisection Bill) that now is the first opportunity when I have been able to secure a little leisure for my purpose.

"I observed in the medical journals of last Saturday, and in the *Times* of the day before, paragraphs to the effect that you, as secretary for a committee of officers of health and others, are taking steps to get up an expensive testimonial to me on the occasion of my having retired from the public service.

"I must (as needs hardly be said) feel deeply the very great kindness and the very great honour which are done to me by such an intention as is described. And I feel it the more because I dare say it represents, on the part of those who have entertained it, knowledge (more or less) of the extreme difficulties in which my later years of office have been passed, and the sympathy which has in consequence been felt for me—at least in my own profession—that at last those difficulties result in the closure of my official career.

"Those being in all sincerity my feelings in one point of view towards the intention which is described, let me hope, my dear Haviland, that you will not deem me ungrateful and churlish if I refer to some considerations of a different kind which lead me personally to hope that the intention may not be persevered in.

"In the first place, so far as you appeal to the general public, the public may quite properly reply that its account with me is already closed. In return for the livelihood which they gave me, I undertook to work my best for them in my province of duty; and if this 'best' has been of some usefulness, such, I need hardly say, was the hope with which they engaged me to work, and for which my sufficient salary was awarded me by them. Granted (as I trust it may be) that, in the office which I held, I loyally endeavoured to do my full duty, this praise (and I can pretend to no higher) is but such as would very rarely not be due to any high officer in the Civil Service; and in the general tone of that Service no particular credit attaches to doing what it would be simple discredit to leave undone.

"But, secondly, and a thousand times more, so far as your appeal addresses itself to members of our own profession, let me say how really grieved I should be that they were asked to give money to do me honour. I hold my profession in the utmost love and reverence; and if I have earned the good opinion of my brethren in it, particularly of those of them with whom in the different parts of my career I have had relations (and such happy relations) of fellow-workmanship, no other distinction that I can ever hope to have will be as dear to me as my consciousness of this. But such needs not be a matter of testimonial. It can be quite sufficiently attested in the kindliness with which my old friends meet me and write to me, and in the welcome with which, for such little work-time as may yet remain to me, they will, I hope, still let me stand shoulder to shoulder with them in the studies and the struggles which concern us all.

"Ours is not an over-affluent profession, and the system of costly testimonials among us should be reserved for very special occasions. In the rank and file of our profession are very great numbers of men who in different spheres of inconspicuous duty have worked their long laborious years in the same spirit as I have worked, yet often with little but their love of knowledge and of usefulness to cheer or requite them; and in proportion as I should count it among my highest rewards to have the approval and sympathy of such men for the work which during so many years I have been carrying on, and for the endeavours which I have sincerely made to contribute my quota to the life and growth of our joint profession, just so should I deeply regret that their kindly feeling towards me were appealed to for any sort of monument to glorify me. My present case (for I hope that my powers of usefulness may not yet be quite extinct) would fairly fall within the general rule—"*Nemo ante obitum testimonialisetur*"; but even were it otherwise, and could I snppose my ashes of cremation to bo speaking hereafter on my behalf, their sentiment would, I trust, still be faithful to mine,—

"'Be but the Spartan's epitaph for me:
"Sparta hath many a worthier son than he."'

"Again let me express my hope that you will not in any degree misunderstand the spirit in which I have asked you, and those who are acting with you, to relinquish the intention of a testimonial. Believe, all of you, how very grateful, how very flattered I feel, in learning an intention which in itself is already enough to crown me in imagination with many laurels. And let me, untestimonialised except with the memory of that most kind and generous intention, remain, dear Haviland,

"Your obliged friend and fellow-worker,

"John Simon."

After the letter was read, it was moved by the Chairman, and seconded by Dr. Cornelius Cox, of Chelmsford:—"That a copy of the letter addressed by John Simon, Esq., C.B., F.R.S., D.C.L., to Mr. Haviland, be forwarded to the subscribers and other promoters of the Simon Testimonial, in order that their views may be ascertained as to the propriety of acceding to Mr. Simon's wishes, that all public recognition of his valuable services should be, for the present, put aside, or whether the public be requested to furnish funds sufficient to provide a gold medal to be competed for triennially on some sanitary subject."

It was likewise resolved—"That Mr. Haviland be requested to communicate with Mr. Simon, and ask his permission to have his letter printed and circulated among the subscribers and others."

In accordance with the last resolution, Mr. Simon was at once communicated with, and he readily acceded to the request of the Committee.

At a meeting of the Committee held on the 14th ult., in order to consider the letter of Mr. Simon to Mr. Haviland, dated July 26, 1876—Present: Dr. Cornelius Fox, Medical Officer of Health, Chelmsford, in the chair; Professor Corfield, M.D., M.A., Medical Officer of Health, St. George's, Hanover-square; Captain Clode, General Register Officer; and Mr. Alfred Haviland, Medical Officer to the Northamptonshire Combination of Sanitary Authorities—it was proposed by Professor Corfield, seconded by Dr. Cornelius Fox, and carried unanimously—"That, in deference to Mr. Simon's wishes expressed in his letter to Mr. Haviland, the original intention of founding a scholarship and medal as a testimonial in recognition of his long and distinguished services to his country in advocating sanitary science, be abandoned; but that it be referred to a subsequent meeting of the Committee to consider the advisability of presenting a marble bust of Mr. Simon, to be placed in the Royal College of Surgeons."

It was also resolved that copies of Mr. Simon's letter be sent to the medical and general press.

It was also resolved that the desirability of limiting each subscription to a certain amount be discussed at the next meeting, which will be held on Wednesday, October 25 next.

A Beauty.—The following is a copy of a label taken off a bottle of medicine supplied by a firm of druggists of Cork.—"*Caution.*—To all medicines for outward application this label is attached to the bottles, in order to distinguish it from others for internal use, but persons unable to read should not be allowed to administer medicines, and never give or take a dose without first perusing the label.—Signed, ————."

FROM ABROAD.

The Jardin des Plantes.

Dr. Bourneville, the editor of the *Progrès Médical*, publishes, in the number of that journal for August 26, a memorial addressed to the Paris Municipal Council on the subject of the Jardin des Plantes. This institution, which had achieved a world-wide reputation for many generations before modern zoological gardens had to some extent eclipsed one of its features, is, in the opinion of Dr. Bourneville, susceptible of being made much more useful as an educational establishment than is the case at present. As it is, no institution in Paris is more assiduously frequented than the Musée d'Histoire Naturelle, popularly known as the Jardin des Plantes. It was indeed founded originally as a botanical school, by Gay de la Brosse, as long ago as 1635; and a century later, Buffon added anatomical, mineralogical, and zoological collections, enlarged the garden by the purchase of adjoining land, and founded three chairs. So matters continued when the Revolution burst forth. In 1792 the direction of the Jardin was confided to Bernardin St. Pierre, who, among the ameliorations which he advocated, especially dwelt upon the utility of a menagerie. Lakanal, who entered with much enthusiasm and competence upon all questions relating to public instruction, was directed to make a report, and upon the reception of this the Convention decreed the reorganisation, or rather the creation, of the Musée d'Histoire Naturelle. Twelve chairs were founded instead of three, buildings were raised for the different collections, a library and a menagerie were added, and new land purchased—everything, in fact, was provided on a large scale, not only for present exigencies, but for future demands. The consequence of this impulse given by the Convention was, that during the first half of the present century the Musée was the grandest establishment of its kind throughout the world; but during the last twenty years various similar institutions in Europe have surpassed it. In 1858 the Empire nominated a Commission for the consideration of the improvements that should be introduced into the Musée, but, like all analogous commissions instituted by that Government, it did nothing in the matter. The consequence is that the collections are badly housed, the plants insufficiently labelled, and the menagerie is inferior to those of London, Amsterdam, Antwerp, etc. In one respect the Musée has, however, retained its superiority; for while in other countries payment must be made to view these menageries, in Paris all is open to all. The result is, that it has always been a valuable centre of popular instruction—more than 30,000 visitors having been counted there on Sundays and holidays.

Believing, however, that the Jardin des Plantes is susceptible of being made far more useful than at present, Dr. Bourneville and twenty other persons interested in diffusing scientific knowledge amongst the common people have memorialised the Municipality for an increased grant of money to this end. In doing so, however, they make use of a statement which is certainly erroneous—namely, that the London Zoological Society receives an annual subvention from the Government of £3000! We are under the impression, on the contrary, that the Society has to pay a handsome rent for the portion of the Regent's-park which it occupies. The memorialists are of opinion that these various valuable collections should be utilised for imparting instruction to the more advanced scholars of the primary and secondary schools, in which natural science is at present untaught or taught perfunctorily. The ardent desire of young persons for such information is almost universal, and only requires to be properly met to be realised. Future generations would thus be made acquainted with valuable information not attainable by the present, and many of the prejudices which are the results simply of ignorance would be dissipated.

Indigence in France in 1872.

The French Government has recently published the returns of the money spent in the relief of indigence in France, which, however, only come down to 1872. The *Progrès Médical* of September 9 furnishes an analysis of the principal facts. It seems, in the first place, that during the period 1837-72 the number of persons in France requiring public succour had increased from 2·30 to 3·64 per cent. of the popula-

tion. At the commencement of 1872 the total number of such persons was 1,313,579, the industrial departments presenting the largest percentages—as Le Nord (18·46), the Rhône (11·34), and the Seine (6·71),—and the minima being found in the essentially agricultural departments. The revenues of the whole of the *bureaux de bienfaisance* amounted to 27,991,785 fr., and their expenses to 24,780,446 fr., of which 20,638,456 fr. were expended in giving succour—*i.e.*, 15 fr. 71c. for each person. The hospitals throughout France furnished 69,296 beds, and there were 421,740 patients who occupied them. The number of patients occupying them on January 1, 1872, was 49,180. The population of the hospitals, it would seem, is renewed about nine times in the course of the year, giving a mean residence of forty days. It would also appear, supposing the daily occupation of beds to be a pretty constant one, that there were in round numbers 20,000 beds unoccupied, showing that the efforts of charity should not be directed towards the creation or enlargement of hospitals. So, also, in the *hospices* for the aged and infirm there were 54,144 beds; and on January 1, 1872, there were only 48,139 occupants, leaving 6000 vacant. This apparent superfluity is probably due to the faulty distribution of the beds, as it is well known that there is no deficiency of applicants in many of the regions.

The number of patients in hospital was in the Seine 4·14 per cent. of the inhabitants, while for the rest of France it was only 1 per cent.; and in the hospices the number was 0·89, and for the rest of France 0·17. Thus in the Seine the number succoured was four or five times that in all the other departments united. The revenues of all the hospital establishments amounted to 106,691,644 fr.; and the expenses of the ordinary hospitals amounted to 88,150,917 fr. At the beginning of 1872 there were 98,664 *enfants assistés*, 8466 of which were foundlings, 46,609 children abandoned, and 9894 orphans—costing together 8,117,718 fr.—included in the hospital expenditure. Besides these there were 33,695 children put out, costing 3,087,023 fr.; so that, while each hospital child costs about 125 fr., the child that is put out costs only about 81 fr. At the same date the number of indigent *insane* were 31,216, of whom 18,701 were placed in the departmental asylums, 5391 in the hospices, and 7124 in private asylums, their total expense being 13,445,829 fr., of which sum 2,235,000 fr. is included in the expenses of the hospices. The large sums charged for administration of the property of the Assistance Publique give rise to criticism for which we have no space.

The Nitrite of Amyl.

Dr. Ziegler, of the Episcopal Hospital, Philadelphia, states (*Philadelphia Medical Times*, July 8) that he has never found this give rise to dangerous symptoms, although its effects differ greatly in different persons. He has used it with good results in angina pectoris, in dyspnœa often attending phthisis immediately preceding death, hysterical convulsions, asthma, neuralgia, intermittent fever, and chorea. In angina pectoris it does not act very quickly, but undoubtedly shortens the attack. In the dyspnœa of phthisis it has been very efficacious; and in hysteria it acts almost instantly, causing a general relaxation of the system, which, after twenty-five or thirty minims of spt. ammon. aromat. have been given, will leave the patient quite comfortable. Given in a great number of cases of cephalalgia of a nervous or neuralgic type, it has not failed in any to give instant relief. In two out of three cases of asthma it seemed to effect a cure, while in the third great relief was obtained. In neuralgia, as a general rule, it is only a palliative, but sometimes it will arrest an attack. In one case of intermittent fever the amyl proved efficacious after the failure of large doses of quinine. In five out of six cases of chorea the results were most satisfactory. The children were kept in bed for at least the first four or five days, and furnished with a well-regulated diet and three ounces of sherry daily. When he first began its use, Dr. Ziegler gave very small doses, viz., from three to five drops; but he gradually used it more freely, and now "gives it almost indiscriminately when the proper cases present themselves." In a case of epilepsy, a man, sixty years of age, inhaled nearly four drachms within ten minutes. In the cases of chorea the dose varied usually from three to ten drops two or three times a day.

Dr. Osgood, of the Jefferson Medical College, writing in the same journal, states that in his hands this remedy has proved useful in several cases of angina pectoris, asthma, colic, spasm of the diaphragm, etc., so that he uses it in any case in which there are spasmodic conditions, whether muscular or vaso-motor, local or general. Lately he has employed it in three cases of intermittent fever, in which it cuts short the chill, and more or less shortens the other stages. The more he sees of the remedy, he says, the less he fears it in large doses. As yet he has only administered so large a quantity as one drachm in a case of angina pectoris, in which it was well borne.

GENERAL CORRESPONDENCE.

FEEDING-BOTTLES.

Letter from Mr. W. Henry Kesteven.

[To the Editor of the Medical Times and Gazette.]

Sir,—I wish to endorse the opinion expressed by the American writer whom you quote in your last impression as to the pernicious results of the use of the tube feeding-bottles. I think he says that their invention would have suited Herod. I say, and am quite convinced of the truth of the assertion, that the invention and use of them has out-Heroded Herod. Those who have not considered the matter can form no conception of the amount of mischief, resulting in death, which these bottles have caused. They must have been a wonderful invention for the pocket of the inventor, for their use is almost universal. "They are so convenient; and then, you know, with a little care they can be so easily kept clean and wholesome." Such is the burden of the song of all who use them, and herein lies the whole of the evil. They are convenient, in that a child to be fed from them, or to be quieted by their use, does not require to be taken from his cot. A lazy mother or nurse has simply to stop the child's mouth by plugging it with the teat, and she needs to pay no further attention either to the child or the bottle. The result of this is that over and over again children suck away at empty bottles—a proceeding which any medical man must allow is harmful, to say the least of it.

Then as to the cleaning of the bottles. I maintain that this is impossible. Mothers—careful mothers—often say to me, when I protest against the use of these bottles, "Oh, but I have half a dozen bottles, and when they are not in use they are in soak, and the bottles are always carefully brushed out after use; I do it myself." I always ask in these cases to see the bottles, and never have I found a bottle that, after once being used with milk, did not smell sour, either at the nipple, or at the point where it (the tube) was attached to the neck of the bottle. The reason for this I cannot for certain fix; but I am strongly suspicious that indiarubber has some chemical action upon milk which causes the formation of the acid.

Whatever the cause is, the evil exists. This cannot, in the face of the facts known to medical men, be denied. When called to a case of infantile diarrhœa or sickness, the first thing I say is, "You are using a tube bottle." The invariable reply is, "Yes, but we are very careful." Before I adopt any specific treatment I insist on the discontinuance of the use of the bottle. In many cases nothing further is required; the patient begins to amend from that moment. In others, matters have gone too far, or the directions about the bottle are disregarded, as being the result of prejudice; and the inevitable result in these cases is one which is entirely in accordance with the principles of Malthus. So strongly do I feel on this matter, that I could write and say much more than you would care either to find room for or to read; but I think I have here said enough, at least to call the attention of those who read to what is one of the most fertile causes of infantile mortality.

I am, &c., W. Henry Kesteven.

51, Tufnell Park-road, Holloway, N., Oct. 3.

Diminution of the Number of Medical Students at Vienna.—According to the Calendar of the Vienna University, just published, there were in the last session 3581 students registered, and of this number 974 were medical. Of these 178 were foreigners, the Americans being 34 in number. Of the other 796 nearly one-half (326) were Hungarians. While the entire number of students is on the increase, that of the medical students is constantly decreasing. Thus in the summer session of 1870 there were 1424 medical students, in 1873 there were but 1152, and in 1875 only 974, although the proportion of foreigners was unusually large that year.—*Allg. Wien Med. Zeit.*, September 12.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Thursday, September 28:—

John Galee, Poplar Hospital, E.

The following gentlemen also on the same day passed their primary professional examination:—

Jackson, Thomas, Middlesex Hospital.
Saunders, William, University College.
Stewart, John McDougall, Middlesex Hospital.
Webb, William Wilfrid, Charing-cross Hospital.
Welchman, Henry Palmer, Birmingham Hospital.
Wiles, Fredk. William, London Hospital.

At the Preliminary Examination in Arts, held at the Hall on September 29 and 30, ninety-one candidates presented themselves; of whom twenty-nine were rejected, and the following sixty-two passed and received certificates of proficiency in general education, viz.:—

In the First Class, in Order of Merit.—1. L. Stokes; 2. R. S. Batson, J. A. Liebmann, and F. W. Nicholson; 5. J. Parrott, J. H. Spry, and W. H. Weston; 8. A. J. Stiles and J. Walpole; 10. A. de Prenderville, H. S. W. Hall, S. Gordon Smith, and J. Whelpton; 14. R. J. Allan and T. W. L. Beales; 16. W. E. Bradley, H. V. Knaggs, and J. F. Spong; 19. O. A. Collins, T. M. Day, H. O. Fisher, and H. Visger.

In the Second Class, in Alphabetical Order.—J. E. Anderson, J. B. Baker, L. P. Banks, J. F. Braga, J. W. Cazalet, W. H. Cory, C. E. H. Cotes, J. S. E. Cotman, C. E. Faunce, H. Gilchrist, S. Goodman, H. Gravely, G. A. Green, W. H. B. Hall, S. S. Hewlett, J. S. Hunt, D. W. Jones, A. S. Kenny, F. W. E. Kinnier, J. T. Land, R. W. Laing, A. Lane, C. J. Lumpkin, E. C. MacPhee, L. Macrae, F. R. Nichols, W. A. J. Nottingham, J. I. Palmer, F. C. Payne, R. W. Pickering, H. A. J. Raymond, T. P. Roberts, R. E. Rygate, W. Spencer, W. F. Stephan, F. Sturges, D. C. Trott, S. Whitaker, and H. Wilson.

BIRTHS.

BOWEN.—On September 30, at Talbot House, Claughton, Birkenhead, the wife of Essex Bowen, M.D., of a son.

EARLE.—On September 24, at Brentford, the wife of Edward S. Earle, F.R.C.S. (Exam.), of a son.

LEWIS.—On September 29, at Loughton, Essex, the wife of W. T. Lewis, M.R.C.S. Eng., of a daughter.

LITTLEJOHN.—On September 25, at Hanwell, Middlesex, the wife of S. G. Littlejohn, M.B., prematurely, of a daughter.

ROSS.—On September 5, at Sattara, Bombay, the wife of Surgeon-Major C. G. H. Ross, H.M.'s 4th Rifles, of a son.

SEXTON.—On July 25, at Poona, the wife of E. Sexton, M.D., Surgeon-Major 8th Regiment Native Infantry, of a daughter.

SMITH.—On August 3, at Auburn, South Australia, the wife of A. W. Smith, M.D. Lond., of a son.

SMITH.—On September 30, at 5, George-street, Hanover-square, the wife of Eustace Smith, M.D., F.R.C.P., of a daughter.

MARRIAGES.

MAHON—FARMER.—On September 27, at St. Paul's, Great Portland-street, George Annesley Derville Mahon, M.R.C.S., of Aspley Guise, Beds, to Sarah Jane, youngest daughter of Joseph Farmer, Esq., of Chapel-hill House, near Margate.

TUCK—MANBY.—On October 3, at the parish church, Seaford, Sussex, Buckmaster Joseph Tuck, J.P., M.R.C.S., Mayor of Seaford, to Elizabeth Sarah, second daughter of W. E. Manby, Esq., of Gable-end House, Seaford, and Regent's-park, London.

DEATHS.

BARTLEET, EDWIN, F.R.C.S., of Chipping Campden, Gloucestershire, on September 29, suddenly.

MACBETH, JOHN S., M.A., M.D., late of 179, Brixton-road, London, at Ramsgate, on September 25, in his 39th year.

TOMKINSON, RICHARD, M.R.C.S. Eng., at Cheadle, Staffordshire, on September 23, aged 64.

WILLIAMS, JOHN LEWIS, M.R.C.S., L.S.A., at 118, Priory-street, Carmarthen, on September 23, aged 53.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BELGRAVE HOSPITAL FOR CHILDREN.—House-Surgeon. Candidates are requested to send in their applications to the Managing Committee, 1, Cumberland-street, S.W., on or before Tuesday, October 10.

HOSPITAL FOR SICK CHILDREN, 49, GREAT OSMOND-STREET, LONDON, W.C.—Medical Registrar. Candidates must possess some legal qualification, and will be required to attend before the Joint Committees on the day of election, October 12, at half-past four o'clock precisely. Applications, with testimonials, to be sent in on or before October 12.

LANCASTER INFIRMARY AND DISPENSARY.—House-Surgeon. Applications, with testimonials of moral and professional character, to the President, on or before October 11.

LEEDS PUBLIC DISPENSARY.—Assistant Resident Medical Officer. Candidates must possess a registered qualification. Applications, with testimonials, to A. F. McGill, 23, Park-square, Leeds, on or before October 14.

LEICESTER FAIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Candidates must be duly qualified and registered. Age not to exceed thirty years. Applications, with evidence of qualifications and registration, with testimonials of recent date, stating salary required per calendar month, to Mr. J. Wright, 32, Humberstone-gate, Leicester, on or before October 10.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be legally qualified in medicine and surgery, and registered in accordance with the provisions of the Medical Act. Applications, with testimonials and qualifications, to Mr. F. Whitburn, Assistant-Secretary, on or before October 7.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Testimonials to the Secretary of the Medical Board, the Infirmary, Sunderland, on or before October 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population computed according to the census of 1871.

RESIGNATIONS.

Glanford Brigg Union.—The Messingham District is vacant; area 13,051; population 3281; salary £40 per annum.

Great Yarmouth Parish.—Mr. J. Palmer has resigned the North District; salary £100 per annum.

APPOINTMENTS.

Aberystwith Union.—John Evan Hughes, B.M. and M.C., to the Llanfihangel District.

Basford Union.—Alexander William Reid, B.M. and M.C. Glasg., M.R.C.S. Edin., to the Arnold District.

Croydon Union.—Frederick Nicholls, M.R.C.S. Eng., L.S.A. Lond., to the Fifth District; also, Thomas Franklin Lloyd, M.R.C.S. Eng., L.S.A. Lond., to the Tenth District.

Louth Union.—James Hurley, M.D., C.M., and L.M., to the Witham District.

ST. BARTHOLOMEW'S HOSPITAL.—There has not been an "Introductory" for some years past at this Hospital; the old students dine together in the fine old hall. And, as showing the interest they take in these agreeable reunions, we may mention that amongst them we recognised on Monday last Dr. Mackenzie, of Rugby; Mr. Dayman, F.R.C.S., of Millbrook; Messrs. Jackson and Favell, of Sheffield; Bowes, of Richmond, Yorkshire; Worship, of Sevenoaks; and Elliott, of Harewood, Yorkshire. Amongst the visitors were Dr. Bennett, the President of the Royal College of Physicians; Sir Trevor Lawrence, Bart., M.P.; Professor Flower, F.R.S.; Messrs. Trimmer and Stone, of the College of Surgeons, etc.

UNIVERSITY OF CAMBRIDGE.—ANATOMY AND PHYSIOLOGY.—Professor Humphry gives notice as follows:—The course of lectures on Practical Anatomy will commence (with the description of the joints) on Tuesday, October 10, at 9 a.m., and be continued daily till October 23, and after that on Mondays, Wednesdays, and Fridays. The course of lectures on Anatomy and Physiology will commence on Thursday, October 19, at 1 p.m., and be continued on Tuesdays, Thursdays, and Saturdays. The subject this term will be the Nervous System with the Organs of Special Sense. Gentlemen not requiring certificates may attend this course without fee. Both courses are intended for students preparing for the Natural Sciences Tripos as well as the medical examinations. Superintendence of practical anatomy daily from nine to four.

WOUND OF THE VITREOUS HUMOUR.—M. Gayat terminates a paper upon this subject with these conclusions:—1. Every deep wound of the vitreous body places vision in danger. This is immediate in cases of suppurative hyalitis, but in cases of simple hyalitis the recovery of vision to a certain degree and according to certain directions is still possible; but it is neither durable nor definitive, and in general suddenly disappears at the end of a very variable time, in consequence of a cicatricial detachment of the retina. 2. Every deep wound of the vitreous body constitutes a permanent danger of sympathetic irritation of the unwounded eye. The presence or absence of the vulnerant body in the humour would seem to be of secondary importance in relation to the development of this sympathetic inflammation, which will be more probable and more rapid in its occurrence when the vulnerant body has injured the ciliary circle or has remained in its vicinity.—*Lyon Méd.*, October 1.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—The Winter Session, 1876-77, was opened on Monday, the 2nd inst., at the Medical Institution, the introductory address being delivered by Dr. Glynn, Physician to the Royal Infirmary, and the prizes distributed by the Rev. Professor Haughton, of Trinity College, Dublin. The following is the prize list:—*Winter Session.*—Third Year Subjects: Medicine, Surgery, and Pathology, Mr. J. Wiglesworth, silver medal; Mr. Rose, bronze medal. Second Year Subjects: Advanced

Anatomy and Physiology, Mr. T. M. Porter, Torr gold medal; Mr. C. E. Steele, bronze medal; Mr. T. Bickerton, hon. certificate. First Year Subjects: Elementary Anatomy and Physiology, and Chemistry, Mr. R. Bredin, Bligh gold medal; Mr. A. Meeson, bronze medal; Mr. A. C. Rich, first hon. certificate; Mr. McPherson, second hon. certificate. *Summer Session.*—Junior Subjects: Botany, Materia Medica, and Practical Chemistry: Mr. Hayward, silver medal; Mr. Meeson, bronze medal; Mr. Rich, first hon. certificate; Mr. J. G. Brown, second hon. certificate. Comparative Anatomy and Zoology: Mr. R. Honeyburne, prize; Messrs. R. Prothero, C. E. Steele, and J. G. Brown, hon. certificates. Histological Prize: Messrs. Dempster and Holmes, equal. Royal Infirmary Clinical Prizes: Physicians' Prize, Mr. Huey; Surgeons' Prize, Mr. Wiglesworth; Students' Debating Society's Prizes, first essay, Mr. Wiglesworth; second essay, Mr. C. Steele; clinical reports, Mr. Twinem. The report of the Registrar showed that 107 students were placed on the register in the winter session of 1875-76, and seventy-five during the succeeding summer session. It drew special attention to the fact that a continually increasing proportion of the students matriculated at one of the universities, from which it was inferred that, so far as preliminary general education was concerned, there was a determination to occupy a higher level than was attained by their predecessors of a few years back. There had been no changes in the staff of lecturers during the year. In the course of a very able address, Professor Haughton pointed out that the best guarantee subscribers to hospitals could have that their money was well expended was to be found in the existence of a clinic. In the publicity thus rendered, certain flagrant abuse was impossible. He deprecated the non-requirement by English examining boards of special certificates of clinical instruction in the recognition and treatment of fevers, and expressed strongly his opinion concerning the advisability, in the best interests of the profession, of a joint examining board. In the evening the lecturers and their friends dined together at the Adelphi Hotel, the chair being occupied by Dr. Davidson.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. White, Trinity, Newfoundland.—Received, with thanks.

Mr. E. Elphick, Moonta, S. Australia.—You are cleared up to February 9, 1878.

Devoniensis.—Of native physicians, or reputed native physicians, of Devon, more or less distinguished, there were twenty. The list commenced with the sixteenth century. Of these twenty, one lived in the sixteenth, seven in the seventeenth, nine in the eighteenth, and three in the present century. But to medicine, with its attendant sciences of anatomy and physiology, Devon has not largely contributed. Fuller said, "Each county is innated with a particular genius inclining the natives thereof to be dexterous, some in one profession, some in another—one carrying away the credit for soldiers, another for learning, another for lawyers, another for divines."

Progress.—You may be answered partly by the following:—"The mediæval physician studied his science not in nature but in books. Was anything the matter with you, he had read the approved writings of antiquity,—he brought his book mentally with him to your bedside; he examined you by the authorised signs and prognostics, and when the book had discovered your complaint the book provided the cure. The interior of the human body was not seen until the beginning of the fourteenth century; and when Mondino had described it, the better physicians read Mondino."

Dr. Thompson, R.N.—The gentleman is a Blane medalist. The late Sir Gilbert Blane, Director-General of the Medical Department of the Royal Navy, was the founder of the prize.

Mr. Bell.—The College of Surgeons formerly examined metropolitan and provincial teachers before recognising them as such. Professor Erasmus Wilson was the first one so examined.

F. M.—Drs. Akenside, Arbuthnot, and Sydenham are buried in St. James's, Piccadilly. Oliver Goldsmith, also a member of our profession, is buried in the ground east of the choir in the vestry beneath the organ-gallery in the Temple Church.

"*L.M.*"—As the members of the Midwifery Board of the College of Surgeons resigned some time since, and the vacancies have not yet been filled up, there will not be any examination for the above licence for some time.

A Guy's Student.—The registration at the College of Surgeons was commenced on Monday last, and will be closed on the 16th inst.

Mr. Williams.—Mr. Francis Mason alluded to the subject in his interesting introductory address at St. Thomas's; but Cheselden was connected with St. George's and the Westminster Hospitals, as well as with St. Thomas's.

An Old Member, Salisbury.—To become a Fellow of the College you must send in a form signed by six Fellows of the College (not being members of the Council) recommending you for that distinction. The Secretary will send you the blank forms.

Pure Water.—The subject is under discussion in a contemporary. But at the College of Surgeons Atkins's filters only are used, and as there are several in the building you can inquire about them of the officers, some of whom, we are told, use them in their private residences. The address of the firm is Fleet-street.

S. A.—A "Society for Promoting Legislation for the Control and Care of Habitual Drunkards" may be very useful, but in order that it may do good, or even gain a hearing, it must be very precise in its enunciation of principles. We would recommend a careful study of Dr. Bucknill's paper, quoted in the *Medical Times and Gazette* for September 9; it should be reprinted and circulated. Intemperance is a *vice*, not a disease, although it may lead to disease and be a consequence of disease. Lock up the patient, and deprive him of means of indulgence, and the disease vanishes, so far as drunkenness is concerned. It is essential to state that drunkenness is one of the most frequent *consequences*, as well as one of the most fruitful *sources*, of domestic misery, disease, pauperism, and crime. What we want is—first, a more broad and humane view of all the social and physical conditions which lead to drunkenness; and secondly, means by which the intemperate may be protected from themselves. But the fundamental doctrine should be that drunkenness is a *vice*.

"Gelsemium" or "Gelseminum"?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The yellow jessamine of the Southern States is spelled "gelsemium," not "gelseminum." It is a small matter, to be sure, but I would like to call your attention to the fact that the weight of authority in this country is against the spelling employed in the *Lancet* and elsewhere of the word—"gelseminum." In the U.S. Dispensatory, Gray's "Manual of Botany," and Wood's "Botany," the word is spelled "gelsemium." The older edition of the Dispensatory has the word as now used in the *Lancet* and in your advertising columns, but it was corrected as early as in the twelfth edition.

I am, &c., SUBSCRIBER.

Wilmington, N.C., September 15, 1876.

Hydrophobia from the Bite of a Cat.

An interesting case of hydrophobia from the bite of a cat was recently the subject of a coroner's inquiry in Manchester. The following notes are abridged from an account kindly furnished by Mr. R. B. Smart, the surgeon in attendance:—On July 22, a salesman, named McNaught, aged thirty-three, was bitten in several places on the forefinger of his right hand by a strange cat which had taken refuge under the slopstone of his kitchen from a troop of children. The wounds were cauterised, and all of them healed except one at the root of the nail, in the neighbourhood of which a small abscess eventually formed. On September 6, a few days after this abscess was opened, Mr. Smart was summoned to the man's house. He found him complaining of some uneasiness in the finger and arm, and alarmed and agitated in his manner. For several nights he had slept but little, walking restlessly about his room, and even occasionally up and down the street; and his whole demeanour had been noticed by the neighbours to be altered and strange. His pulse was 80. On being requested, he swallowed some liquid food, but he did so reluctantly and in sips. He passed the night on the sofa, and, under the influence of a full dose of chloral, slept for several hours. In the morning he took some bread and milk, complaining that he found it difficult to swallow. He talked in an excited manner; his pulse was about 90, his temperature 98·5°. A few hours later he became incoherent and still more excited. He refused to take food when people were looking on, but would now and then go out into the lobby and swallow a little liquid there. Occasionally he struck himself over the upper part of the chest, although he declared himself free from pain. At bedtime morphia was administered subcutaneously, and the night passed quietly. On the following morning, September 8, he altogether refused to swallow, and became greatly irritated when urged to try. In the afternoon he suddenly became very violent, and attempted to get out of the window. He talked incessantly, and thought those around him were conspiring to take his life. He had a savage look, and made threatening gestures as if to strike. Later in the day he is said to have spat upon his attendants, and the surgeon himself saw him apparently preparing to do so. He ordered all vessels containing food to be taken out of the room. During the night his violence increased; he foamed at the month, and repeatedly put his hands up to his throat. Early in the morning of September 9 he died, without any symptom of convulsion, and recognising the bystanders to the last. At the post-mortem examination, conducted by Mr. Thomas Jones, Medical and Surgical Registrar at the Royal Infirmary, there was found marked congestion of the veins on the surface of the brain, as well as of the vessels in the brain-substance. There was no softening or exudation. Nothing abnormal could be detected in the condition of the throat. There were some old pleuritic and pericarditic adhesions, and the aortic valves were thickened. All the other organs were healthy.

BOOKS AND PAMPHLETS RECEIVED—

W. Douglas Hemming, M.R.C.S.E., The Medical Student's Guide—Transactions of the College of Physicians of Philadelphia—John Hilton, F.R.S., F.R.C.S., On Rest and Pain—Nathan Allen, M.D., LL.D., The Normal Standard of Woman for Propagation—William Johnston, M.D., The Diarrhœa of Leicester: its Causes and Prevention—John Syer Bristowe, M.D. Lond., F.R.C.P., A Treatise on the Theory and Practice of Medicine—George William Balfour, M.D. St. And., Letter of Applica-

tion for the Chair of Practice of Physic in the University of Edinburgh—De Primitivo Splenis Carcinomate—Guido Baccelli, Di un Nuovo Segni de Tumori Ovarici in Genere: La Subcontinua Tifoide—A. H. Kollmyer, A.M., M.D., Chemia Coartata—Francis Sutton, F.C.S., Volumetric Analysis—Bentley and Trimen, Medicinal Plants, part 13—Tilbury Fox, M.D., Atlas of Skin Diseases, part 13—Llewellyn Thomas, M.D., Brief Considerations on Diseases of the Ear.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Iron—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Boston Medical and Surgical Journal—El Siglo Medico—Medical Temperance Journal—Harkwicke's Science Gossip, October—Monthly Microscopical Journal, October—Popular Science Review, October—Edinburgh Medical Journal, October—The Veterinarian—New York Druggist's Advertiser—Monthly Homœopathic Review, October—Obstetrical Journal of Great Britain and Ireland—Sunday at Home—Leisure Hour—Medical News and Library—Richmond and Louisville Medical Journal—Practitioner—British and Foreign Medico-Chirurgical Review—Morningside Mirror.

COMMUNICATIONS have been received from—

Dr. J. Pearson Irvine, London; Dr. Francis Ouston, Aberdeen; Dr. J. Mitchell Bauce, London; Mr. Maunder, London; Mr. R. J. Godlee, London; Mr. B. R. Wheatley, London; Mr. J. Chatto, London; Mr. C. J. Cullingworth, Manchester; Mr. James Bara, Liverpool; Subscriber, Wilmington, U.S.A.—Dr. Thomas, Sheffield—Mr. Francis Mason, London—Mr. G. Dale, Hastings—The Treasurer of Guy's Hospital, London—Dr. Andrew Clark, London—Dr. Evans, London; Dr. H. Maudsley, London; Dr. Sawyer, Birmingham; Mr. Kesteven, London: Professor Humphry, Cambridge; Dr. William Johnston, Leicester; The Secretary of the Clinical Society, London; Mr. Geaman Reed, London; The Registrar of the School of Medicine, Liverpool; Dr. Wiltshire, London; Dr. F. Barnes, London; Mr. W. Hay, Hull; The Secretary of the Faculty of Physicians, Glasgow; Mr. Alfred Haviland, London; Mr. T. R. Glynn, Liverpool; Mr. Nathan Allen, America.

APPOINTMENTS FOR THE WEEK.

October 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

9. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

10. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Wm. Adams, "On Subcutaneous Division of the Neck of the Femur for Anchylosis of the Hip-Joint." Mr. Davies-Colley, "On a Case of Resection of the Tarsal Bones for Congenital Talipes Equinus Varus."

11. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Dr. J. Braxton Hicks, "On some Cases of Suppurating Ovarian Cysts treated by Drainage-Tube, with Remarks on Diagnosis."

12. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

13. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Wolston and Mr. Maunder, "On a Case of Intestinal Obstruction." Mr. Gordon Brown and Mr. Maunder, "Sequel of a Case of Enterotomy, with Artificial Anus in the Small Intestine." Mr. Teevan, "On a Case of Traumatic Stricture and numerous Fistulæ, cured by Internal Urethrotomy." Mr. Higgens, "On a Case of Hydatid of the Orbit." Dr. Cayley, "On a Case of Empyema, in which washing out the pleural cavity was followed by convulsions and death."

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 30, 1876.

BIRTHS.

Births of Boys, 1217; Girls, 1068; Total, 2285.
Average of 10 corresponding years 1866-75, 2118·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	683	547	1230
Average of the ten years 1866-75	656·5	645·6	1302·1
Average corrected to increased population ...	...	...	1393
Deaths of people aged 80 and upwards ...	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	...	2	...	2	...	3	1	7
North	751729	11	4	12	3	4	1	5	...	9
Central ...	334369	...	...	4	...	1	...	2	...	3
East	639111	...	1	17	...	2	2	5	1	13
South	967692	3	4	24	2	5	...	4	3	10
Total	3254260	15	9	59	5	14	3	19	5	42

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·453 in.
Mean temperature	55·8°
Highest point of thermometer	68·9°
Lowest point of thermometer	46·1°
Mean dew-point temperature	52·6°
General direction of wind	Variable.
Whole amount of rain in the week...	0·96 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 30, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Sept. 30.	Deaths Registered during the week ending Sept. 30.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489128	46·3	2285	1230	68·9	46·1	56·8	13·78	0·96	2·41
Brighton	100632	42·7	56	38	67·0	51·0	58·8	14·89	1·68	4·27
Portsmouth ...	124867	27·8	62	35	65·0	51·6	58·4	14·66	1·01	2·57
Norwich	83430	11·2	50	30	65·5	49·0	55·5	13·06	0·94	2·39
Plymouth	72230	51·8	34	15	64·5	49·0	56·2	13·44	2·38	6·05
Bristol	198539	44·8	135	73	67·4	46·3	56·3	13·50	1·75	4·44
Wolverhampton ...	72549	21·4	63	29	66·9	46·0	51·1	12·28	2·41	6·12
Birmingham ...	371839	44·3	303	134	...	...	...	...	...	...
Leicester	113581	35·5	80	50	66·8	43·8	54·2	12·33	2·38	6·05
Nottingham ...	93627	46·9	71	32	66·8	41·0	53·8	12·12	1·31	3·33
Liverpool	521544	100·1	416	233	65·0	46·2	52·6	11·45	1·51	3·84
Manchester ...	357917	83·4	273	168	66·0	41·0	53·2	11·78	1·01	2·57
Salford	138425	26·8	121	77	67·2	40·2	52·0	11·11	1·04	2·64
Oldham	88609	19·0	89	39	...	...	...	...	...	...
Bradford	173723	24·1	109	60	61·8	45·4	52·1	11·17	0·92	2·34
Leeds	291580	13·5	217	114	64·0	47·0	53·0	11·67	1·11	2·82
Sheffield	274914	14·0	184	112	64·0	45·0	52·7	11·50	1·94	4·93
Hull	136933	37·7	78	58	61·0	50·0	51·3	12·39	1·30	3·30
Sunderland ...	108343	32·8	85	34	57·0	46·0	51·4	10·78	1·15	2·92
Newcastle-on-Tyne	139929	26·1	115	41	...	...	...	...	1·68	4·27
Edinburgh	215146	51·3	141	66	...	...	...	...	...	...
Glasgow	545144	90·4	396	206	60·3	38·0	50·5	10·28	0·60	1·52
Dublin	314666	31·3	185	144	67·1	43·0	54·1	12·28	1·09	2·54
Total of 23 Towns in United Kingdm	8028595	37·7	5538	3033	68·9	38·0	51·2	12·33	1·40	3·56

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·45 in. The highest reading was 29·77 in. on Monday evening, and the lowest 29·14 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture X.

DEATH BY DROWNING.

(*Concluded from page 374.*)

I. Such being the available signs of death by drowning, and their relative frequency and importance, the question now occurs as to how far we can be entitled, from the concurrence of all or the greater number of them in the dead body found in water, or known to have been removed from it, to infer with certainty that these appearances could only have originated in this way.

It may assist us in the determination of this point if we separate the signs passed under review into two groups; *assuming*, at the same time, *that nothing else has been met with* in the bodies in which the signs in question had been found *which would account for the death in any other way*, whether from natural disease or violence inflicted during life.

One such group can readily be made to embrace *the appearances common to this and the other forms of death by asphyxia*—hyperæmia of the right heart, lungs, liver, kidneys, spleen, and head.

A *second group*, coming in aid of the former, would take in *the appearances peculiar to this particular form of apnœa*. The most important of these latter, or *special signs*, as we may term them, are (1) watery froth about the lips and nostrils; (2) the same froth in the trachea, bronchi, and air-cells of the lungs; (3) water in the trachea and air-cells of the lungs, with or without the admixture of mud, sand, or weeds; and (4) water in the stomach. Then come in, as *corroborative signs*, the cutis anserina, the cholera hand, the blanched and plaited hands and feet, excoriations about the knuckles and points of the fingers, dirt or sand under the nails, and foreign bodies grasped in the hands.

Of the first three of these, which we place amongst the more certain signs, we may safely assume that they could only have been produced in the living body. In regard to the fourth, or water in the stomach, we encounter the objection that the water in this viscus may have been drunk by the party before his immersion, or that it may have entered the dead body from columnar pressure at great depths—both of which are possible, and the latter, if the body had been in deep water, not improbable. Turning, then, to the corroborative signs, it must at once be conceded that, with the exception of the last of them, they only indicate that the body had lain for some time in water.

All this, it will be seen, brings us back to the question from which we started—Would the appearances we have thus brought into juxtaposition authorise the conclusion that where the whole or the more important of them were encountered in the dead body, the person must have died by drowning?—a question which is answered in *the negative* by such a high authority as Orfila. In opposition to this conclusion, however, we must bring forward that of Caspar, who on a point of this sort is well entitled to speak with some authority. "I think," says this author, "that by carefully considering in their totality the diagnostic proofs of death by drowning, as actually observed in nature, and setting aside all that subtle scepticism whose ultimate object is mere negation, it is by no means the most difficult task that a medical jurist has to determine, whether or not a man has fallen alive into the water and been drowned. In making this statement," he adds, "of course I suppose that the bodies to be examined are such as, from not being too far advanced in putrefaction, can supply demonstrative evidence in dissection."—("For. Med.," vol. ii. page 245.)

To this, though it may be somewhat superfluous, I may be permitted to add, as my own opinion, that, *taken in conjunction with the observed absence of appearances indicative of death from any other cause*, the *combination of the signs of death by asphyxia generally, with the whole of the greater number of the special signs*, and, in addition, *such of the corroborative signs as may be present*, a decided opinion may readily be hazarded as to the death having taken place by submersion, and not by any other cause. In connexion with this point I would take occasion to repeat once more in this place that it is not by relying on *single signs*, however valuable, that the medical jurist should reach his conclusions on any of the occasions on which he may be called on to resolve questions in medical science. It is only by an enlarged survey of all the available points in the case, and by the concurrence of as many signs and appearances as are obtainable for his purpose, that he can form an opinion which will admit of being defended against all assailants, and which he will be able conscientiously to uphold in the face of the profession and the public.

The second point of importance which we stated as liable to call for solution by the medical jurist in cases of death by drowning is the determination of the question—

II. *Whether the death* by submersion *has been the consequence of accident, of suicide, or of homicide?* The solution of this question will often rest upon purely moral evidence, with which in general the medical jurist will have nothing to do. In other cases the proof will rest upon data of a purely physical character, and of the force and applicability of these the medical practitioner will be the best judge. At the same time, it must be admitted that the question will seldom permit of being resolved in an *absolute* manner by the medical jurist, for in fact there does not exist, in many instances, at least, any material difference as to consequences between the action of a person who throws himself into the water, and one who falls into it by accident or who is thrown into it by another. In a few instances, however, there are certain indications, which a careful inspection of the body will elicit, that may enable us to throw some light on the circumstances attending the latest moments of life. Thus, when a person throws himself *voluntarily* into the water he commonly chooses a deep part of it, leaps from a high bank, and not unfrequently attaches weights to his body. In these circumstances indications of violence will scarcely be ever met with on the body. The same thing will happen from a person falling accidentally into deep water. But, on the other hand, if a man is forcibly thrust into the water, we may expect to find indications of a vigorous struggle for life, unless indeed his assailants have been so numerous as to have overpowered him at once, or he has been taken by surprise, or has been intoxicated, or been insensible from narcotics. It is for these indications of violence, therefore, that we have to look in the dead body, and when such are met with it remains for us to determine how these were produced—whether they could have been self-inflicted, whether or not they could have arisen from the struggles of the person in the water, or been produced by the fall into it, or whether they were of such a nature as could only have been produced by the agency of others.

There is no danger of our confounding the marks of violence which may have been inflicted before death in cases of drowning with those injuries which may have caused death before the body was thrown into the water at all. The absence of the signs of death by drowning in the latter case would obviate any chance of error in this respect. Attention to the nature and character of the injuries found in the body would also facilitate our decision. They would necessarily be such as would be sufficient to account for death independently of the submersion altogether. The danger of such a mistake, however, should not be altogether overlooked, as it is a very common occurrence for murderers, after having despatched their victims by the usual means, to dispose of the body in this way with the view of concealment, or to render it probable that the party had either drowned himself or fallen accidentally into the water and perished in consequence. Indeed, drowning is a mode of homicide seldom resorted to in the first instance by murderers, from the difficulties in the way of its successful accomplishment, and from the combination of circumstances required to facilitate its execution.

When, on the removal of a body from the water, injuries are found in it of such a nature as to justify the suspicion that they had not been fairly come by, several inquiries must be originated by the medical examiner—Are they of such a character as to account for death prior to submersion? Were they inflicted before or after death? In either case were they the result of accident or of design? If received during life, were they self-inflicted or inflicted by the agency of others?—(Taylor, page 131.)

The data for the correct solution of these inquiries will not require to be entered upon here. There are, however, a few points bearing upon the special circumstances of the present inquiry

which will need to be adverted to in this place. Thus, it is of importance to keep in view that injuries of very considerable extent may arise from the circumstances attendant on the decease of the party, even where the drowning was accidental or designed. In a person of the name of Petrie, who drowned himself here several years ago, numerous bruises, some of them of considerable severity, were observed on the body. He had waded into the Dee, at a spot where the water was shallow, to some distance from the bank before he reached the deeper channel, and, as he was intoxicated at the time, he had in all probability fallen repeatedly amongst the rocks which abounded there. Suicides, by throwing themselves from a high rocky bank, sometimes in falling produce severe contusions, dislocations, and fractures. In accidental or suicidal drowning the body is also occasionally carried by the current against mechanical obstacles in a river or canal, and thus the appearance of violence is produced. "Even the mechanical resistance offered by the water alone," in falling into it, "may give rise to marks of very violent injury on the person." Dr. Smith gives an instance of dislocations of both arms in this way; and a case occurred here in 1833, where the perineum in a female was lacerated by the forcible separation of the thighs in coming into contact with the water in leaping over the parapet of a swivel-bridge at the harbour. This case reminds me of another remark bearing on this subject. In a tidal harbour the body of a drowned person may float under a ship at high-water, and be there crushed below it at the fall of the tide, and thus present very extensive injuries. In a case of this kind here in 1855, besides exhibiting some minor injuries, the right clavicle was seen to be dislocated, the left clavicle, the right radius, the bones of the left forearm, and the right zygoma were fractured, the abdominal cavity widely laid open, and the intestines protruding.

It has been remarked that bodies found in the Rhine and other rivers on the Continent are generally much disfigured and extensively injured from their getting entangled with the wheels of the numerous floating mills stationed along the banks of these streams. A parallel instance occurred in our harbour in 1876. In a putrid body brought up by a dredging-machine, one of the lower extremities had been torn off by the machinery, and the intestines protruded through a rent in the abdominal wall.

Again, it may be observed of these marks of injury that they were sometimes of such a kind as to forbid the idea of their accidental origin after submersion. Thus, there may be severe and extensive bruises about the person, deeply penetrating wounds involving the cavities of the body, gunshot wounds, a deeply ecchymosed circle around the neck, or the marks of violent compression about the larynx or trachea. All these injuries, provided the post-mortem appearances of death by drowning be absent, afford the strongest presumptive evidence of homicide prior to submersion.—(Taylor, page 133.)

The finding of traces of poisons or their action in the stomach or intestines on dissection points strongly to the same conclusion. The appearance of vascular fulness in the intestinal canal is not, however, to be hastily assumed as indicative of the action of irritant poisons during life. Discoloration of the alimentary canal from venous congestion is a common feature in death by drowning, and the same appearance arises naturally, and becomes much more marked by the progress of putrefaction. Orfila also has observed "that when drowning took place while the process of digestion was going on, the mucous membrane of the stomach often had a red or violet tint."—(*Ibid*, page 115.)

Before quitting this part of our subject, I have to remind you that, in bodies which have been long in water, the finding of losses of continuity of portions of the surface are not to be confounded with wounds or losses of substance during life, or immediately after death; as, independently of their possibly originating in the rapacity of fishes, etc., the erosive action of water, formerly referred to under "Wounds," has here to be taken into account. These erosions are found, under these circumstances, most frequently about the scalp and face, or on the hands, feet, knees, and elbows.

With a few observations on the best mode of conducting—

III. *The medico-legal inspection*, we conclude this subject of death by drowning. Before proceeding to the dissection of a person supposed to have been drowned, the inspector should endeavour to learn what can be ascertained regarding the following points:—First, in what manner the body had been removed from the water. Secondly, whether any, and what, means for the restoration of animation had been resorted to. Thirdly, whether the corpse had been placed on its face after its removal from the water. Fourthly, whether it had been suspended by the feet or the head, or been kept dependent. Fifthly, if conveyed to any distance from the place where it was discovered, what was the mode of its conveyance. Sixthly, what period had elapsed since it was taken out of the water. And lastly, if the body had been washed or otherwise disturbed; whether any mud, grass, or other substance was observed about the nails, or clutched by the hands. The state of the eyes and mouth should then be noted; the colour of the skin, the expression of the countenance, the state of the joints, and of the hands and feet, should also be observed. Attention should be directed to any marks of violence which may be present on the exterior of the body, such as contusions, ecchymoses, abrasions, or wounds, distinguishing between such as might have been produced during life and those which are of post-mortem origin. In this last case the inspector should examine the spot where the body has been found, in order to ascertain, from the nature of the bottom or the banks, whether these injuries could have been readily produced by its stay there. It should be known that from the position of the body in the water the eyelids, the nose, and the lips are not unfrequently disfigured by abrasions of their surfaces; as are often the integuments over the knees in men, though more rarely in female bodies.

The inspector should next be careful to note the presence or absence of froth about the lips and nostrils, the position of the tongue, and the state of the mouth. He should then proceed to the dissection, attending to the general rules already laid down, directing his attention particularly to the following points:—First, the appearance and distribution of the blood in the principal viscera, especially the lungs, heart, liver, kidneys, spleen, and alimentary canal. Secondly, the state of the larynx, trachea, and bronchi, which *should be examined in situ*. Thirdly, the appearance, quantity, and situation of any water or froth present in any part of the air-passages; any water containing particles of sand, mud, vegetables, or other foreign bodies in the air-passages is to be compared with the water in which the body was discovered. Fourthly, the volume, colour, consistence, and feel of the lungs, and any water or froth which may or may not be present in their cells, and be obvious on compression. Fifthly, the state of the stomach, with the water or other liquids in it. Sixthly, the quantity and colour of the urine in the bladder, if present. Lastly, the condition of the body as to plumpness, leanness, and muscularity, as this may have influenced the nature of the death-struggle, and the speedy sinking or the floating of the body at or after death, it being known that, *cæteris paribus*, the body of a person which was much loaded with fat would float more readily than that of one which was thin and emaciated.—(Taylor, vol. i. p. 153; Devergie, vol. i. pp. 279-81 *pass.*)

A LECTURE ON PERNICIOUS ANÆMIA.(a)

By Professor H. QUINCKE, of Bern.

(*Concluded from page* 375.)

If we now inquire what are the causes and the mode of origin of this peculiar form of anæmia, we are struck at once with the large number of cases which have hitherto been observed in *Switzerland* and the neighbouring parts of Germany, and the idea is forced on us that perhaps some conditions favourable to the disease and affecting the mode of life or the nutrition are more powerful here than elsewhere, though at present we cannot decide what these conditions are.(b) It is certain, however, that similar cases have been observed sporadically in other countries. The disease appears to occur with relative frequency during pregnancy, and perhaps only represents an excessive pathological degree of what many authors have described as an anæmic hydræmic condition normally accompanying the latter. The majority of my patients were in wretched circumstances; their life had been barely sustained by bad and insufficient food, which often consisted only of coffee and potatoes. Under such circumstances, severe labour and the

(a) Translated, by permission, from No. 100 of Volkmann's *Sammlung Klinischer Vorträge*.

(b) Biermer and Gusserow have observed cases at Zürich; Immermann has had cases at Basle, Gfrörer at Heilbronn, Schüle at Illenau, De Cérenville at Lausanne, and I myself have had ten cases at Berne within two years.

strain of bearing and suckling a number of children made large demands on the strength of the organism.

Not unfrequently other influences, such as habitual alcoholism, repeated epistaxis, typhoid fever, and protracted catarrh of the stomach and intestines, had aided in reducing the physical powers.

Now, although we must admit that a large number of the poor are continually being subjected to such injurious influences without suffering from pernicious anæmia, yet I cannot accept that as a reason for rejecting their causal connexion with this disease; for, on the one hand, we have no means of measuring the total number of injurious influences which have affected any one single individual; and, on the other hand, we know that the resistance of individuals varies very much, as is proved by different endemic and epidemic diseases, as well as by acquired phthisis, which only attacks a portion of all the individuals who have apparently been exposed to equal risks, from their occupation, from the atmosphere in which they work, and the food they eat. We can understand, too, the obstinacy and the uninterrupted progress of the anæmia; for when it has reached a certain stage it leads to dyspepsia, vomiting, and diarrhœa, and perhaps, too, to disturbances in the nutrition of the blood-forming organs, so that a *circulus vitiosus* is established, out of which the organism either escapes with difficulty, or not at all. I think, therefore, that our present experience enables us to explain part of the cases, and that we need not (as Immermann does) regard the absence of a satisfactory causation as characteristic of pernicious anæmia. *Gradual inanition* is perhaps the proper expression for this kind of origin. But by no means every case of pernicious anæmia can be referred to this source. Many of those which have been reported, developed under favourable external circumstances, and in one or two of my own cases the conditions in which the patient lived were not especially unfavourable. We must therefore look out for other causes besides. But before I enter on a discussion of the various possibilities which may influence the disease, permit me to tell you something about the changes which have been found in the blood and in some of the other organs. I do this at this particular part of the lecture in order immediately afterwards to consider the various possible modes of origin of the disease.

As I have already stated, there was always a diminution of the total quantity of blood. The heart and bloodvessels were not so full as usual, while the blood itself was of a lighter colour than in health, as well as watery and badly coagulated. A drop of blood taken from the finger during life generally looked very pale, and the number of corpuscles under the microscope appeared too small, though I have not yet been able to determine their absolute number, having only lately received one of Malassez's instruments. In several cases the unequal size of the red corpuscles attracted attention, no inconsiderable number of corpuscles of smaller diameter and more rounded shape being intermingled with those of the ordinary form. In three of my cases many of the red corpuscles, especially of the smaller kind, exhibited remarkable differences in shape—they were egg-shaped, ovoid, crescentic, and sometimes drawn out into a pointed process, and amongst them there were a number of tiny yellowish particles. (The corpuscles of peculiar shape were several times seen to change their form under the microscope; but this can scarcely be regarded as a vital phenomenon.) The larger of these abnormal corpuscles might be regarded as ill-developed hypoplastic blood-cells, but it appears to me more reasonable to regard the smaller irregularly-shaped corpuscles as due to the breaking down of red blood-cells. In several cases those finely granular masses, which are sometimes lustreless and sometimes shining, and which are common in the blood of cachectic individuals, were found in great abundance among the blood corpuscles, either singly or in groups. Their appearance reminds one of the material of which the white corpuscles are composed, and they are probably due to the destruction of the latter. In my eighth case they were so abundant that they rendered the serum of the blood cloudy. In one case there was an absolute diminution of the number of red corpuscles, while the colourless corpuscles were remarkably abundant; in fact, there was a relative leucocytosis, which may have been due simply to destruction of red, or perhaps to a simultaneously increased production of colourless corpuscles. Transitional forms between white and red corpuscles, such as occur in the stage of convalescence after acute hæmorrhages, were never observed.

We have therefore made out changes in a part of our cases which point to an unusually extensive destruction of the cellular elements of the blood—at one time the red, and at another the white—without their places being filled by the formation of new corpuscles. Our investigations, so far as they have gone, have failed to show what share in these anomalies is taken by the spleen, the lymphatic glands, and the marrow of the bones, and whether they depend on a functional activity of these organs, on an insufficient production of cellular elements, or perhaps on an abnormally active destruction of them—for example, in the spleen.

Another point also seems to me to be worthy of notice, since it perhaps indicates an increased destruction of red corpuscles in another organ—namely, the liver. In three of my cases the liver was found both quantitatively and microchemically to contain a remarkably large proportion of *iron*. The quantity of metallic iron amounted in two cases to 2·1 and 0·6 per cent. of the dried liver substance. The iron was contained in the liver cells themselves. In all the three cases the small and peculiarly formed red corpuscles which I mentioned above were present in the blood. It is true that the importance of this discovery is to some extent diminished by the fact that in two of the cases the kidneys and pancreas also contained an abnormally large amount of iron; nor can the possibility of iron which had previously been given as a medicine being stored up in the liver be certainly excluded. It seems scarcely likely, however, that this could have happened in the last months of life, since during that period all three of the patients had suffered from severe digestive troubles, accompanied with loss of appetite and vomiting.

If we now review once more the facts before us, it seems to me that we arrive at this conclusion—namely, that the changes in the blood and in other organs in pernicious anæmia are by no means identical in all cases, and that therefore the disease most probably originates in several very different ways.

It appears, therefore, that we have not to deal with a single diseased condition, but that pernicious anæmia, just like anæmia in general, is the product of extremely various morbid processes, and represents the very last stage of the anæmic process.

Hence we should range the disease before us in a certain sense with uræmia, jaundice, septicæmia, etc., which also are represented by certain typical symptoms, although they may originate in the most various primary diseases. The consequences of the extreme alteration in, and diminution of, the blood as a whole will have a great family resemblance, while at the same time they present marked variations in individual cases. Thus we have general weakness, œdema, fatty degeneration of the heart, perverted appetite, and diarrhœa. The albuminuria can equally well depend on alterations in the secretory functions of the kidneys due to the anæmia as on an altered composition of the serum of the blood. The fever may originate either in perverted function of the nerves which regulate the temperature, or else in abnormal tissue-changes, and be analogous to the fever which Chossat observed in starving animals. The hæmorrhages may depend either on altered nutrition of the walls of the capillaries, or else, as the microscopic appearances in the retina seem to prove, may be due to local accumulations of white blood-corpuscles. In individual cases the outlines of the picture which the disease presents must be modified by the aspect of the primary disease, and by the remains of it which survive the establishment of the anæmia; and we must recollect that defective formation of new corpuscles (*anhæmatosis*) and increased destruction of the elements of the blood (*hæmophthisis*) represent the two chief types to which the disease conforms, though these can be combined one with the other, and though there may be a greater or less deficiency of certain cellular and chemical elements which may make the external characters of the diseased condition somewhat variable. Examples of the first type of cases would be represented by those in which chronic inanition, or atrophy of the mucous membrane of the stomach are present, or else the disturbance of nutrition in the blood-forming organs, such as King and Schüle have assumed to exist in their cases. Examples of the second type are perhaps those cases in which there is an increased amount of iron in the liver. From such a view of the nature of pernicious anæmia it follows that there is no sharp boundary-line to be drawn between it and the more severe forms of the so-called simple anæmiæ; and in fact I have myself observed such doubtful cases, and there are others to be found in the literature of the

subject. It must be the object of future observations to determine what points are characteristic of pernicious anæmia, and what are the relations of the latter to the various diseased conditions which are allied to it; in this way we shall arrive at a correct comprehension of the essence of the disease.

The *treatment* must, as in other anæmiæ, be directed against the cause of the disease. The patients must therefore be removed from their unfavourable surroundings at home, and be carefully attended to in a hospital. In some cases, however, the most careful nursing completely failed, whereas recovery followed a sojourn in the mountains. The food must be selected with the greatest care, especially as loss of appetite, vomiting, and diarrhœa are so often present. These symptoms must be treated with the ordinary remedies, although I must confess that they often completely fail. Next to a well-selected diet, hydrochloric acid, rhubarb, and gentian gave me the best results; preparations of iron were only used when the functions of the stomach were completely restored. In cases in which fever was present, quinine was given, and during convalescence the patients were ordered lukewarm baths. Gusserow has recommended the artificial induction of labour in cases of pregnancy. There is an obvious and apparently very rational remedy which has been recommended by several authorities, namely, the transfusion of blood, and I have several times employed it. Putting aside transfusion of lamb's blood, the prestige of which has been pretty well destroyed by recent experimental researches, it was found that transfusions of human blood were not followed by success, perhaps chiefly because they were made at a period of the disease in which the functions of the digestive organs and of the heart had suffered past recovery from the changes which had taken place in the constituents of the blood.

In my ninth case the numerous recent hæmorrhages which the autopsy revealed, and which were found under the pericardium, the arachnoid, the mucous membrane of the stomach and bladder, as well as in other regions, were certainly the result of the transfusion, although the operation was conducted very slowly, and we can scarcely assume that the blood pressure can have been materially raised by it. The alteration in the constitution of the blood, combined with the existing tendency to hæmorrhages, seems to have been sufficient to induce abundant effusions of blood. At any rate, we should be warned by this case, in which 250 cubic centimetres of defibrinated blood were injected, to transfuse smaller quantities—say not more than 100 grammes—at one sitting. In cases where the production of blood is lowered by primary disease of the blood-producing organs, even early transfusion can at the most be followed by transient success; but where, owing to chronic inanition, to digestive troubles which admit of repair, or to severe losses of vital fluids, a state of intense anæmia has been set up, we may always hope to break through the existing *circulus vitiosus* by the help of transfusion, and to supply the body with material to work with during the period that digestion and blood-making are again coming into operation, and until they are able to maintain the forces of the body unaided. As long as we are unable to distinguish the incurable from the curable form of the disease, it will be right to make trial of transfusion in every case, and the chief difficulty will consist in deciding, on the one hand, when it is useless; and on the other hand, when is the best moment to transfuse. This difficulty can only be obviated by balancing all the facts relating to the general condition of the patient.

Note.—The *Centralblatt Med. Wiss.*, No. 26, 1876, contains a communication from Professor Eichhorst, of Jena, in which he states his belief that pernicious anæmia can be diagnosed with *absolute certainty* in its early stages by means of a microscopical examination of the blood. He asserts that a constant alteration of the red blood-corpuscles can always be detected. While a part of the latter retain their normal size and are only distinguished by their remarkable paleness and slight tendency to form *roulcaux*, the remainder immediately attract attention by their diminished size. Their diameter may scarcely be a quarter that of a healthy corpuscle, while their colour is of a deeper red than normal, and when seen in profile they are found to have more or less completely lost their bi-concave outline. Their size may be even so much diminished that many of them resemble small red-tinted fat drops. The alteration here described has not been detected in anæmic and cachectic conditions other than pernicious anæmia. The white corpuscles were present in all the cases observed (seven in number) in remarkably small proportion.

ABSTRACTS OF

INTRODUCTORY ADDRESSES

DELIVERED AT THE

OPENING OF THE LONDON MEDICAL SCHOOLS.

UNIVERSITY COLLEGE.

Dr. Maudsley thought that he might most fitly use the occasion to endeavour to satisfy them that they had made a good choice of a profession for their life's work. This he would do by pointing out the intrinsic nobility of their direct function as healers of disease; the excellence of the method of medical study as a means of intellectual and moral training, and its fruitfulness in benefits to mankind; and the grandeur and the reach of its aspirations for the future. There was no profession which, looking to the higher aims of it, afforded so many and constant opportunities of doing good in the hourly routine of its work; and no profession, therefore, which so little needed extraneous titles of honour to give it dignity and respect. So far from regretting, as some did, that peerages were not conferred upon it, he was glad that they were not, for he feared that there would not be the strength of mind to reject them; that a pitiful social ambition might cause the simple nobility of the vocation to be spoilt by decorations which had their origin in, and belonged properly to, a childish stage of human progress.

He went on next to show how well the training through which the student must go was adapted to make the most of his intellect. He was brought into direct contact with the facts of Nature from the first, had to advance step by step in the practice of observation and reflection from more simple to more complex phenomena, using the lower as a ladder by which to mount up to the higher, and so learned to make the order of his ideas conform to the order of Nature. That was real instruction; moreover, it was instruction at first hand. Coming to his work with a fair knowledge of mathematics and physics, he proceeded to the study of chemistry, and passed on thence to the study of physiology; so he laid deep and firm the groundwork for the study of the disorders of the structure and functions of the body and mind, which was his ultimate special work. A knowledge of the simpler and more general science was an essential prerequisite to the study of the more complex and special science. It was impossible to enter the chamber of the mind without going through the antechamber of the body; impossible to understand the body without understanding the physico-chemical processes which lay at the foundation of physiology. To proceed in this way was to train the mind systematically in conformity with the order of Nature through patient observation and careful induction; to know Nature by becoming her servant and interpreter. And to know Man finally through Nature, of which he was the present culmination, the thorough knowledge of his environment and of those his relations to it which constitute his life, must be the foundation of a scientific medicine. Provision for the purpose of action was our aim here, as in other sciences: we observe, in order to foresee; and, foreseeing, to modify and direct, gaining a knowledge of the phenomena of life in order to make ourselves master of them—just as we gain a mastery over physical nature through a knowledge of physics and chemistry. Formerly it was the practice to treat the body as if it were an entirely independent kingdom, without regard to its essential relations with what was outside it, and to try to drive out the enemy which was supposed to have taken possession of it, by pills and potions, as barbarous nations do by charms and ceremonies. Now, however, all this was changed. Through recognition of the relations of the organism to its environment we had risen to a conception of the prevention of disease—the great purpose of medicine, which it was earnestly prosecuting at the present time. It was probable we should attain earlier and larger success in preventing the diseases of communities than in curing the diseases of the individual. To show what encouraging success had already been gained, several diseases were enumerated, which, very fatal 200 years ago, were now harmless or extinct; and others which would probably soon be almost extinct. One might, without being absurdly hopeful, foresee a time when the occurrence of epidemic disease would be felt as a gross

reproach to the community, and there would be comparatively little for the practitioner to do in the treatment of particular disease.

To some this prospect might appear fancifully bright, and it might be said that from the beginning men had, through unrestrained indulgence of their passions, engendered disease, and, however pure their surroundings, would go on doing so; that were a clean sweep made of all disease from the face of the earth to-morrow, they would breed it afresh before to-morrow's to-morrow. No doubt, as constituted and trained at present, they would. But it must be the aim of the medical science of the future to give them such an exact knowledge of their own nature and relations as will teach them to know and conform to the laws governing health and development which they now violate habitually in ignorance and indifference. This was to be done by the patient and steadfast application of the method of observation and induction, which had been so successful in the subordinate sciences, to the highest phenomena of man's nature—his thoughts, feelings, and conduct. The problem was the same here as in the lower sciences—to observe in order to foresee, and to foresee in order to modify and direct; and the method was the same. It could not be doubted scientifically that a process of evolution had gone on in nature, and that man, as he now is, is a product of the past carrying on this process in his progress to a higher purpose in the future; he must, as a part of the order of nature, be studied by the same positive method as the rest of nature. When the origin and development of his higher nature was investigated in this way by observation and induction, it was seen that the highest faculties of his mind had not been implanted ready-made in his nature at any period of its history, but had been the slowly won results of the accumulated experiences of the race, transmitted by hereditary action. The problem to-day was no longer the schoolmen's vexed question of the origin of evil, but a question of the origin and growth of good. And our plain duty was to search and find out the laws which have been at work in this process of human evolution, and to continue it,—to carry on by deliberate method, with conscious purpose, what has been going on through past ages irregularly and blindly. It was truly amazing what recklessness men exhibited in regard to the power which they had over their own destiny, acting entirely as if they had no responsibility in the matter. In face of constant observation of the important modifications in the constitution and character of animals which were effected by selective breeding and training, and of positive knowledge of hereditary action in human development and retrogression, it was the rarest thing in the world to take the least thought in marriage of the ills which might be entailed upon children. Disease was propagated as if disease were a supernatural affliction, which arose and spread by no natural laws. Men behaved in relation to the laws which govern human evolution very much as primeval savages behaved in relation to the laws of physical nature,—were content with superstitions where they ought to get understanding, and put up prayers where they should exert intelligent will. It was an immediate task of medical inquiry to find out exactly the laws of heredity, mental and bodily, in health and in disease, and to apply the knowledge to promote the welfare and progress of mankind. Its large function in the future was, indeed, to discover those laws which have been in operation through the past to make man the superior being which he is, and to determine future action in intelligent conformity with them—not only to cure disease of body and mind, as it had aimed always to do, and to prevent disease, as its larger aim was now, but to carry on the development of his nature—moral, intellectual, and physical—to its highest reach. Clearly, they had chosen a profession which yielded the fullest gratification to high aims and the largest scope to good work.

In pursuing the course of scientific inquiry indicated, one cannot well help coming into collision with some of the prejudices and traditions of mankind. It is not possible, for instance, to prosecute the physiological study of mind to its farthest reach without shaking the metaphysical notions of it; and with the fall of these notions other notions closely bound up with them may totter to their fall. But if this must be, we shall do well to acknowledge it more in sorrow than in anger. Let us not rush with eager clamour to the work of destruction; it behoves us, as products of the past who will one day ourselves constitute the past, to deal gently and even reverently with it: we cannot break with it if we would, nor should we if we could. The very language which we use we owe to the slow acquisitions of generations which have preceded us; we cannot pity or despise them except in words for which we are indebted to them. As he who has been the best son is in turn the best father, so the generation which guards with respect the good which there is in the past, and puts gently aside that which is effete, will make the most stable progress in its day, and transmit the best inheritance to the generation which follows it. One may esteem science sufficiently without feeling sympathy with the aggressive delight with which some persons accentuate its hostility to expiring beliefs. A scientific discovery is only a means to an end. The cultivators of science seem oftentimes to forget that its end must be constructive—that after analysis must come synthesis; that all the analytical work in the world will leave matters in a chaotic state until the constructive spirit shall organise the incoherent results and make them serve for a higher social development. The problem is to make straight in the future a highway over which mankind may pass to a higher life. The philosopher, the poet, and the moral teacher have not been rendered superfluous by science; on the contrary, it will have need of them to attain to its own perfect working, to the bettering of man's estate. And it may well seem to some that the time has come now when its manifold, scattered, and somewhat anarchical results should be penetrated by the synthetic insight of the philosopher, be embodied in forms of beauty by the poet's imagination, and utilised by the moral teacher to guide and promote the progress of mankind. So long as man sees splendour in the starry heavens, beauty in the aspects of nature, grandeur and glory in self-sacrifice, so long will he feel that his brief conscious life is but a momentary wavelet on the vast ocean of the unconscious; that there is in him something deeper than knowledge, which "cometh from afar," and which the laboured acquisitions of science will ever fail to satisfy.

ST. MARY'S HOSPITAL.

The Introductory Lecture at this Hospital was delivered by Dr. Wiltshire, joint Lecturer on Midwifery and the Diseases of Women and Children. Dr. Wiltshire, after having expressed the pleasure he felt that the public part of the work of his life was carried on amidst friends, whose uniform kindness encouraged and stimulated him, referred to the loss they had sustained in the death of Dr. Sibson and Mr. Gascoyen, to whose memory he paid a well-merited tribute of respect. Turning to the object of their meeting, he stated that the work of medical education was of a solemn character, and that rightly to appreciate the value of medical studies, it was necessary to understand what were the aims and objects of medicine, and the relation it bore to other callings. It was only by judicious comparison that the true proportion of things could be estimated; and it was the want of, or neglect to use, the comparative faculty that brought so much trouble on communities and on individuals. Their first aim and paramount duty was to *prevent disease*, and failing that, to *cure* or *relieve* it. The two great branches of medicine were, then, preventive medicine (hygiene) and curative medicine. In the former the relations of the profession, as a body, were with the State; in the latter they were with individuals, and were personal. In public health they had been the pioneers, and almost the sole workers, though they were the only losers by promoting healthfulness. Great triumphs undoubtedly awaited them in the noble field of sanitary science. In curative medicine, while the future was also great, they were able to point to past achievements with pride and satisfaction. The progress their professional knowledge was making every year was immense, and had been especially great during recent times. He lamented that the benevolent work of the profession had been so gravely misrepresented, and science hindered, by recent agitation respecting vivisection, and he demonstrated the injustice of the accusations brought against the profession as a body, no doubt in ignorance, by many whose generous sympathies had been misled. He claimed for the members of his own calling no less tenderness of feeling than other persons possessed, with which was coupled a greater knowledge of, and at least equal sympathy with, human suffering, which in amount was stupendous, and in character awful.

Dr. Wiltshire next pointed out how great an influence on the welfare of mankind, especially town-dwellers, the preventive branch of medicine was capable of exercising. In its fullest development it was capable of making mankind

healthier in body and in mind. The tendency to sin, vice, and crime might therefore be diminished by attacking it at its inception; for the hereditariness of moral defects was as abundantly clear as was the inheritance of proclivities to physical disease. What each one of us was morally and physically was very much the product of ages. Still we were powerfully influenced by our environment, and, being thus susceptible, it behoved each generation to pay great attention to all that affected our mental and physical well-being, so that as clean a bill of moral and physical health as possible might be handed down to posterity. Lord Beaconsfield's celebrated paraphrase, "*Sanitas, sanitatum, omnia sanitas*," embodied objects which in future years must become the care of statesmen; for a healthy and vigorous population formed the most valuable wealth of the State. The curative branch of medicine, which engaged the energies of the bulk of the profession, afforded scope for the exercise of the noblest qualities; and to stand by the bedside of the sick and sorrowing, not idly, but helpfully, both able and willing to relieve, was as great a privilege as it was an abiding pleasure. The study of medicine and the many sciences that were ancillary thereto greatly illuminated the mind. They exerted a corrective influence on the judgment, and enabled us to survey and contemplate life and its environments from a lofty sphere. Above all, they engendered a love of truth, and that for its own sake. Dr. Wiltshire believed there was a noble future in store for medicine. This had been recognised by a distinguished statesman, Mr. Gladstone, in his recent address to the students of the London Hospital. In the future certain municipal laws would have to be ordained in accordance with the teachings of science. The Mosaic code had done much for the Jews, and similar hygienic laws, expanded and corrected by the light of science, might, under Divine guidance, still do much to promote the healthfulness of all the nations of the earth. Illustrations of the importance to society of both the preventive and curative branches of medicine, which in practice were closely interwoven, were given.

Dr. Wiltshire then addressed words of welcome to the freshmen, of exhortation to the advanced students, and of counsel to those who were about to embark in practice. He entreated all of them to work earnestly and honestly; to observe carefully and closely, and to reflect upon their observations; to leave nothing undone in order to become masters of their calling; and lastly, remembering the dignity, the responsibilities, and the sacredness of their profession, to practise it only as high-minded and honourable gentlemen, taking care that its fair fame was not sullied in their keeping, and that they did not pursue it in a mercenary spirit.

MIDDLESEX HOSPITAL.

After a few preliminary remarks, Dr. Evans went on to compare the course of the medical student to that of a traveller along a road, straight at first, and easily followed, provided along its course with establishments where travellers would be furnished with merchandise of various kinds, and with instructions how best to dispose of it. This portion of the road ended in turnstiles where tolls had to be paid, which gave admission to an open country, with roads, more or less plainly indicated, leading in various directions, from which roads each traveller might choose that which seemed most likely to lead him to a good market for his wares. After a few words on the subject of the selection of the ultimate road, he proceeded to give some advice as to the conduct of the students during the course thus described, laying great stress on the necessity, during their hospital education, that they should take every possible opportunity of doing practical work. "There is," he said, "not one of the subjects with which you have to make yourselves acquainted that can be learned only from books and lectures; but you must, in the case of every one of them, familiarise yourselves with the practical application of the principles laid down in books and lectures." He especially urged upon them the importance of making themselves well acquainted with their fellow-men. "Remember," he said, "that in the exercise of your profession you will have to treat individuals, not diseases; that in no case which you may be called upon to attend will you find a cut-and-dried method or a hard-and-fast rule of treatment available. You will have to exercise your own judgment on each individual case, and you will be guided by the knowledge and experience which you will have acquired of your profession and of your fellow-men." Here he took occasion again to urge them most strongly to make themselves well acquainted with various descriptions of cases by frequenting the out-patient rooms and the wards. Speaking of their actual entry on a professional career, he suggested that in all probability there was a brighter prospect for the coming members of the medical profession than had been open to those of the preceding generation; that their services were likely to become better appreciated for their value with regard to the public, as well as with regard to private individuals. He quoted some observations made by the late Lord Herbert of Lea in 1860, to the effect that it was not by any means to the interest of the medical man in civil life to prevent disease; that it was only the sick man who sent for the doctor, and not the man who was well; and he compared with this statement Dr. De Chaument's words in 1875, that we had "the spectacle of hundreds of educated gentlemen who, as officers of health or public analysts, were profitably devoting the whole of their time to that very duty which, fifteen years ago, his lordship thought so unpromising a branch of our art." Further, he quoted recent statements of Mr. Disraeli and Mr. Gladstone to similar effect. He then shortly described some of the changes which had taken place in the direction of improving the position of the medical profession; how the State had gradually and slowly been recognising the value of medical science in the prevention as well as the cure of disease, this recognition having been first evinced in the appointment of a medical member on the General Board of Health in 1848. "Since that time," he said, "an immense amount of good work for the public has been done, initiated, and until very recently superintended by Mr. John Simon, whose masterly and noble efforts, though rather frequently hampered by what we may, perhaps, call unappreciative administration, have succeeded in starting the science of public health on a sound and firm basis." He then reminded his hearers that there was yet much to be done, and that all the medical profession could in one way or another contribute to the advance of sanitary knowledge.

He then made some observations on the alleged (in some quarters) inferiority in social status of the medical, as compared with other professions. He considered that where the opinion existed it was probably due to unfair comparisons between individual members of different professions; he admitted, however, that there were instances of a kind of deterioration in some cases, where want of means, want of opportunity of mixing in good society, and other causes, had combined to drag a medical man in general practice in a provincial town down to the social level of the tradesmen who formed the majority of his clients. "And undoubtedly," he said, "the unwillingness of the public to appreciate properly and to remunerate sufficiently the services of medical men has had a good deal to do with the difficulty experienced by some members of our profession in keeping themselves clear from some of the lowering influences to which I have alluded." He then, in support of his theory that the profession had not really to any extent deteriorated, referred to the number of its members who were working unselfishly, conscientiously, and honestly, with very little substantial reward; believing that there is no profession in which so much good unpaid work is done by men who can ill afford to give their hardly gained experience for no return but the satisfaction of knowing that they are benefiting their fellow-creatures.

He then urged that if any improvement were required in the social status of the medical profession, it must be made by increasing the number of well-educated gentlemen in that profession; defining "well educated" as having had a good general education, not by any means confined to the acquisition of technical professional knowledge; and with this view suggested that many medical men commenced their practice too early in life, and that an ordinary university career was an extremely useful preparation for a course of medical study, as giving at all events some of that knowledge of men and of things in general which was so essential to the education of a medical man.

His further advice to the students consisted in bidding them not to consider that their education is completed when they start in practice, seeing that our education is never completed. He bade them take every opportunity of getting information from the cases they attended, and from the recorded experience of others; saying, "Give your whole undivided attention to every case that is brought before you, and do not leave it till you have really satisfied yourself that you have ascertained

all that is to be ascertained about it. Give your skill and experience as freely to those who cannot afford to remunerate you, as to those who can and do. Always bear in mind that you have to keep up your own reputation and that of the noble profession to which you belong. Treat everyone with whom you come in contact with the courtesy and kindness with which you would like to be treated yourself; and, even supposing that you do not meet with much substantial reward, you will yet have the satisfaction of feeling that you have done your duty fearlessly, honestly, and unselfishly."

In conclusion, he made a few remarks on the loss the Medical School and the Hospital had sustained in the death of Mr. Campbell de Morgan: "A few months ago there passed away from among us one who for some forty years had adorned, aided, and supported this Hospital and its Medical School; one whose skill and varied acquirements had earned for him the admiration and respect of a far wider circle than that of the medical profession; and whose kindness, whose gentle simplicity, whose intense sympathy with, and thoughtfulness for, his fellow-creatures had necessarily endeared him to all who came in contact with him. He was always ready to bring his remarkably clear and accurate judgment to bear on any difficult question which might come before him, as we who were in the habit of meeting him in the board-room of this Hospital have very good reason to remember. He is gone, but his memory remains. Let us, by making use of, and following as nearly as we can, the noble example he has left us, endeavour to cause his loss to be less severely felt, and his influence to be as far as possible perpetuated amongst us."

ST. THOMAS'S HOSPITAL.

Mr. Francis Mason, F.R.C.S., Senior Assistant-Surgeon and Lecturer on Anatomy at the Hospital, delivered the Inaugural Address to the students at St. Thomas's Hospital. After some prefatory remarks Mr. Mason said he was unwilling to draw any invidious comparison between the work done at this and at other hospitals, when there was such abundant evidence that all were working so nobly and so honourably for the general good of mankind; but in reflecting on the antiquity of the Hospital, and in contemplating the names of the many eminent physicians and surgeons who in former years laboured so gloriously in its suit and service, he had no difficulty in finding a suitable theme for consideration. He then gave a brief, but nevertheless a very interesting, account of the rise and progress of the Hospital. It was one of the Royal Hospitals, and was established as an almshouse in the eleventh century, on the site of the present Charing-cross Railway at London-bridge. He then referred to the fact that the distinguished anatomist and barber-surgeon, Cheselden, was a pupil, and afterwards was appointed Surgeon to the Hospital in 1719. Alluding to Cheselden as a barber-surgeon, he stated that in the eleventh century medicine was entirely in the hands of the clergy; for example, William the Conqueror was attended by a bishop and an abbot, and the surgeons to King Henry VI. were barbers, and his physicians priests. The barbers were, indeed, originally introduced to surgery by the priests, whose heads they shaved. He then referred to the relic of the barber-surgeon as seen at the present day, in the pole which is observed outside the hair-dressers' shops where they profess "easy shaving." The pole represents the staff which the patient grasped in order to accelerate the flow of blood in the operation of venesection. The stripes, red and blue, which decorate it, are symbols of the venous and arterial blood, and the white line indicates the bandage which was applied to arrest the hæmorrhage. He then spoke of the Act of Parliament passed in 1714, by which the Barbers and Surgeons became two distinct corporations. On the separation, the Barbers retained the old Hall, books, paintings, and records, and thus the Surgeons were left homeless, and without property. They even had to borrow money to build a hall in the Old Bailey, on the site of the present Sessions House, and subsequently they removed to their present abode in Lincoln's-inn-fields. Reverting to Cheselden, Mr. Mason stated that the celebrated John Hunter was one of Cheselden's pupils, and that Dr. Edward Jenner's grand discovery of vaccination was first performed in London, by Mr. Cline, sen., at St. Thomas's Hospital, in 1798. Mr. Mason then referred to other illustrious men who had been connected with the Hospital, including the names of Dr. Richard Mead, Sir Astley Cooper, Dr. Mark Akenside (the poet), the renowned Dr. John Lettsom, and others—men who have proved themselves benefactors to science and mankind, and whose self-reliance, industry, and perseverance all might well emulate. Both Mead and Cheselden, said the lecturer, attended Sir Isaac Newton, and "won golden opinions of all sorts of people," but by none were their talents more appreciated than by Pope, the poet, who referred to them in the following complimentary terms:—

> "Weak though I am in limb, and short of sight,
> Far from a lynx, and not a giant quite,
> I'd do what Mead and Cheselden advise,
> To save these limbs and to preserve these eyes."

Addressing himself then more especially to the pupils who were commencing their studies, he reminded them that the student should at once be imbued with the all-prevailing truth, that there is no royal road either to learning or to success in the medical profession. Money might assist to a certain extent, but it was of little value to further the progress of science without the closest application and persevering and sustained industry. Work was all-important in every calling. "We listen," he said, "with rapt attention to the learned divine. We marvel at the brilliant oratory of the illustrious statesman. We gaze in wonderment on an historical picture, in which all the details, with appropriate costumes, are depicted by the artist with the utmost accuracy and precision. We admire the actor, who 'holds as 'twere the mirror up to nature,' and places before us the characters of England's mighty dramatist with vigour and truthfulness, representing the 'very age and body of the time.' But such conquests were not won, such triumphs were not achieved, without incessant labour and unflinching perseverance."

The lecturer then referred to the labours of John Hunter, of Michael Faraday, and of Harvey, the discoverer of the circulation, and impressed upon his hearers the importance of being self-reliant, and of being accurate in their work. Truthfulness and good principle, purity of motives, and prompt decision were imperatively demanded for success in any walk of life. Great wealth and high honours, although open to all, were, he said, practically given to few in our profession; yet he expressed his own honest opinion that there was no calling in which a fair competence is so speedily acquired as in the medical profession.

"Let me add, in conclusion," said Mr. Mason with much earnestness, "to all who are now studying here, that, whether your life be a success or a failure, I confidently hope you will never lose sight of the moral influence and discipline inculcated at this Hospital. In life's campaign you will necessarily meet with many vicissitudes to impede your progress, and you will have to contend with and conquer numberless difficulties; yet when the fiery fight is o'er, and you bear away the emblem of your victory, you will, I feel sure, look back in your leisure moments with pride, reverence, and thankfulness to your *Alma Mater*, gratefully remembering the happy days you have spent here, and recognising with intense satisfaction the many lifelong friendships that you have had the opportunity of forming."

Composition and Quality of the Metropolitan Waters in September.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction	17·02	0·032	0·105	0·000	0·006	12·1	3·3
West Middlesex	17·50	0·032	0·096	0·002	0·005	12·7	2·6
Southwark and Vauxhall	18·30	0·046	0·098	0·000	0·006	13·2	3·0
Chelsea	18·10	0·035	0·090	0·001	0·007	12·7	3·3
Lambeth	17·12	0·042	0·105	0·000	0·005	12·7	2·4
Other Companies.							
Kent	27·35	0·003	0·390	0·000	0·000	19·4	6·0
New River	16·43	0·028	0·188	0·000	0·006	12·7	3·0
East London	16·22	0·028	0·093	0·000	0·005	11·6	2·4

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Grand Junction.

ORIGINAL COMMUNICATIONS.

CASES ILLUSTRATING THE OCCASIONAL OBSCURITY OF THE ACUTE SPECIFIC DISEASES.

By J. PEARSON IRVINE, B.A., B.Sc., M.D., Lond.,
Assistant-Physician to Charing-cross Hospital.

(*Concluded from page* 114.)

II.—Case of Varioloid.

A man, aged twenty-one, a luggage porter at a London hotel, strong and well nourished, was admitted into Charing-cross Hospital on Friday, November 27, 1875, because of an eruption over the abdomen. This at the time of admission was diffuse in kind, red, and disappearing on pressure, usually regular, but here and there punctated by spots of a deeper colour and hæmorrhagic in character. The general eruption faded gradually towards the thorax, but deepened towards the groins, where it was limited by remarkably abrupt lines of demarcation. Below these the skin was perfectly pure. The eruption was strikingly symmetrical in all respects. At the time of admission (in the afternoon) the man seemed to be severely ill, but severity of symptoms was not in proportion to the temperature (105·5° Fahr.) and pulse (136). I saw him next day (Saturday). His general condition was much the same, though the temperature had abated to 102° Fahr. He had then no sense of great illness, and gave a good account of himself; was free from headache and from catarrh of eyes and nose, and complained of no sore throat. He knew of no cause for his disease; there was no history of syphilis; he had been vaccinated. His illness began on the Monday previous with achings in the limbs—as he said, he felt "heavy about the joints," and had pains in the back and head, but not severe. He did not vomit, nor was he at all sickly, but from the first suffered from thirst, and was constantly drowsy. On Wednesday (third day) the abdominal rash appeared, and extended, though the patient became sensibly better, and on Friday presented himself at the hospital simply because of the "skin disease." On Saturday the eruption had in the groins the before-mentioned limited characters, and was there almost black in colour, but above was more generally punctated with deeper spots, which did not fade on pressure. Passing upwards, appearances became less equal, the eruption being more scattered in kind and more irregular in colour, but still with a great approach to symmetry. The face was now affected; on it, especially on the forehead and about the malar bones, had come out a crop of reddish papules, distinctly elevated, occasionally pimply, but not shotty to the feel. These papules were congregated into irregular patches, very like those of measles, and the skin about the cheeks was a little œdematous. The conjunctivæ were somewhat injected. On the arms had appeared also an exanthem irregularly circinate and papular, and almost identical with that of measles, but more deeply rose-coloured than is common in ordinary cases of that disease. Around some of the morbilloid patches there was considerable erythema. On the legs were to be seen sparsely scattered papules, a few on the thighs being in striking contrast to the appearances of the abdomen. In regard to the skin affection, as a whole, there was a symmetrical development, or a marked approach to it, but the characters of eruptions on face, upper extremities, trunk, and lower extremities, were in many respects, as will have been seen, widely different one from the other. There was, indeed, a variety of eruption, independent in great measure of its early or late out-coming on this part or that. The tongue was large and broad, furred white; the throat, free from pain with and without swallowing, was congested; there was no coryza. On each arm was a vaccine cicatrix the size nearly of a sixpence. A diagnosis of small-pox was made, on grounds which I will shortly state, and it was determined to send the patient to the small-pox hospital. He was not, however, removed thither until Monday morning, so that on Sunday I had an opportunity of again examining him. The shotty eruption characteristic of small-pox was then decided on the face, the hands, and arms. Some spots had advanced so rapidly that they had already matured, and were discharging puruloid matters. The eruption on the lower extremities had greatly increased, but that on the abdomen was much as at the time of admission. General symptoms were insignificant: the temperature was down, the pulse all but normal, the tongue cleaner, the appetite good, the mind clear, and there was no headache. On the following morning (Monday) the eruption was in many respects similar to that of confluent variola in an early stage. The patient was removed to the Small-pox Hospital at Highgate; and three weeks afterwards, in answer to my inquiries, Mr. Marson, the Medical Superintendent, kindly wrote to the effect that the patient had passed—without any bad symptoms—through an attack of confluent small-pox modified by vaccination, and had been that day discharged convalescent.

It was not possible to trace the source of contagion. The patient himself asserted, in a manner which carried conviction, that he had never been away from the hotel for a fortnight at least previous to the onset of his illness, and for a much longer period had certainly not been near anyone suffering from "skin disease" or any other illness so far as he knew. It may be mentioned, as showing how entirely all sense of illness had gone in less than twenty-four hours after the temperature had stood at 105·5° Fahr., that the patient expressed himself as being entirely well except for the eruption, and that no one could have been more astonished than he when told that he had small-pox, and must be removed to the Small-pox Hospital.

A diagnosis of small-pox was made on what I believe were good grounds. Simple dermatitis, which the early eruption resembled in very many respects, could be excluded by the high temperature at the time of admission (105·5° Fahr.). This temperature was strikingly high, no matter what the nature of the exanthem, seeing that the general symptoms were so slight that the patient had not taken to his bed, and had betrayed not the least tendency to delirium or any mental disturbance. But though a simple dermatitis could be excluded, it was not so easy to eliminate measles. The rash of the second day of observation in hospital had become so remarkably like that of measles, that only a few reasons prevented one from declaring without hesitation that the patient was suffering from this disease. But these few reasons were almost conclusive against measles, and very strongly in favour of small-pox modified by vaccination. The fact of the occurrence of an eruption on the lower part of the abdomen, subsequent to general constitutional disturbance lasting two or three days, in no matter how slight a degree, should lead the physician to look carefully for the possibilities of varioloid, and especially when the eruption is either a simple diffuse (or patchy) erythema, or a diffuse (or irregular) hæmorrhagic redness. When such skin disease appears, the chances are far more in favour of variola, or modified variola, than of measles, typhus, scarlatina—than, in fact, of any other acute specific disease. Corroborative facts soon develope themselves, as a rule, but as in the case related, new eruptions may possibly mislead, unless all things are taken fully into consideration. On the second day, as I have said, in this case an eruption appeared on the arms especially, which, taken by itself, might justly have been described as typically rubeolar. But, considered not alone, but with all the other facts, it helped to strengthen the view that the disease was a modified form of small-pox. There was this peculiarity: that there existed at the same time a variety of eruption which had set in more or less acutely, and after more or less constitutional disturbance; and herein we had an indication of an acute specific disease and of varioloid rather than of measles. This variety of eruption included a diffuse erythema, hæmorrhagically punctated, over the lower part of the abdomen, a disseminated rose-red and morbilloid exanthem on other parts, as the extremities—in fact, several of those appearances which have been observed initially in cases of modified small-pox.

There are several other facts which helped the diagnosis, though not one by itself was more than suggestive of small-pox, and some not at all suggestive. The manner of extension, though not characteristic, was more so of small-pox than of measles. Taken in connexion with the general symptoms, the exanthem suggested small-pox, for in measles, irregularity of eruption, especially associated with hæmorrhages, however small, and irregularity in time of appearance and mode of spreading, are usually, if not always, accompanied by very severe constitutional effects—by all the signs, indeed, of what will shortly prove a rapidly fatal disease. But here was an exactly opposite condition, and the more varied became the eruption the more general symptoms abated, so that when the eruption was most remarkably nondescript the tempera-

ture sank almost to normal. At the same time the occurrence of high temperature and its continuance with the exanthem were more like measles than small-pox. It might, however, be argued that the fever in this case did really abate in the manner of small-pox fevers, that, indeed, on Saturday the temperature fell with the appearance of a true and characteristic variolar eruption, and reached the normal almost on Sunday, when this eruption had become more fully developed, and was shotty to the feel. On this view we may consider that there was a first stage protracted from three to nearly six days, and that during this stage the temperature remained high, or increased, altogether independently of initial exanthems, but fell, as occurs in typical small-pox, with the appearance of the true eruption. Thus, indeed, the fever and its course were more in favour of varioloid than of measles. Little stress, however, should be laid on temperature determined by few observations, because it varies so much in both irregular small-pox and irregular measles, and because the conditions under which the patient had passed his first week of illness were not calculated to promote typical temperatures in any disease. The remission, which lasted three days in hospital, would have been of service, however, in diagnosis, had not other facts by that time resolved all doubt. The history of the case and the age of the patient pointed to small-pox, as did also the absence of any of those catarrhal symptoms met with in measles. The difficulty of tracing contagion, taken with other things, may also be considered useful diagnostically. It is, as a rule, more easy to trace contagion of measles than of small-pox, that of the latter being unquestionably more subtle and more readily carried about in the clothes, etc. It is more than probable that this man was infected by a contagium which was being conveyed from place to place in the luggage of some passing visitor to the hotel. At the time of the illness small-pox was almost unknown in London. In Ziemssen's recent work, under article "Small-pox," it is stated that the only pathognomonic sign in these doubtful cases is a hæmorrhagic exanthem in the triangle of the thighs. It seems to me, however, that though this sign be absent entirely, it is possible to make a diagnosis in the most obscure cases, provided that reliance is placed, not on one sign or symptom, but on a collection and comparison of all.

A diagnosis of small-pox having been made, the question of prognosis arose. Was the attack likely to be severe or mild? The first point we turn to—and, perhaps, the only safe one—is, has the patient been vaccinated? Because the patient in this case had good vaccine marks, for one reason, a favourable prognosis was given. Probably, no reliance can be placed on any of the initial symptoms for the purposes of prognosis—except, of course, in those cases where a hæmorrhagic exanthem developes rapidly, and with it, as rapidly, general symptoms, which end in death before the true eruption has time to appear. A scarlatinoid blush on the lower part of the abdomen is certainly more favourable than a hæmorrhagic diffuse redness; still, the former may be followed by fatal symptoms. I remember one case in which such a blush—of small extent, and which disappeared entirely on pressure—was observed on the third day of disease, and with it the abatement of all pains and fever. The patient seemed well, but nevertheless died of malignant confluent small-pox at an early date; he had not been vaccinated. The present patient had been vaccinated, however, and a favourable prognosis could be given, in spite of the more or less hæmorrhagic initial eruption, and other threatening symptoms, as the high fever. These conditions, taken alone, were most certainly unfavourable, but there was no appearance of "malignity," such as one would expect to accompany these in bad cases. The patient had been "knocked about" during several days of illness. He had excellent vaccination cicatrices, and had hardly been an hour in hospital and freed from various anxieties before all the slight signs of constitutional disturbance abated. So a favourable prognosis was given, and was, I believe, entirely justifiable. It would seem, indeed, that an initial exanthem in vaccinated persons, no matter what its nature, may be followed by a mild disease; while, on the other hand, there is no doubt that any initial exanthem in non-protected persons may be followed by severe disease, and that especially hæmorrhagic forms are signs of ill omen—of the worst possible omen indeed; and even a simple erythematous blush is far from being evidence of future mildness of the attack. The proofs of a previous vaccination, as determined by the physician for himself, are of more value in the prognosis of these irregular small-pox eruptions than anything else. It is of interest to notice that in this case six days elapsed before the appearance of the true exanthem, as it is characteristic for the initial, like other stages, to be shortened in varioloid. The fact also of the existence of a temperature so high as 105·5° Fahr., as in this case shortly after admission, without more than very slight general febrile symptoms, is remarkable, no matter what the nature of the disease.

Mansfield-street, Cavendish-square, W.

TWO CASES OF

STRANGULATED HERNIA—RECOVERY.

By THOMAS SAVAGE, M.D., F.R.C.S.,
Senior Surgeon to the Birmingham and Midland Hospital for Women, etc.

Case 1.—Mrs. L., aged sixty-nine years. Has had a small right irreducible femoral hernia for some years; irregular in wearing her truss. At 3 p.m. on December 21, 1875, she felt something wrong in her rupture whilst hanging curtains. She was first seen at midnight with symptoms of strangulation, and at 1.30 a.m., after application of taxis under chloroform, an operation was performed. Several bands outside the sac were divided; but the rupture not returning, I opened the sac, and put back the bulk of omentum lying there, leaving in the sac the small mass, which was more or less adherent in places to the sac-wall. She made a good recovery.

Case 2.—Mrs. B., aged eighty-three. Says positively that she never had a rupture until May 20, 1876, when it appeared after vomiting.

First seen May 22. Bowels had not been opened for forty-eight hours, and there were other symptoms of strangulation. Patient declined an operation when proposed.

May 23.—Patient was much worse. She agreed to operation, and was placed under ether. Stricture found at Gimbernat's ligament, which I divided, when, the sac not being opened, part of the tumour was returned, and a part which was irreducible left in the wound. The vomiting ceased in a few hours after the operation, and in forty-eight hours the bowels were relieved. She made a tedious though perfect recovery.

Remarks.—Age being often such an important element in the success of operations, these two foregoing cases may be thought worthy of record, as they show that an advanced period of life is not always to be considered a contraindication for operation, at least in hernia. Both the women were pale, weakly, and apparently much enfeebled by their condition at the time of operation. In the first case, although the relief was resorted to very early—viz., not more than ten hours from the commencement of symptoms—yet the sac was required to be opened. In the second case the age, length of time after first symptoms, and greatly enfeebled state, rather pointed to the undesirability of surgical interference.

NOTE ON THE TREATMENT OF GLEET BY ISOLATION.

By J. C. OGILVIE WILL, M.D.,
Surgeon to the Aberdeen Royal Infirmary.

In a recent number of the *Medical Times and Gazette* I find a paper by my esteemed friend Mr. Chiene on the treatment of gleet, in which he advocates the use of kaolin. This remedy is new to me, and probably to most readers of the *Medical Times and Gazette*, but the principle of treatment on which the success attending the employment of kaolin is supposed by Mr. Chiene to depend is far from recent, and as the correctness of the view he has advanced may be strengthened by the evidence of other trustworthy observers, I think it may be well to direct attention to the opinions of some of those who have attempted to cure gleet by coating the surfaces of the affected parts with insoluble substances so as to keep them apart. In a clinical lecture in the *Medical Gazette*, vol. i. 1838, Dr. Graves, in speaking of an injection containing calamine and other ingredients, says—"How the lapis calaminaris acts, unless on a mechanical principle, it is difficult to explain; but of its utility I am certain, having long used this combination as recommended in Thomas's 'Practice of Physic.'" Dr. Bumstead refers to this in his work on Venereal Diseases, fourth edition, page 78. Dr. Thomas, in the fourth edition of his work, published in 1813,

page 511, gives a formula containing calamine, copaiba, mucilage, and water. As copaiba administered as an injection is inert, the efficacy of the preparation he prescribes must be ascribed to the calamine. Bumstead, in his chapter on gleet, writes—"Contact of the diseased surfaces doubtless assists in keeping up the discharge in gleet, as it is well known to do in balanitis. Separation of the affected surfaces is partially effected by certain forms of injection, as those containing bismuth, calamine, and other insoluble ingredients. The sub-nitrate is an excellent injection; it acts as a local sedative, and, deposited upon the walls of the urethra, seems to protect the diseased surfaces from contact." The same author, quoting De Méric (Report to the Medical Society of London, 1860), says—"Of fifty-two patients suffering from gonorrhœa, treated exclusively with injections of sub-nitrate of bismuth, thirty-six recovered after an average of twenty-two days."

In Van Buren's invaluable work on Diseases of the Genito-Urinary Organs, page 73, the following passage occurs:—"Another style of injection, called isolating, highly praised by Caby" ("Nouveau Mode de Traitement de divers Affections Génitaux chez l'Homme et chez la Femme par l'Emploie de Sous-nitrate de Bismuth"—Thèse, Paris, 1858) ,"is still occasionally resorted to. It consists in throwing in bismuth, or calamine, or chalk, suspended in a sticky fluid, or as soluble suppositories, the object being to coat over the walls of the urethra with one of these insoluble powders." He gives the following formula—℞. Bismuthi subnitratis gr. x.-xx., glycerini mucilaginis acaciæ, āā ʒ ijss.—m.; while Bumstead recommends—℞. Bismuthi subnitratis ʒ j., mucilaginis cydonii ʒss., aquæ ʒvss.—m. Both Bumstead and Van Buren give only qualified praise to this mode of treatment, the one stating that he had found only one difficulty attending its use—that it clogged up the urethra, and by its mechanical presence excited an uneasy sensation, which was only relieved by the passage of urine; and the other, that it sometimes acts effectively, but often causes a good deal of discomfort from the collection of little hard lumps of bismuth and mucus along the canal. Bouchardat had evidently found a similar objection; for, in speaking of Caby's mode of treatment, of which he approves, he says—"L'extrême division est une condition de succès; j'ordonne la porphyrisation du sous-nitrate continués pendant une heure, afin de donner au mélange aqueux au glycérineux la plus grande homogénéité possible" ("Nouveau Formulaire Magistral," Paris, 1873, page 297).

From what has now been adduced, it must be evident that the principle of treating gleet mechanically has been recognised for long; and as so accurate an observer as Graves used and approved of it, and as the objections of the others, whose opinions I have cited, are apparently overcome by the substitution of kaolin for the substances hitherto employed, I think Dr. Godon and Mr. Chiene have done good service in bringing this new agent before the profession.

Interesting Donation.—An English amateur bull-fighter having killed two bulls in the presence of 16,000 people at Barcelona on the 6th inst. was serenaded at night, and the following morning, when he received his share of the proceeds of the fight, he immediately handed it over to the Barcelona Hospital.

Self-imposed Dumbness.—The *Portsmouth Times* reports a strange case which has occurred on board the training ship *Impregnable*, at Portsmouth. Shortly after his entry, a boy was discovered thieving, and was in consequence birched. He immediately ceased to speak, and was sent to the hospital, where he was treated for dumbness, and where he remained for four months. Whilst there, according to the report of the medical officer in charge, he behaved very badly, and the hospital authorities stated that they could keep him no longer. It was also alleged that he had spoken to at least half a dozen of his fellow-patients; and when he got on board the *Impregnable* he was found to be in possession of a letter that he had written to his friends, stating that he had not spoken for a certain length of time, and that he expected to be discharged from the service shortly. The authorities were communicated with, and, pending their decision, the lad was placed behind a screen with a sentry in charge of him, but he tore down the screen, assaulted the sentry, and otherwise misconducted himself, and for this and his misbehaviour at the hospital he has been again flogged. This case is principally noteworthy from the amount of determination in one so young to abstain from speech for such a lengthened period.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

DISEASED HIP AND ANKLE JOINTS.

(Under the care of Mr. MAUNDER.)

[Reported by Mr. S. H. Fisher, House-Surgeon.]

Case 1.—*Diseased Hip-Joint.*

C. W., eleven years of age, had been the subject of hip-joint disease for seven years.

On admission, May 17, 1876, the thigh was firmly fixed by fibrous anchylosis at a right angle to the pelvis, and two sinuses were discharging. Extension and tenotomy were resorted to in vain. To remedy this serious deformity, and to discover and remove the source of suppuration, the upper end of the femur was cut away (with a chisel) through the usual longitudinal incision, and a sequestrum, deeply placed, extracted. An interrupted long-splint was applied.

Remarks.—Mr. Maunder said that by a curious coincidence he had excised the upper extremity of the femur four times during the last few days—twice for disorganisation, suppuration, and displacement; once for disorganisation of the joint and displacement, but *without* suppuration; and to-day (June 21) for great deformity, firm fibrous anchylosis, necrosis, and sinuses. His audience would recollect that he had recently introduced a method of remedying deformities in connexion with the femur, and with great success, by dividing this bone with a chisel and mallet. It had been suggested that the chisel might splinter the bone, and he had therefore taken the opportunity of demonstrating the effect of this instrument. They had now seen the upper extremity of the femur cleanly cut by the chisel, and *without* splintering. He regarded this as a most valuable piece of evidence highly favourable to his advocacy of the use of the chisel; there could be no *débris* with this, as there must be with the saw. He had selected abscision of the upper end of the bone in this instance in preference to subcutaneous osteotomy, as a means both of remedying the existing right-angular deformity, and also of discovering the probable source of protracted suppuration. This had been found deeply placed, and was all that remained of the head of the bone. With the exception of this sequestrum, the disease was cured, and had resulted in fibrous anchylosis. The boy was now in a condition favourable to recovery, and, the foreign body having been removed, the sinuses would close.

Case 2.—*Diseased Ankle-Joint.*

John S., aged five, admitted April 21, 1876. About twelve months before this he had twisted his ankle under him. This was soon followed by a swelling in the region of the joint; not much pain, and he could walk. These symptoms gradually became aggravated, and for one month before admission the patient could neither stand nor walk by reason of the increased pain. During the last two months tonics and good diet have been administered, while the ankle has been kept at rest by strapping and bandage. But all to no purpose; swelling, heat, and tenderness have increased. Excision of the ankle-joint was performed to-day (June 21) by an incision on each side to expose the malleoli; and when these were removed the upper surface of the astragalus was cut away with a small saw, worked through the above wounds. The limb was put up, and swung on a back-splint, with two interrupted side-splints.

Remarks.—Mr. Maunder drew attention to the appearance of the foot in this case as typical of disease within the ankle-joint. He said he often stated that gelatinous disease was curable by fibrous anchylosis without suppuration—a fact which surgeons should recollect in contemplating an individual instance, and should endeavour to promote. To illustrate this point, a lad was shown, who, when admitted eight months before, the subject of white swelling of the knee, with heat, pain, tenderness, and inability to use it, seemed in imminent risk of either excision or amputation. By careful treatment all serious symptoms had subsided; he could stand upon the limb, and the joint could be freely handled. He had just been put upon a Thomas's splint, which would allow him to take exercise out of doors, and would maintain the limb straight. He looked upon this as a knee-joint saved, and

that repair would be completed twelve months hence. Turning to the child on the operating-table, he stated that the case was the reverse of the last; swelling, heat, and tenderness were on the increase, and suppuration threatened. He should therefore make no further effort to save this joint, but should anticipate its disorganisation by operation, and thus save the patient months of suffering. In proof of the value of this operation, a young man was shown, upon whom Mr. Maunder had performed it for similar disease in 1864 (twelve years previously). The foot was a most shapely one, and the patient walked with a scarcely perceptible halt, and for years past has been on his feet all day long without discomfort. The operator also alluded to the possible accession of lardaceous disease of the important viscera, such as the liver and kidneys, in connexion with prolonged suppuration, as an argument in favour of operative interference.

WEST NORFOLK AND LYNN HOSPITAL.

FRACTURE OF PETROUS PORTION OF TEMPORAL BONE—HÆMORRHAGE FROM RIGHT EAR—ESCAPE OF SUBARACHNOID FLUID—RECOVERY.

(Under the care of Dr. SWEETING.)

[Reported by Chas. Glasier, M.B., House-Surgeon.]

D. B., aged twelve, admitted at 1 p.m. on June 5. He had been run over by a carriage, one of the wheels passing over his head. Said to have been insensible for a short time.

Condition on Admission.—Very faint, but quite conscious. Blood issuing freely from right ear; bruise over occiput. Shortly after admission he vomited, and continued to do so at intervals during rest of day.

Treatment and Progress.—5 p.m.: Pulse 90; temperature 99°; feverish. Very drowsy, but speaks rationally when addressed. No irregularity of pupils. Head shaved, and ice-bag applied. Milk diet.

June 6.—Hæmorrhage from ear has ceased, but in its stead there is a scanty flow of cerebro-spinal fluid. No vomiting; makes no complaint of pain; tongue thickly coated with white fur. To have a saline purgative. Temperature 99·4°. 4 p.m.: Temperature 100°. No relief of bowels. To have three grains of calomel at once. 10 p.m.: Bowels not opened; to repeat the calomel.

7th.—No escape of cerebro-spinal fluid; bowels freely opened; very drowsy, but quite sensible. Temperature 99°.

8th.—Very restless, tossing to and fro. Temperature in morning 99·8°, in evening 99°.

9th.—Better; but says he feels very giddy on raising his head from pillow. Temperature 99°.

10th.—Ice discontinued. Temperature in morning 99°, in evening 98·8°.

14th.—Doing well. Tongue clean; temperature normal; does not feel giddy on raising his head. From this date he steadily improved, and by the 27th had quite lost any feeling of giddiness. He was kept under observation for a fortnight longer, and then discharged, according to his own statement, quite well.

COMPOUND FRACTURE OF VERTEX OF SKULL—PROTRUSION OF CEREBRAL MATTER—LEFT HEMIPLEGIA—PARALYSIS OF TONGUE—ESCAPE OF PORTIONS OF BONE AND OF A PIECE OF FELT—INCOMPLETE RECOVERY.

(Under the care of Mr. WILSON.)

[Reported by Chas. Glasier, M.B., House-Surgeon.]

W. H., a labourer, aged sixty-six, admitted at 6 p.m. on February 23. On the evening of preceding day, whilst walking along the bank of a sluice, he fell over, striking his head against an iron bolt on the sluice-gate, and then rolling into the water, from which he was soon rescued.

Condition on Admission.—A wound about three-quarters of an inch long, oblique in direction, found nearly on apex of head, four inches immediately above right ear, and a quarter of an inch from middle line. Protruding from wound was a pulsating mass—in appearance like brain-matter—the pulsation being synchronous with pulse; this protrusion was loose and easily removed by forceps. Left arm and leg almost totally paralysed as to motion, but only slightly so as to sensation. Patient quite conscious, but very feeble and irritable; speech unimpaired; no abnormality of pupils; no headache or vomiting.

Treatment and Progress.—Head shaved; ice-bag applied. Milk diet. Hypodermic injection of morphia, as there is great restlessness.

February 24.—Slept well. Slight headache.

25th.—Purgative draught given, as bowels not opened since accident. Complains only of inability to sleep. To have twenty grains of chloral hydrate every night. Ice discontinued.

27th.—Bowels freely opened. Can take ordinary food. Wound rather sloughy.

March 1.—Wound clean. Has more power in leg, but not in arm.

7th.—In the evening patient was seized with a fit, during which he was speechless and his face was livid. Fit lasted about ten minutes. On its termination the tongue was found to be paralysed, pointing to the left when protruded. Speech returned in course of a few hours.

8th.—Very feeble.

9th.—Better; wound granulating.

14th.—Tongue now protruded normally. From this date steady improvement; motion gradually returning in both arm and leg. To take four minims of liq. strychniæ three times a day.

April 14.—Can walk with assistance, and can raise arm almost to level of head. Pulsation still visible in wound. Occasional headache.

20th.—Two pieces of dead bone came away from wound.

22nd.—A piece of substance, apparently felt (he wore a felt hat at time of accident), removed from wound.

28th.—Headache, and pricking feeling in wound.

29th.—Small piece of bone escaped.

May 20.—General health very good. Cannot walk, however, unless supported by some one's arm. Pulsation scarcely perceptible in wound. A cap of gutta-percha fitted over wound, and patient discharged.

Glasgow and Aberdeen Universities.—On Friday, the 6th inst., a meeting was held of the supporters of Mr. Anderson Kirkwood in one of the committee-rooms of Exeter Hall. Dr. A. P. Stewart was called to the chair. A deputation from the committee in Glasgow attended to give such information as might be required by the London voters, and otherwise to aid in promoting Mr. Kirkwood's candidature. Dr. Joseph Rogers, of London, a graduate of St. Andrews, in the course of some observations on the matter of the candidature, stated that he had received a pressing invitation to attend the meeting of Mr. Watson's supporters, but that, as he had been a Liberal for thirty years, he was willing to give Mr. Kirkwood his support, provided that candidate was prepared to deal with and aid in carrying sanitary measures, and would interest himself in all medical questions coming before the Legislature. It was then moved by Professor Chalmers, D.D., seconded by J. B. Caskie, Esq., M.D., and resolved unanimously—"That this meeting views with much satisfaction the candidature of Mr. Anderson Kirkwood for the representation in Parliament of the Universities of Glasgow and Aberdeen, and pledges itself to make every effort to secure his return." The Rev. Dr. Morison and J. H. Aveling, Esq., M.D., were appointed vice-chairmen, and Mr. C. R. MacClymont secretary. Before the meeting separated the Chairman read the following telegram, addressed to himself from the secretary of the committee in Glasgow:—"Dr. Kirkwood considers legislation with regard to sanitary questions of primary importance. He would give his cordial support to measures under suitable medical supervision, which would insure the enforcement of proper sanitary regulations. He would support the Scotch Poor-Law Amendment Bill, and all similarly well-directed legislation, believing as he does that at present the provisions for administration of medical relief are very insufficient."

The *naïveté* of the above proceedings is delightful. That Dr. Rogers, the graduate of another university, should come forward to patronise the graduates of Glasgow and Aberdeen is almost too good to be true, were it not vouched for by the best authority. That he should offer them, or any section of them, his advice, assistance, and good wishes in a matter which concerns themselves only, and which they are surely capable of dealing with, is quite uncalled for. How Dr. A. P. Stewart, a man whom we all respect, could have allowed it we do not understand. By the way, it is not stated who gave Dr. Rogers the urgent invitation to attend the meeting of Mr. Watson's supporters.

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Medical Times and Gazette.

SATURDAY, OCTOBER 14, 1876.

THE INTRODUCTORIES.

Not a little of Dr. Maudsley's Address to the Students of University College was, we venture to think, decidedly over the heads of the more part of his audience, but all must have recognised its high ability and literary excellence. All must have listened with delight to—

> "The rapt oration flowing free
> From point to point with power and grace,"

and must have greatly admired and enjoyed its scholarly tone and well-ordered arguments, its wide grasp and clear thinking, and the lucidity and finish of its style.

Dr. Maudsley dwelt at some length and with some fulness, as Dr. Andrew Clark did, on the excellence of the method of medical study as a means of intellectual and moral training. By it the mind is trained "systematically in conformity with the order of nature, through patient observation and careful induction; to know Nature by becoming her servant and interpreter;" and to know Man finally through Nature: and he depicted in glowing phrases the intrinsic nobility of medicine as a profession, its fruitfulness in benefits to mankind, and the grandeur and reach of its aspirations for the future; pointing out, however, that while, when followed truly for its higher aim—that is, in order "to relieve the suffering, and to minister to the comfort of man's estate, to lessen the sum of human sorrow on earth,"—no other profession affords such great and constant opportunities of doing good in the daily and hourly routine of work, yet, and therefore, if pursued merely as a money-getting means, "it assuredly causes the deepest demoralisation of him who so uses it, as best things turned to the basest ends breed the greatest corruption." But Dr. Maudsley dwells most fondly and eloquently on the great object of the prevention of disease. "It is in this direction," he says, "that the future course of medicine lies clearly open, and to this end we must work; it will rise to the true height of its great vocation when it watches over communities and ministers to the welfare and development of the race." He thinks that one needs not a prophet's imagination to foresee a time when preventive medicine shall have reached such a degree of perfection "that the occurrence of epidemic disease will be felt as a gross reproach to the community, and when there will be comparatively little for the practitioner to do in the treatment of particular disease."

His creed is the creed of evolution; and he hopes that the medical science of the future "will have a great deal to say in the way of instruction respecting the highest concerns of man's nature, and the conduct of his life; that it will enter a domain which has hitherto been given up exclusively to the moral philosopher and the preacher." These teachers have failed to make men good; and it is for the medical investigator, perhaps not, or at least not yet, to displace them, but to come to their aid—to apply patiently and steadfastly the method of observation and induction, which has served so well in the subordinate branches of science, to the highest phenomena of man's being, his thoughts, feelings, and conduct; "to discover those laws which have been in operation through the past to make man the superior being which he is, and to determine his future action in intelligent conformity with them; not only to cure disease of body and mind, as it has aimed to do in time past, and to prevent disease, as its larger aim now is, but to carry on the development of his nature, moral, intellectual, and physical, to its highest reach." In this way the physician is to succeed in teaching man, and making him practise his duty to his neighbour and his posterity, though the preacher has failed so to do. Some of the passages in which Dr. Maudsley sets forth his own creed, and pleads for a tender and even reverent regard for the older, and, as he believes, expiring creeds, are so eloquent that, in the pleasure of reading them, it is difficult to find fault and to recognise that the subject was really entirely out of place in an introductory lecture. We, however, will be content to say that the true preacher will most gladly welcome all the aid preventive medicine can give him in making men wiser, better, and more teachable; and that we have no doubt that in that good work preventive medicine may take a large share. We will add also that Dr. Maudsley is far from thinking that science is everything to, and can do everything for man, and this is well seen in the closing sentence of his graceful reminiscence of the late Dr. Parkes. The grand lesson to be learnt, he says, from a consideration of Parkes' character and influence is, that, "great as is knowledge, the moral nature is greater still; that the impulses of evolution which move the world come not from the intellect, but from the heart; that he who would work upon the hearts of others must speak to them from the heart.; that everywhere and always we have to recognise the predominance of heart over intellect." It is surely curious to note how some men will struggle against acknowledging the highest part of man, and what is generally known as religion and Divine influence.

Dr. Wiltshire, who gave the Introductory at St. Mary's Hospital, also devoted much of the time at his command to a consideration of the high importance of preventive medicine. He insisted on the duty of each generation to hand down to posterity as clean a bill of health, moral and physical, as possible; and that it is now abundantly clear that the tendency to vice and crime may be largely diminished, just as physical disease may be lessened or prevented by constant, full, and careful attention to sanitary science and art. The logical inference is—as drawn by Dr. Wiltshire—that a healthy and vigorous population being the greatest wealth of a State, statesmen must in the future pay more and more attention to all that is embodied in the famous "*Sanitas, sanitatum, omnia sanitas*" paraphrase of Lord Beaconsfield.

By-the-bye, may we ask the lecturers, speakers, and writers of the day what special virtue there is in the word *environ-*

ment? Dr. Maudsley, we are happy to observe, once at least condescends to speak of man and his surroundings, but far more generally both he and the rest of the lecturers talk of our "environment," or "man and his environment," and so on. We must confess to very greatly preferring "surroundings," or "circumstances" even, to "environment"; and at the same time we confess our ignorance of any reason why the last should be in any way better than the first or the second.

Mr. Francis Mason, at St. Thomas's, took as his chief theme the rise and progress of that Hospital, of which, and of the celebrated men who had belonged to it, he gave very interesting sketches. But he besides impressed forcibly on the students the fact that there is no royal road to learning or success in the profession they had chosen; that in that, as in all other professions, close application, and persevering and sustained industry, are all-essential.

Dr. Evans, in his address at the Middlesex Hospital, treated at length of the subjects and objects of medical education. He insisted on the paramount importance of practical work, and exhorted the students to study their fellow-men, as in the practice of their profession they would have to treat individuals, not disease. He also spoke of the rising importance of preventive medicine, and of the increasing influence, through it, of medical men with the public; and he concluded his address with a touching notice of the loss the Hospital and its school have sustained in the death of Mr. Campbell de Morgan.

We have not had the pleasure of seeing many of the Introductory Lectures delivered at the Provincial Schools, but what we have seen of them proves that they are well up to the mark; and we may instance, especially, the address on "Medicine in 1876," delivered by Professor Morgan, at Owens College, Manchester. He dwelt at length, and very ably, on vivisection, on the progress of medicine and surgery, on public health, and on the hope—and the reason for the hope—that, ere many years have passed, the name of "Owens College" may be merged in the yet nobler title of "The University of Manchester."

SPIRITUALISM.

Believers in modern Spiritualism believe in two correlated series of facts (?). The first relates to "spirits," the second to "mediums"—that is to say, a set of peculiarly endowed persons, through whom alone the "spirits" are able to produce their "manifestations."

As for the "spirits," they believe that living human beings are haunted or visited by the spirits of persons who have died, or (to use their special phraseology) who have passed into "spirit-life." One man is attended by his deceased wife; another has visits from the spirits of deceased children. Mr. Joseph Hands, M.R.C.S., of Hammersmith, believes that Dr. Samuel Johnson is his "spirit-guardian"; whilst the renowned Mrs. Victoria Woodhull, the female candidate for the office of President of the United States, declares herself to be under the guidance of so distinguished a personage as Demosthenes. But it must be admitted that the effects of this invisible guardianship seldom seem worthy of spirits, bodied or disembodied. Spirits make known their presence by rapping on tables, or lifting and tilting articles of furniture; by playing upon accordions and other discordant instruments; and by producing tremblings of the floor, rattling of the windows, and noises as of a multitude of persons dancing. Sometimes they are alleged to "materialise" themselves, and do a number of physical actions, such as grasping the legs of visitors, pulling their beard, or putting their hands on their shoulders (the hands of spirits are also described as very warm, soft, and smooth, like a baby's). Not unfrequently they utter words, such as "Phœbe," "Love," "I shall not hurt you"; and sometimes they write on slates. But never has any spirit vouchsafed, either by writing or speaking, to tell us anything that we did not know already. Milton says in "Il Penseroso"—

> "But, O sad Virgin, that thy power
> Might raise Musæus from his bower;
> * * * * * *
> Or call up him that left half-told
> The story of Cambuscan bold;
> Of Camball and of Algarsife,
> And who had Canace to wife."

We should be glad to hear of visits from the spirits of great writers, explaining passages obscure in their works, and deciphering inscriptions; nay, we should be quite contented if Demosthenes or Samuel Johnson would write a dozen lines in Greek. As things are, the conduct of "spirits" is that of schoolboys or monkeys, and their messages the most insipid drivel, such as "The glorious cause is moving on," etc. Spirits are also alleged to cause luminous manifestations, and to appear visibly in human shape. We read in the *Medium* of October 6 of the apparition of the nude head and bust of a beautiful young woman; we also read of an apparition of King Charles I., in a white robe, with a green velvet broad-brimmed hat and feather on his head; which makes us ask, Where do spirits get their robes? Are there spirits of old clothes? and when a man dies do these go with him?

But the Spiritualist believes that spirits are able to produce their manifestations only through the "medium" of certain peculiarly constituted persons, who are called "mediums"; and that the earliest on record were certain members of the family of Mr. Fox, of the State of New York, in March, 1848. It is believed that spirits are able to borrow the nervous force, or "nerve fluid," or "nerve atmosphere" of the medium, and to condense it, so that they can operate magnetically on physical objects. This "psychical vapour" it is, when condensed, which produces the luminous appearances visible during the manifestations of spirits. Of course the medium is very much exhausted by the abstraction of his nerve fluid by the spirits, and ought to be well paid for his trouble. He is much influenced by the opinions and secret thoughts of persons present, and is rendered unable to exert his "mediumistic" functions by the mere presence of an unbeliever. Moreover, he is a mere passive instrument of the spirits, and acts, speaks, and writes under their control. "In some cases desperate spirits with bigoted notions and strong will-power strive to take control of the medium and his conditions, and incite him to some act likely to inculpate him in the charge of trickery."

It is like treading familiar ground to find on further study that "mediums" are much the same as mesmerists: they are *clairvoyant*, able to "see objects not visible to the physical eye, to read when blindfolded, and tell what is going on at a distance." Mediums also possess the gift of healing, and some advertise that they will send magnetised paper of healing virtue by return of post, for half-a-crown and upwards. There are plenty of "*séances*" advertised, admission from one shilling upwards, in the *Medium and Daybreak*,(a) to which publication we may refer such of our readers as desire to know more of this outcome of the highly developed, educated, enlightened mind of civilised man in the boasted nineteenth century.

THE GLASGOW AND ABERDEEN ELECTION.

Three documents are now before us relating to the election of a representative in Parliament for the Universities of Glasgow and Aberdeen. The first of these to which we shall refer is the formal resignation of his seat by Mr. Gordon, now one of the Judges of Appeal in Scotland. In this letter he refers, not without just complacency, to the various measures he has been, if not instrumental, at all events of service in passing during the period he has represented the two Universities. In it we have a record of good work, which enables Mr. Gordon to look

(a) Published by Mr. Burns, of Southampton-row.

back on his Parliamentary career with an honest pride, and which assuredly shows how fully justified were his constituents in returning him as their representative.

The two other documents referred to are the addresses of the two candidates between whom, apparently, the contest will rest. These are Mr. Watson, the Lord Advocate, and Mr. Anderson Kirkwood, of Glasgow. The former, as a matter of course, stands in the Conservative interest; the latter in that of the Liberal party. Both are lawyers. The Lord Advocate is also Dean of the Faculty of Advocates—the highest distinction the Scottish Bar can confer on one of its members; and, at the same time, the principal Government official in all matters relating to law in Scotland. Mr. Anderson Kirkwood is a Glasgow advocate, or lawyer, who was at one time Professor of Conveyancing in the University, and is also Dean of the local Faculty. He is highly esteemed by his fellow-graduates, and has been by them sent as their representative to in the University Court.

Here, as it seems to us, all comparison ends between the two candidates. Who could have composed the stump oratory which constitutes the bulk of Mr. Kirkwood's address is not for us to say. If it emanates from his own pen, his election to the responsible post of representative for the two ancient Universities could only give to his constituents a feeble imitator of the mighty talker who sang the fame of the little streak of silver sea. Thus the address begins:—

"In general politics I am and always have been a decided Liberal, believing that the prosperity, happiness, and comfort of the greatest number should be the aim and end of government; that there should be no class legislation, no monopolies, and no sinecures; that civil and religious liberty should prevail; that there should be the utmost toleration; and that there ought also to be no hindrance to the freest expression of thought and opinion. These are the fundamental principles of the Liberal party. It is very necessary to reiterate them when we look back to the recent session of Parliament and find them seriously contravened, particularly in the cases of the Hampton sinecure, the slave circulars, the burial question, and the tendency to denominational education."

In our humble opinion, such stuff is almost an insult to the thinking powers of university graduates. Had these platitudes been addressed to the Greenwich electors, we could have easily understood the use and meaning of them, but when addressed to men surely as well qualified as Mr. Kirkwood himself to judge of the fundamental principles of what he is pleased to call the Liberal party, they are too bad. We do not care to analyse these so-called principles of the Liberal party; we leave them to any and every elector. But throughout the whole address there breathes a spirit of rancour which is not calculated to conciliate moderate graduates of any way of thinking. Of course such an address, which is almost purely political from end to end, would be imperfect without another imitation of him who seems Mr. Kirkwood's great prototype—the chosen of Greenwich, and the foe of the Pope. Turkish atrocities must be called in to play their part. What university graduates, as such, have to do with Turkish atrocities it is hard to conceive. Doubtless they are influenced by the same feelings of pity and indignation as are other men; but what that has to do with returning a Whig advocate who has swallowed all the formulas as their representative in Parliament we cannot understand. Thus says Mr. Kirkwood:—

"But the Government *has itself* to blame. *They* [*sic*] treated the cruelties of the Turks at first with indifference, next with incredulity, then with levity, and it was not till the scenes at Batak were fitly compared with 'the valley of the shadow of death' that they showed some sympathy with the helpless women and children who have been the victims of the insurrection. Even now the head of the Government, as appears from his Aylesbury speech, shows more favour to the oppressors than he does for the oppressed."

Mr. Kirkwood's address is almost wholly political, and of a kind of politics, too, which should, we think, be discredited by university men. It is not possible, even if it were desirable, that politics should be banished from university contests, but a candidate for a university seat ought to be something more than a mere politician. In more than one contest we know that men have deliberately put on one side political feeling, and have voted for a given candidate out of a conviction that he was the best man obtainable for the post. To our mind, therefore, it seems poor policy to come before a band of university graduates with merely a string of political phrases as the basis of an appeal for their suffrages.

In this way we have to find fault almost as much with what Mr. Kirkwood's address does not contain as with the matter that is in it. And this is especially glaring as regards our own profession. If not the majority, the members of our profession constitute a very large proportion of the graduates of the two universities entitled to vote in the election of a member. Moreover, it is well known that there are certain grievances which weigh somewhat heavily on us, and especially on our Scottish brethren, but Mr. Anderson Kirkwood has not even deigned to say a word on the subject. Nay, more; when a meeting was held here in London of those who supported him, and where we had the somewhat extraordinary spectacle of an M.D. of another university promising his support to Mr. Kirkwood on certain conditions, Mr. Kirkwood's views on such subjects could only be obtained by telegraph through the medium of his Glasgow committee. He himself is pledged to nothing. Such proceedings we take to be a deliberate insult to our profession.

Mr. Watson's address, on the other hand, is a studiously moderate, and, as it seems to us, straightforward document. It does not abound in fine phrases, but, at all events, its meaning is plain. In it, too—as of necessity after Mr. Kirkwood's inflammatory reference to the Bulgarian atrocities,—some reference is made to the undoubted and wanton cruelty displayed in the unfortunate provinces of Turkey; but in it there is moderation shown—quite as much in speaking of such attempts as those inaugurated by Mr. Gladstone to produce a general European war as otherwise. Mr. Watson's two other most important themes are—education, and the improvement of the status of the medical profession in Scotland. The Government are now pledged to a measure of reform in this direction, and it might have become Mr. Kirkwood to have stated his views with regard to it. Mr. Watson is pledged to push forward this measure vigorously should he be elected.

We have already expressed a belief that the address of a candidate for a university seat should not be exclusively nor yet mainly political, and that the man himself should be considered as well as his declarations. To our thinking in this particular instance these criteria tell heavily against Mr. Kirkwood, and in favour of his opponent. This we hold, speaking in all moderation, and suppressing, as far as possible, the feeling of resentment which cannot but arise from the fashion of Mr. Kirkwood's treatment of our profession. Considering the position of the poor-law medical officer in Scotland worse by far than that of his neighbour in England, an adhesion to at least the principles of the Bill introduced last session would not have been out of place. The real state of matters we have already seen.

There is, however, yet another objection to Mr. Kirkwood's candidature, and that is a most serious one—not so much from reason as from sentiment. Mr. Kirkwood is distinctly a local man. He is Glasgow all over. This we know is not acceptable to many Aberdeen graduates, and it would be a great pity if any such feeling should spread abroad in the minds of the graduates. We might then see university pitted against university, not in an honourable rivalry, but in polling capacity—a very different thing. One therefore neutral in almost

every respect would be the better candidate; and here again, it seems to us, Mr. Watson has the superiority over his opponent.

Our desire, we confess, would have been to see a member of our own profession, or one trained in it, of such commanding position as to have united the whole body of medical graduates as the chosen candidate for the seat in Parliament. Such will not be the case on the present occasion. Under the circumstances, therefore, we can only say that, as a candidate, Mr. Watson seems to us infinitely preferable to Mr. Anderson Kirkwood.

THE WEEK.

TOPICS OF THE DAY.

Warned by the serious outbreak of small-pox prevailing in Islington, the Rev. G. Allen, Vicar of St. Thomas's, caused an examination to be made of the children in the school in Hemingford-road. Dr. Hill examined 710 children one day last week, and recommended the vaccination of 101 of them. A circular reporting the case of each child was forwarded to the parents, and the offer of vaccination, where deemed advisable, has been widely accepted. These precautionary measures are much to be commended, for, although the district medical officer for Islington has expressed an opinion that the epidemic is declining, Mr. John Broome, the vaccination officer, reports that during the past week there had been eleven fresh cases, all, with one exception, in the locality of the outbreak, and there had been two deaths. Dr. Wilkinson has been actively engaged in vaccination, he having vaccinated thirty-two persons, and revaccinated 243, at places other than the appointed station in Liverpool-road. It was suggested at the meeting of the Islington Board of Guardians that the old pauper men who took the ambulance about collecting patients should be isolated from the other inmates of the workhouse, and a temporary building was ordered to be constructed for their accommodation at once.

A new and very remarkable illustration of the necessity for reform of the law affecting coroners and coroners' inquests has just arisen in Wales. Last week a watchmaker, of Amlwch, on trying to enter a moving train at Llanerchymed, was run over, and sustained injuries so serious that death shortly ensued. The body lies awaiting an inquest, but none can be held at present, the county coroner having recently died, and no successor having yet been appointed. The Sheriff was applied to, and represented the matter to the Lord Chancellor's Office and the Home Office, but the answer received was that no authority could be given to hold an inquest; neither could any local functionary be authorised to do so. Under these rather exceptional circumstances, it is presumed that the body will have to be interred under a magistrate's order.

With reference to a case which was recently heard before one of the Masters in Lunacy, in which it was stated that the French law was similar to the English in requiring two medical certificates before a person alleged to be of unsound mind could be placed in an asylum, a correspondent writing to the *Times* from Paris, and signing himself "M.D.," states:—"This interpretation of the French law and procedure is very far from being correct, as I have myself, during a long practice in Paris, been under the painful necessity of certifying to the unsound state of mind, and on my certificate alone a patient has been placed under restraint in an asylum. When *a conseil de famille* have placed an unfavourable report on the mental condition of a relative before the Procureur de la République, he will order two alienists to send him their report on the case, and the patient will be examined by them separately, similar to the procedure in England; but as I have above stated, one medical certificate of insanity suffices to deprive the suspected individual of his liberty."

At the recent Public Health Congress held at Brussels, one of the day's discussions referred to the question of sewage. The Liernur system was explained, and the Government Sanitary Inspector in the provinces of Friesland and Gröningen, in Holland, reported that the system was employed at Amsterdam, Leyden, and Dordrecht, but was inapplicable to rural places. The town of Gröningen, which has 40,000 inhabitants, has made by its sewage, sold publicly once a week, 1,500,000 frs. in ten years. Mr. Crookes, F.R.S., contributed a paper explaining and recommending the A B C system. He gave a striking illustration of the waste of manure by saying that in consequence of London drainage arrangements the country had lost as much food as if 10,000,000 quartern loaves were daily floating down the Thames to the sea. The Native Guano Company had treated about 5,000,000,000 gallons at Leeds, and had sold over 4000 tons of their product at £3 10s. per ton. Their process converts the deposit into a dry, portable, and inoffensive powder.

The Bristol Royal Infirmary was re-opened by the Bishop of Gloucester and Bristol last week, after having been closed for a period extending over twelve months. The building has been thoroughly renovated at a cost of £15,000. The Bishop gave an address in the chapel, where a short service was held, and the building was then declared to be open.

At a meeting of the Town Council of Southampton, held on the 4th inst., the question of the increase of lunacy in the borough was discussed. It was shown that whereas in 1868 the number of pauper lunatics chargeable on the local rates was sixty-nine, it had increased, according to the Blue-book, to 145 in 1875, and that there were now 166 to be provided for.

Two rather important Royal Warrants, affecting the pay and rank of medical officers of the Army, have recently been promulgated, under dates of September 9 and 23, by the Secretary of State for War. The first of these enacts that, in future, medical officers employed in the administration of the Army at head-quarters shall receive consolidated salaries, according to the following scale:—Surgeon-General, £1200; Deputy Surgeon-General, £850; Surgeon-Major, £600—these rates to be inclusive of all pay and allowances. The second runs as follows:—"Whereas, by Article 3 of our Warrant of April 28, 1876, prescribing the terms and conditions of service of officers who should thereafter join the Medical Department of our Army, we did amongst other things direct that a Surgeon-Major should, after twenty years' full-pay service as Surjeon and Surgeon-Major, rank as Lieutenant-Colonel, but junior of the latter rank. Our will and pleasure is, and we do hereby direct, that medical officers of our Army who shall hereafter be promoted for distinguished service in the field before they have completed the period of full-pay service above mentioned, shall rank as Lieutenant-Colonel, and shall enjoy all the advantages appertaining thereto to the same extent as they are enjoyed, under our Warrant above-mentioned, by Surgeons-Major after twenty years' full-pay service, whenever it shall happen that the junior officer next to them shall have acquired the relative rank aforesaid."

An offer of a medal in connexion with the subject of industrial hygiene has been made by Mr. Benjamin Shaw, and has been accepted by the Council of the Society of Arts. The medal will be of the value of £20, and will be awarded every fifth year. The terms of the offer are as follows:—"For any discovery, invention, or newly devised method for obviating or materially diminishing any risk to life, limb, or health incidental to any industrial occupation, and not previously capable of being so obviated or diminished by any known and practically available means." The first award is announced to be made in May, 1877.

We have recently received the annual report on the Grey Hospital for the year 1875, by Dr. J. P. Fitzgerald, Super-

intendent of the King William's Town Native Hospitals. This Hospital was established at the recommendation of Sir George Grey during the time he was Governor of the colony. At that period the province of British Kaffraria was entirely destitute of hospital accommodation, and there was no civil practitioner within eighty miles of King William's Town. The native doctors taught the people that all sickness was the result of witchcraft, and that they alone were able to cure them. Patients, whether suffering from fevers, dysentery, or inflammation of the lungs, were generally covered over with cow-dung, while the doctor professed, by virtue of his power, combined with suction, to extract the poisoned matter from the interior of the body. Some, however, treated disease by the exhibition of medicinal herbs, but as to the true nature of disease and its treatment they were in ignorance. The Government had originally in view the establishment of one central hospital with district surgeoncies and small hospitals in such localities as might be deemed advisable, while it was further proposed to educate native surgeons and employ them under Government in treating the sick of the various tribes. The difficulty appears to be that of finding Kaffir youths having sufficient general instruction and knowledge of the English language to profit by a medical education in this country; and Dr. Fitzgerald appears to think that the time has arrived when some of the missionary colleges or training-schools in the colony should be able to produce a few young men of good character, who might be sent to this country to study medicine, with a view of eventually carrying out the whole of the original scheme. As a very successful beginning, it is shown that the Grey Hospital has treated over 60,000 cases since its opening, 2121 having been relieved during the past year, whereby much of the prejudice existing amongst the natives to scientific treatment has been happily removed.

DR. ABRATH, OF SUNDERLAND.

Fortunately for the ambitions or desires of mankind the roads to fame are multitudinous, especially as many persons are as satisfied and attain their objects as well through celebrity, or notoriety, as through fame in the highest sense of the term. Whether Dr. Abrath is now famous, celebrated, or notorious we will not pretend to decide, but certainly the fact that he has been prosecuted under the provisions of the Cruelty to Animals Bill has made his name known far and wide. The Act came into operation on August 15 last. Three days later, Dr. Abrath issued an announcement of his intention to deliver a lecture in Sunderland on "Antimony," and its relation to the "Balham Mystery," illustrated by experiments on animals to show the effects of poisons. The matter was immediately reported to the Royal Society for the Prevention of Cruelty to Animals, in London, and prompt measures were taken to prevent the experiments in question. According to the sixth section of the new statute, an offence had already been committed by the announcement of a public exhibition of experiments on animals; and Dr. Abrath having in his lecture spoken contemptuously of the Act, instead of apologising for his projected defiance of it, was summoned before the Sunderland Borough Bench at the instance of the Society; and fined one shilling and costs, the Society asking for a nominal penalty only, in vindication of the law. Why Dr. Abrath should have assumed the task of instructing the public in the use of poisons, and on the Balham case, we will not inquire; but the idea of illustrating the effects of poisons by experiments in public on animals was so hopelessly and absurdly wrong that we can hardly suppose that even the gaping public could think that medicine or science had any part in the proceedings; and it might have been left, we suspect, to public opinion to put down Dr. Abrath's public-experiment proceedings without the intervention of so great a machine as the Royal Society for the Prevention of Cruelty to Animals. Dr. Abrath must have known perfectly well that if he had anything of any clinical or scientific value to make known, he could have done so through the most fitting channels—the medical journals—though, as it is, it must be allowed certainly that he has gained a very widespread publicity at a very small cost—from the £ s. d. point of view.

THE ROYSTON COTTAGE HOSPITAL.

The report of Mr. D. B. Balding, F.R.C.S., Surgeon to the Royston Cottage Hospital, has just been published. It embraces a record for the years 1873, 1874, and 1875, and shows that during those periods thirty-one, fifty-one, and forty-six patients were admitted, making a total of 128. Of this number seven died, the mortality being at the rate of 5·4 per cent., or very much lower than that of the larger hospitals, which may be to some extent explained by the fact that the percentage of cases admitted to this Hospital in a *hopeless* condition is no doubt much less than in the institutions of the metropolis and other large towns, though the general character of the great majority of them is very similar. In almost all operations on adult patients ether has been used in preference to chloroform, and the results have been sufficiently satisfactory to justify its continuance. One case of erysipelas is reported to have occurred in a female patient after an operation on the breast. The attack was never so formidable as to threaten life, however, and the patient made a complete recovery; but, as erysipelas is now known to be to a great extent a preventable disease, Mr. Balding remarks that it would have been more satisfactory if no case of this kind had occurred, and he thinks that it is sufficient to warn us that even small cottage hospitals may, like the large and ill-constructed hospitals of former times, become the centres of contagion, unless carefully and constantly supervised in reference to ventilation and all other sanitary arrangements.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

The annual meeting of this Society was held in the library of the Newcastle-on-Tyne Infirmary on September 28. The report of the Committee stated that the affairs of the Society are in a highly satisfactory condition. "The work done during 1875-76 quite equalled in interest and importance, and far exceeded in amount, that of any previous session. Sixteen papers were read, sixty-one pathological specimens were exhibited, and sixteen patients were introduced to the meetings." The total number of members now is 154. The following were elected office-bearers for the session 1876-77:—*President:* Mr. G. B. Morgan, of Sunderland. *Vice-Presidents:* Dr. L. Armstrong, Dr. Burnup, and Mr. J. Hawthorn, of Newcastle; Mr. S. W. Broadbent, of South Hetton. *Secretary:* Dr. Byrom Bramwell, of Newcastle. *Committee:* Dr. Philipson, Dr. Page, Dr. Arnison, Dr. Hume, Mr. H. E. Armstrong, and Mr. C. Carr, of Newcastle; Dr. Denham and Dr. Frain, of South Shields; and Dr. Eastwood, of Darlington.

THE UNRESTRICTED SALE OF CHLORAL.

Recently, an inquest was held at Carlisle on the body of a man, seventy years of age, who died from an overdose of chloral self-administered for the purpose of procuring sleep. The deceased, who suffered from a painful surgical disease, had been in the habit of procuring chloral in solution from a local chemist in twopennyworths at a time. Within forty-eight hours of his death deceased procured from a lad eighteen years of age, who was in charge of a chemist's shop, 160 grains of chloral in solution. In summing up the case to the jury, the coroner said that there was no culpability in the matter or malice aforethought pointing to anyone, but there was undoubtedly about the whole case an exhibition of carelessness—not only of carelessness, but of gross recklessness—in the giving out of drugs of a fatal character by mere lads, without

any authority to do so beyond the verbal order of the purchaser. He, however, recommended the jury to turn away their attention from that awkward feature of the case, and confine themselves to the cause of death, leaving the case to be taken up hereafter, if it were thought necessary, by another tribunal. It appears that chloral is not included in the list of poisons in Schedule (A) of the Pharmacy Act, and hence there are no restrictions on its sale. The frequent deaths that occur from the self-administration of this drug certainly render it desirable that chloral should no longer be sold in the reckless manner that it is at present.

THE SMALL-POX EPIDEMIC IN ISLINGTON.

We understand that small-pox continues to spread in Islington and the North district, although the actual number of cases now under treatment is, as far as can be ascertained, somewhat less than the number reported last week. The area over which the cases are spread has, however, considerably extended, and there are now several isolated cases in neighbourhoods previously free from the disease. Up to last week the disease was chiefly localised to the neighbourhood of the Caledonian-road, but within the last few days several cases have been reported in Barnsbury and Holloway. One case is reported as occurring in Pierrepont-row, Upper-street, two cases in Windsor-street, Essex-road, and one in Alfred-street, Colebrooke-row. The parochial authorities are most liberal in the supply of disinfectants, and every precaution is taken to confine the disease to the narrowest possible limits. Notwithstanding the efforts of the anti-vaccinationists to prejudice the minds of the public against vaccination, persons residing in infected neighbourhoods exhibit great anxiety to be revaccinated.

THE MEDICAL SOCIETIES.

The session was inaugurated on Tuesday last. The Royal Medical and Chirurgical Society led the way, Sir James Paget, President, in the chair. The evening was devoted to the discussion of two excellent surgical papers—one by Mr. William Adams, on "The Subcutaneous Division of the Neck of the Femur"; the other by Mr. Davies-Colley, on "Resection of the Tarsal Bones for Congenital Talipes Equino-Varus." There was a considerable attendance of surgeons, and both papers were warmly discussed.

The first meeting of the Metropolitan Asylums Board after the vacation took place on Saturday last. According to the report of the Committee for the Imbecile Schools, there are 337 children under treatment at Clapton, and the erection of the permanent schools at Darenth is proceeding satisfactorily. The patients in the Fever and Small-pox Hospitals at Homerton are increasing. The Small-pox Hospital is now more than half full, eighty-six patients having been admitted during the past eight weeks. In the Small-pox Hospital at Stockwell 168 patients have been received, of whom thirty-three had died, and 96 had been discharged. It was decided to call the attention of the Local Government Board to the increase of these cases in the metropolis.

Awards at the Philadelphia Exhibition.—The official list of awards to British exhibitors at the Philadelphia Exhibition has just been published, and among those who have taken prizes we find the following:—Messrs. Ross and Co., microscopes; R. and J. Beck, microscopes; J. J. Hicks, clinical instruments, thermometers, etc.; Negretti and Zambra, microscopes; Mayer and Meltzer, surgical instruments; A. W. Gerrard, mustard-plasters and chemicals; Henry Crouch, microscopes; W. and A. K. Johnston, anatomical illustrations; T. and H. Smith and Co., chemical manufactures; Morson and Co., chemical manufactures; F. C. Calvert and Co., carbolic acid; J. Muspratt and Sons, chemical manufactures; Chance Brothers and Co., chemical manufactures; Gaskell, Deacon, and Co., chemical manufactures; Peter Spence, chemical manufactures; and Richards, Kearne, and Gasquoine, chemical manufactures.

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

APHASIA OR ALALIA: ITS VARIETIES.

(Third Lecture.)

Seat of the Lesions in Aphasia from Logoplegia, from Verbal Amnesia, from Hebetude—Observations.—Theory based upon Lesion of the Third Left Frontal Convolution—Some Anatomical and Physiological Considerations—Reasons for the Preponderance of Lesions of the Island of Reil—Reasons for the Preponderance of Lesions on the Left Side—Gratiolet's and Meynert's Theories—Conclusion.—Fasciculus of Transmission between the Brain and the Medulla Oblongata—Schröder van der Kolk's Account—Meynert's Tonal Field—Certain Causes of Functional Aphasia.

Gentlemen,—In the preceding varieties, defective observation and the disregard of a certain number of facts have only resulted in the leaving of a deplorable hiatus in the history of aphasia; but, as regards our third variety, logoplegia—which constitutes, let me remind you, aphasia in its restricted meaning,—ignorance or the omission of facts has led to more troublesome consequences. It has not only left a blank; it has conduced to error. Let us, while always on our guard against prejudices, and pursuing the same method that we have hitherto followed, simply look at the teachings of fact, using more than ordinary circumspection in taking care to restrict ourselves to such facts as admit of no doubt, no equivocal interpretation.

Proceeding on this plan, we shall find an early case observed by Andral, which, viewed from a clinical standpoint, is typical, and exhibits the following lesions—softening of the external and posterior part of the left corpus striatum, in extent equal to a large pea; and softening of equal extent in the right hemisphere, at the junction of its anterior with its posterior half, equidistant from its external and internal border, and at the point where the two upper layers meet the lower layer of the nerve-substance situated above the centrum ovale of Vieussens. In a second case observed by the same author there was no alteration beyond a central softening of the left corpus striatum.

Romberg's two cases show—the one softening, the other atrophy, of the left corpus striatum; and the four cases observed by Bright may be analysed thus: in one, softening of the middle and posterior lobes of the left hemisphere; in another softening of the outer part of the left corpus striatum; and in the other two, softening of both corpora striata. Thompson and Newman have thus summarised the lesions discovered by them in a person of twenty-three: marked congestion of the arachnoid and dura mater; obliteration of the right middle cerebral artery, and the posterior cerebral artery on the same side; and multiple embolic obstructions of less importance, the starting-points of softening in both hemispheres.

Bateman reports, amongst other cases, one in which the alteration consisted in two hæmorrhagic centres occupying the middle of both the hemispheres, the frontal convolutions remaining intact. In another, there was, in addition to a chronic thickening of the arachnoid and congestion of the pia mater, an exostosis of the base of the skull, which affected the middle lobe of the left hemisphere. In another individual, the lesion consisted in an embolic softening in the right hemisphere; it is in their bearings upon this case that Bateman alludes to the six instances of aphasia with *left hemiplegia* collected by Crichton Browne. With these may be contrasted the twenty cases published by J. W. Ogle, from which it may be inferred, judging in some instances from the results of the autopsy, and in the others from the symptoms, that the lesion was situated in the right half of the encephalon.(a)

In a patient under my care (the record of whose case was published by my pupil Dieulafoy), we found two hæmorrhagic

(a) J. W. Ogle, "Illustrations of Impairment of the Power of Intelligent Language in connexion with Disease of the Nervous System" (*Lancet*, 1868, vol. i., p. 370; and vol. ii., p. 110).

cysts in the locality of the island of Reil, *in the neighbourhood* of the third left frontal convolution.(b)

In Farge's case, which that able observer refers to my third variety of aphasia, there was softening of the left portion of the centrum ovale of Vieussens.(c)

Benedikt mentions in his book, without giving the names of the observers, four instances of softening of the occipital lobe; and Vivent relates a similar case in his Thesis.(d)

In the woman whose history is recorded by Voisin, the softening was limited to the grey substance of the left part of the island of Reil.(e) In another patient under Voisin's care, an account of whose case was published by Cornillon, the frontal convolutions were intact; there was softening of the island of Reil and corpus striatum on the left side, and a similar lesion of the corpus striatum on the right.(f)

Meynert has related an instance of embolic necrobiosis of the hindermost convolution of the island of Reil; and Griesinger and Sander found, in two cases, a centre of softening in the left parietal lobe; the lesion occupied the fasciculus of fibres formed by the divergence of the corpus callosum.

Beside this first group of cases in which the lesions vary, there is another more numerous group in which the seat of lesion is one and the same throughout; it occupies the origin or posterior extremity of the third left frontal convolution, which, I may mention in passing, corresponds to the first convolution of most of the German anatomists.

I confess that, in presence of these facts, I find it difficult to understand the theory which maintains that the locality of the lesion is always the same. According to this theory, with which the remarkable publications of Broca have caused his name to be associated, the lesion, in this form of aphasia, would always have its seat at the origin of the third left frontal convolution. Such an assertion can only be traceable to disregard of a certain number of recorded cases, or to that objectionable caprice which consists in counting that to be alone trustworthy which a person has observed for himself. For my own part, desiring simply and without prejudice to receive the teaching of facts, I reject this theory as untenable, and I think you will do the same when we shall have examined it together a little more closely.

Two distinct questions are presented to us—one a question of region (third frontal convolution); the other a question of right or left side (left). To decide the first, there is no surer way than to bring together the conclusions drawn from the cases I have just recapitulated to you; proceed with this work of synthesis, and you will see that in aphasia from logoplegia the lesions have occupied, on the one hand, the cerebral hemispheres in their anterior, middle, and posterior portions; and on the other, the corpus striatum, the lobule of the island of Reil, and the third frontal convolution at its origin. Unless, then, we wish to suppress, of set purpose, a certain number of recorded cases, it is impossible to assign a constant seat to the lesion; so one step is gained. But inasmuch as we wish scrupulously to accept the teaching of facts, we must acknowledge, on the other hand, that the various localities are not equal in frequency, and that far the most common are the corpus striatum, the island of Reil, and the frontal convolutions—notably the third. There is nothing surprising, gentlemen, in this preponderance; it is simply the consequence of the topographical relations which connect the cerebral hemispheres with the spinal system. On this subject allow me to remind you of some fundamental facts. You have, on the one hand, the hemispheres of the brain, the organs of ideation in all its forms, of verbal ideation amongst the rest. You have, on the other hand, the executive apparatus, which is the spinal axis. By what means, then, is communication established between these two instruments? Solely by means of the optic thalami and corpora striata. The optic thalami are the means whereby peripheral (centripetal) impressions reach the cortical layer of the hemispheres. The corpora striata are those whereby motor (centrifugal) impulses, the offspring of voluntary ideation, can reach the spinal axis. Whatever be the point of the cortical layer which gives birth to the impulse, behind, in the middle, or in front, it can follow no other course than through the corpus striatum if it is to provoke the wished-for motor reaction in the executive apparatus. It is entirely from this consideration that I have named the apparatus of the optic thalamus and corpus striatum the uniting apparatus (*appareil de conjonction*).

There is, therefore, a strictly circumscribed district, which establishes, and which alone establishes, functional communication between the apparatus of the hemisphere, or of ideation, and the spinal or executive apparatus; this district consists of the corpus striatum, more especially that portion of it which is extra-ventricular, of the island of Reil and its radiation towards the hemisphere by means of the convolutions. This being the case, it is quite clear that lesion of these parts must interfere, more certainly than any other, with the production of speech, because the only means of communication between the organ which forms internal speech and the organ which projects it outwardly are thereby interrupted; in other words, if these lesions (which I propose to group together under the name of *insular lesions*) determine more frequently than any other the symptom of aphasia, it is not because the point affected by them is the seat of the supposed faculty of articulate language; it is simply because, by reason of their locality, they attack, more certainly than any other the elements which, through the medium of the corpus striatum and the pedancle, conduct the impulses from the hemispheres to the spinal apparatus. That is so true, that in the group of insular lesions themselves certain differences are observed. Changes in the island of Reil, in the convolutions which take their rise there, always produce aphasia, while it does not invariably follow changes in the corpus striatum proper. Why? Because in the first set of cases these parts are affected in which, as in a defile, the fasciculi of communication are collected and condensed; while in the second a much larger organ is attacked, containing multiple elements, of which a considerable part may be subjected to alteration without the conducting media being involved.

This exposition enables you, I hope, clearly to understand the mode of action of lesions of the corpus striatum and island of Reil, as well as of those which are situated between the island and the cortical layer of the anterior lobe. With regard to lesions of the middle and posterior lobes, it is more difficult to appreciate the relation which they bear to the symptom aphasia. I would remind you, in the meantime, that the cortical layer of the hemisphere has been properly compared by Valentin to a mosaic, the compartments of which are connected with each other, step by step, by means of anastomotic fibres, and that functional individuality of these various compartments is entirely unknown. It is possible, therefore, that some of the groups of cells in the middle and posterior lobes are connected with verbal ideation; whence it would follow that if the white substance which connects these groups with the corpus striatum be affected by a lesion, abolition of speech will be produced by the same mechanism as already mentioned. Without having recourse to this physiological hypothesis, we may also appeal to the influence of the antero-posterior commissures, which bind together all parts of the hemispheres; and we may allow that certain lesions of the middle or posterior lobes may disturb, by a distant action like reflex action, the functional condition of the frontal and insular regions—which, I repeat, is the confluence of all impressions, and the pass through which each impression, that, starting from the hemisphere, intends to reach the corpus striatum, has to make its way. After all, cases of this kind are the rarest of all; it is useless to discuss them further.

So far as to the question of locality: there still remains the question of right or left side. According to the theory I am inquiring into, the third left convolution alone exercises a pathogenic influence over aphasia. Thus formulated, the theory is inadmissible; it tends to nothing less than the promulgation of an absolute law, and a single case of lesion on the right side will suffice to overturn it. Now, instances of this exceptional kind are not solitary; several cases (a certain number of which I have quoted) illustrate aphasia occurring with left hemiplegia and lesion on the right side. We have, therefore, nothing to do with a law; the only question here is one of frequency, an altogether different matter. On that ground the theory is unassailable; it is a fact that, in the great majority of cases, the lesion has its seat on the left side, and this is especially true as regards the group of lesions affecting the island of Reil. It is well, in fact, to notice that most of the lesions occurring on the right side are not situated in the part which I have explained to you as that generally selected. Matters being thus accurately adjusted, we may proceed to ask ourselves why the alterations producing aphasia have their most

(b) G. Dieulafoy, *Gazette des Hôp.*, 16 Mai, 1867, p. 229.
(c) G. Farge, *Gaz. Hebd.*, October 28, 1864, p. 724; and *Arch. Gén. de Méd.*, sixième sér., t. 7, 1866, p. 101.
(d) Vivent, "Thèse de Paris," 1865.
(e) A. Voisin, Soc. de Méd. de Paris, séance du Oct. 18, 1867 (*Gaz. des Hôp., Paris*, 1868, No. 10, p. 39).
(f) Cornillon, "Mouvement Médical," 1868.

frequent seat on the left side. Two solutions of this problem have been suggested.

According to the researches of Gratiolet, the left hemisphere is developed before the other, so that it takes a predominant, if not an exclusive, part in the development of intellectual acts during a child's education. Whence Broca's aphorism: "We are left-brained." If this were so, it might be conceivable that destruction or disturbed action of the left hemisphere does, by reason of priority, exercise a special influence upon speech; and that the right hemisphere, slowly developed and imperfectly educated, cannot supply its place. Unfortunately, all this is still in the region of hypothesis. The fundamental point, the earlier development of the left hemisphere, is not certain; an equally competent anthropologist—Carl Vogt—disputes the fact, and the theory, having no solid foundation, can hardly be sustained.

The second suggestion is open to the same objection; it takes cognisance of another fact, but in reality its starting-point is the same. Its proposer, Meynert, accepts the notion of prior development of the left hemisphere, but, in order to explain the inability of the right to take its place, he appeals further to an anatomical fact discovered by himself—namely, the absence of a transverse commissure between the point where the convolutions of the left anterior lobe enter into relation with the island of Reil, and the corresponding point on the right side. From this absence of anatomical connexion between the two homologous localities there would result absence of functional agreement; and, inasmuch as the left side, from priority of development and exercise, is alone educated in the matter of speech, lesions of that side would, to the exclusion of the rest, involve the abolition of that function. The anatomical fact pointed out by Meynert requires to be verified; until then the theory, taken as a whole, is, like the preceding one, but an ingenious hypothesis.

For my own part I think I can place the question on a more tangible footing. I note firstly, and I have proved this to you by cases, that the left side is not the absolutely constant seat, and that it is only much more frequently so than is the right side. This point settled, I am of opinion that if the lesions producing aphasia from logoplegia are most commonly situated on the left side, it is simply due to the nature of the lesions themselves. Most frequently—not always, as we have already said, but in the great majority of cases—the lesion is softening from embolism in the arteries of the fissure of Sylvius. Now, observation shows decisively that these embolisms are infinitely more frequent on the left side than on the right; so much so that a statistical table of Meissner's, comprising fifty-one cases, only contains eight cases of obstruction on the right side. If, then, logoplegia is most frequently connected with changes on the left side, it is not by reason of a peculiar functional prerogative of the left side of the encephalon, it is simply that the lesion which ordinarily gives rise to this symptom is almost always seated on the left side, and that, as you are aware, on account of the relations and mode of origin of the large vessels arising from the arch of the aorta.

Another mistake has been perpetrated in this matter of localisation, which I proceed to lay before you. Suppose for a moment (a false hypothesis, you know) that insular lesions of one side—it matters little which—are the only ones that produce logoplegia; would it follow from that that this unilateral district comprised within the island of Reil is the exclusive seat, the solitary functional centre, of the process of word-formation?] Not the least in the world. When you see the power of balancing in the erect posture destroyed by lesion of one of the hemispheres, or one of the peduncles of the cerebellum, do you pronounce that hemisphere or that peduncle to be the seat, the functional centre, of the power of preserving the erect position? No; you simply say that the normal condition of equilibrium is dependent upon the regular and harmonious action of the cerebellar apparatus taken as a whole, and that if a unilateral lesion destroys this harmony, the corresponding function is necessarily disturbed. Well, gentlemen, it is just so with speech; it is not a unilateral function, if I may venture to say so, like movement and sensation in a limb, it is essentially a bilateral function, and, like all functions of that class, it demands the co-operation of certain homologous regions of the encephalon. If a unilateral lesion is sufficient to disturb the function, it is because this single alteration destroys the co-operation of the two halves of the apparatus. This interpretation appears to me, to say the least, more reasonable than the theory which makes an isolated district of the encephalon the physiological centre of a bilateral function.

I come now to two other categories of aphasia—verbal amnesia, and hebetude. The want of a sufficient number of facts obliges me here to be much more brief; and you can readily understand the reason of this poverty of recorded cases. It is very rarely that patients succumb with no other symptom besides abolition of memory or hebetude, and, seeing the complexity of the phenomena observed during life, it becomes difficult, or even impossible, to assert a relationship between the lesion met with and one of the phenomena in particular. Nevertheless, there are several cases which are not open to this objection; as, for instance, that recorded by Hun, where a lady experienced, as the first indication of cerebral mischief, sudden amnesia. After a pretty long interval, the patient succumbed in a kind of imbecile condition. At the autopsy, cancer of the brain was discovered, occupying the greater part of the left anterior lobe. In Watson's patient, amnesia occurred four days before the hemiplegia, and fourteen days before death. There was in that case an abscess, containing two ounces of pus, in the antero-inferior portion of the left hemisphere. In one of Bateman's cases, adduced by the observer himself as an instance of aphasia from verbal amnesia, the lesion consisted in softening of the posterior parts of the left hemisphere. There may very likely be analogous instances, but these, which are remarkable for their clearness, suffice to prove the impossibility of assigning any locality whatsoever to the memory of words.

The conclusion is equally true as regards the general disturbance of ideation constituting hebetude. Cases recorded by Romberg, by Henle and Henoch, by Forbes Winslow, by Down, by Paget, and by Henry, exhibit variously situated lesions of the hemispheres, or malformations affecting the corpus callosum and fornix. In several of these cases the phenomenon of echo was noticed, and in these the alterations, exclusively hemispherical, left intact the districts of the island of Reil and the elements connecting them with the medulla oblongata. This circumstance might be expected, inasmuch as echolalia almost necessarily implies the integrity of the apparatus for moter transmission which has to do with the external manifestation of speech.

To recapitulate, neither aphasia from *hebetude*, nor aphasia from *verbal amnesia*, can be localised, because the acts of ideation and translation of the idea into words have no defined physiological centre. All that can be said is that these operations are performed in the cortical layer of the cerebral hemispheres; beyond that, all is hypothesis. We have seen, on the other hand, that a fixed locality is equally wanting for *glossoplegia*, inasmuch as all lesions of the hypoglossals in any part of their course may produce it—from their peripheral distribution up to and including the central fasciculus (whose course is not known), which connects the origins of these nerves in the medulla with the nerve-cells of the hemispheres. Consequently, aphasia from *glosso-ataxy* and aphasia from *logoplegia* (aphasia in the restricted sense of several writers), can alone be localised, the former in the commissure between the cerebellum and the medulla, the latter in the districts which connect the hemisphere with the motor apparatus (that is to say, the nucleus in front of the island of Reil, the island of Reil, and the corpus striatum), and the communicating band between this body and the grey matter of the medulla. One word as to this last point.

This band of connecting fibres—an indisputable physiological postulate—has been anatomically demonstrated by Schröder van der Kolk; it arises from the multipolar cells of the several nuclei of grey matter in the medulla oblongata, and from the cells of the olivary bodies, and then reaches the corpus striatum through the cerebral peduncles and optic thalami. Van der Kolk was not able to follow it further; but he has expressly specified the part which these elements play, regarding them as the medium of the transmission of psychical impulse to the motor apparatus of the medulla. I cannot doubt that this band is the same which Meynert has recently described; only this last author has succeeded in discovering its whole course. The eminent Viennese anatomist pointed out, under the name of "the acoustic band," a fasciculus which, arising from the centre of origin of the auditory nerve, passes under the floor of the fourth ventricle, traverses the crus cerebri, to reach the nucleus of the tænia—a ganglion situated between the lenticular nucleus of the corpus striatum and the surface of the island of Reil. The radiating fibres of this ganglion enter the island itself, as well as the marginal

convolutions. This grey nucleus (*nucleus tæniæformis*) represents, according to Meynert, the point where auditory impressions enter into relation with the organs of ideation in the hemispheres; and on account of the direct connexion existing between hearing and speech he has designated this district the *tonal field*. The integrity of speech would be dependent upon the integrity of this territory, which, according to the same anatomist, you will remember, is wanting in commissural fibres with the corresponding territory of the right side; and it is because the tonal field is necessarily involved in lesions of the posterior extremity of the third left convolution that these lesions are always followed by aphasia; but, for the same reason, changes in other parts of the island—notably, its posterior part—may bring about the same result; and Meynert has duly recorded a case of this kind, which I have already pointed out to you.(d)

Accepting as fact the anatomical observation, which seems to me a kind of proof and complement of the description given by Schröder van der Kolk, I cannot admit the *rôle* assigned by Meynert to his acoustic fasciculus and tonal field. It is easy to see that, according to his interpretation, this fasciculus is centripetal, that its part consists in carrying to the tonal field the auditory impressions which are to be transformed into perceptions, and that the act of speech is dependent upon the regular reception of these impressions by the organ of ideation (hemisphere). Certainly it cannot be denied that auditory impressions come into play in the case of an individual learning to speak; but, in one whose verbal education is completed, the depository of memory can, without question, take the place of these impressions. Were it otherwise, how would persons becoming deaf after having learnt to speak be able to go on speaking when their hearing is lost? And, on the other hand, if the real effect of lesions of the island of Reil were to destroy the tonal field—that is to say, the meeting-place of auditory impressions with the apparatus of ideation—how would persons aphasic from logoplegia not only hear, but understand, words addressed to them? On these grounds, I do not think Meynert's physiological induction well founded, and I only appropriate from his writings the anatomical observation, which happily completes the description of the fasciculus of communication between the grey nuclei of the medulla and the district of the island of Reil. I persist in connecting this fasciculus with the centrifugal transmission of impressions from the cerebrum to the medulla, firstly, on account of its relations with the nuclei of the corpus striatum, and then because there is no phenomenon to prove that the auditory impressions in persons aphasic from logoplegia are impaired, while there is everything to show an interruption in the outward transmission of duly prepared verbal formulæ.

So far I have spoken to you of alalia as a symptom dependent upon lesions of the encephalon; but though that is most frequently the case, yet it is not the only one that comes under observation, and aphasia from functional disturbance must be distinguished from aphasia due to a structural or organic cause. The functional form, which is always temporary, although its duration may vary from a few minutes to several weeks, has been seen to follow strong mental emotion, particularly fright (Dunn); in hysteria, and the neuroses accompanied with convulsions; after the exanthemata; and, lastly, in brain disorder caused by lead-poisoning (*encéphalopathie saturnine*). An interesting case recorded by Heymann establishes the existence of this last etiological condition.

Here, then, I bring this study of aphasia to an end. It is possible that, as the number of recorded cases is multiplied, some points of detail may require modification, but my fundamental conclusions, which are the outcome of clinical observation, cannot be disturbed. In any case, I have placed the question on its true territory by showing that speech is no more an indivisible faculty than is, for instance, voluntary movement, and that this function, like every other, can only be elucidated by a searching physiological analysis, which has nothing in common with the speculative conceptions of a nebulous psychology.

THE BRITISH MEDICAL BENEVOLENT FUND.—The late Sir Jas. Bardsley, of Manchester, has bequeathed £500, free of legacy duty, to this Fund.

(d) Meynert: "Anatomische Begründung gewisser Arten von Sprachstörung" (*Oester. Zeits. f. Heilkunde*, 1866).

FROM ABROAD.

"PROSELYTISM IN THE FRENCH HOSPITALS."

WHEN this heading first appeared in the newspapers, it was regarded as one of those exaggerated party-cries that are so prevalent in France just now; but it turns out to be a correct expression of a most unjustifiable practice that has recently been introduced. The cards attached to the beds of the hospital patients indicated already various particulars concerning their inhabitants, which were of no use with reference to their treatment, and which should have been recorded in the office of the institution. But when additional information is now supplied concerning the religious persuasion of the individual, how far he has exhibited this by taking the Sacrament, and whether he has expressed a desire to change it, it is at once seen that here is a procedure of a most mischievous character as regards the patient as a patient, and only calculated to be of use to the sisters and lady visitors, in facilitating their search after proselytes. We should have thought that a general protest against this violation of the rights of their patients would have been made by the medical officers of the hospitals; but at all events, M. Desprès, by entering and publishing his own, has brought the matter before the public, and the attention thus aroused has compelled a meeting of the Conseil de Surveillance des Hôpitaux. The Director of the Assistance Publique, who seems almost possessed of despotic power with regard to the management of the hospitals and the alteration of their regulations, called for a vote of censure on M. Desprès for having published his indignant protest against the new measure. Several members of the Conseil, however, agreed with him in condemning this serious attack on the liberty of conscience of the patients, and the vote of censure was negatived, although the measure itself at present remains unrepealed. There can be little doubt, however, that M. Desprès' initiative will before long lead to its revocation.

M. de Nervaux, Directeur de l'Assistance Publique, has since written to the newspapers disclaiming any religious object in adding to the cards the indications which have excited so much displeasure. On the contrary, he says that this was done purely to facilitate the access of the ministers and charitable visitors of various persuasions to persons of their different creeds, and to avoid the confusion which had ensued in searching for them. The *Progrès Médical*, commenting upon this explanation, observes that, acquitting the Department of having the intentions attributed to it in remodelling the cards, there can be no doubt that the opportunity has been seized by the spirit of proselytism of adding particulars to these which could have no administrative object whatever, such as whether the patient has confessed, has received the Sacrament, or expressed a wish to change his religion. The *Progrès* also remarks that it has been in some measure the fault of the medical staff of the hospitals that the abuses which have arisen from the too zealous conduct of priests and sisters have not been brought under the notice of the Directeur, who can himself be little aware of the mischief to the patients thus produced.

THE POSITION OF TRACHEOTOMY WITH RESPECT TO CROUP.

Dr. Schüller, Assistant-Physician at the Greifswald Clinic, observes (*Deutsche Med. Woch.*, September 9) that there is scarcely any other operation that has been so differently appreciated as tracheotomy; and its urgency in croup (a region wherein surgery and medicine come into contact) is especially a matter of lively controversy even at the present time. He trusts that the practical importance of the subject will excuse his attempting an exact estimate of its value. Most persons place much too narrow limits to tracheotomy, employing it as an extreme measure at the last stage of the disease; this practice originating in the entirely unjust view that it is in itself a very dangerous operation, only to be resorted to as an extreme measure. On the other hand, some expect from tracheotomy more than it can supply, seeming to think that its mere performance will suffice for the cure of the disease. The confusion of ideas that has resulted from these opposite views is the usual consequence of a want of exactness in stating what we have really to expect from the operation.

That the mere opening of the air-tube in itself is unattended

with danger has been shown in numberless cases, and in the results of its suicidal division, the difficulty in healing such wounds having been greatly exaggerated. In croup the danger to life has become so great when the operation is suggested, that this should be performed, even if it were far more perilous. The air-tubes are obstructed by the new-formed membranes, the tumefaction of the mucous membrane, and the accumulation of mucus; and, sooner or later, the glottis is probably rendered incapable of action by the paralysis of its dilators produced by infiltration. The resulting dyspnœa varies with the intensity and extension of the diseased process, and may reach a certain height without being attended with great danger; but, sooner or later, life is threatened, especially when the croupous inflammation extends to the finer bronchial divisions. This respiratory insufficiency plainly demands our interference, and that whether we regard the croup as a simple local process, or a mere localisation of a general disease. Resolvents and expectorants soon reach the limits of their utility, and indeed usually correspond very imperfectly to the indications; but by means of tracheotomy, free access of air, the removal of the obstructing membranes, and the relief of the dangerous dyspnœa are obtained. The condition of the patient is greatly improved by this mere opening of the air-tube, and his life preserved from the immediately threatening dangers. Moreover, removal of the detached membranes, and also the direct application of medicinal agents to the diseased membrane, become far more easy, and the minuter ramifications of the air-tubes become accessible. In comparison with other means of combating the disease, it is by far the most efficacious; and, indeed, it is the only one capable of contending with the dangerous suffocative paroxysms of croup. The earlier it is resorted to, the greater will be its success; and if we delay it until the last stages we must not expect remarkable or durable results. Carbonic acid intoxication has then produced paralysis of the central organs of the nervous system (especially those influencing the cardiac and respiratory movements), so that restoration may have become impossible, even without taking into consideration that extensive infiltration of the lungs may have rendered these organs incapable of their function. Moreover, it must be remembered that in the meantime an important general infection of the system has been produced by the operation of the croupous process, which is combated with greater difficulty in consequence of the insufficiency of the movements of the heart and respiratory organs. Yet, even under these circumstances, we should still have recourse to the operation in order to relieve the sufferings of the patient. But although the performance of tracheotomy at an early stage in croup is desirable, yet it is by no means necessary in all cases of the disease. In order to determine when the operation is called for, the following rule may be laid down—viz., that it should always be resorted to as soon as the child manifests great dyspnœa. If the ribs are drawn greatly inwards during inspiration, the muscles of the neck and chest exhibiting compensatory action, and if the lips become blue (a sign of insufficient decarbonisation of the blood), then tracheotomy is not only to be recommended, but it has become an absolute necessity. If, under such circumstances, time be lost in resorting to other remedies, not only will the force of the above indications have been misapprehended, but the chances of the operation when undertaken somewhat later will be rendered much worse. In such a case as this tracheotomy is the most practical physiological procedure, and is to be preferred to all others.

We need not follow Dr. Schüller in his description of the operation, only observing that he employs chloroform or not, according to whether there is or not danger in the delay which is thus entailed. He has not found that its cautious use increases the dyspnœa, while it greatly facilitates the execution of the operation in unruly children. After the trachea has been opened, the expulsion of the membranes and masses of mucus is best secured by the introduction of a medium-sized gum-elastic catheter (the edges of the wound being held apart by hooks) as far as the bronchial division, this operating in part by exciting cough, and in part by suction. The catheter is to be rapidly introduced and withdrawn in this manner until the respiration becomes free, which it generally does before long. But no pains must be spared to secure this end; and it is not until then that the hæmorrhage, which has hitherto been arrested by forceps, is definitively prevented by ligature of vessels—although the bleeding usually stops spontaneously after the removal of the forceps. The after-treatment is of very great importance, and has not been sufficiently appreciated by the opponents of tracheotomy. At first, the patient must be guarded day and night by a well-instructed person, whose duty it is to constantly watch the condition of the respiration, to remove the accumulated mucus from the canula by means of a feather, and from time to time withdraw the inner tube and free it from the dried secretions which would otherwise easily obstruct it. As this is not always easily replaced, and in order to favour the solution and expulsion of the membranes, an inhaling apparatus should always be kept in action at the bedside, filling the air with the vapour of water in which minute quantities of carbolic acid, lime-water, etc., may be diffused. Direct inhalation is not always required if a sufficient quantity of the vapour is set free in the vicinity of the aperture. This procedure seems also to have some effect in preventing pneumonic infiltration. When any disturbance of respiration takes place, the elastic catheter should be again introduced, and the obstructing membranes removed by suction. Should any of the matters thus withdrawn get into the mouth of the operator, he should rinse it out with diluted carbolic acid.

By following out the above plan, which may have to be continued for several days, Dr. Schüller states he has met with most excellent results. Internal remedies may, according to the indications, be combined with these mechanical procedures, which, however, are usually sufficient. In his opinion, no treatment of croup can compare with tracheotomy, and he is unable to understand how Vogel can object to it. Anyone who has seen these cases must know that by far the most important indication to be met is the danger of suffocation, the children dying, in the majority of cases, not from the croupous process itself so much as from the obstruction of breathing which this has given rise to. For the relief of this there is no measure like tracheotomy; and it may be the more readily employed, as it also renders the combating the croupous process by mechanical and pharmaceutical measures much more possible. Death may occur in spite of tracheotomy; but it is not the consequence of the operation, but of a persistence of the general infection, or the occurrence of ensuing complications; and if the operation were resorted to more promptly, it would less often follow.

A New Theory of Chorea.

At a recent meeting of the New York Academy of Medicine (*New York Medical Record*, August 12), Dr. Stevens, of Albany, propounded a new theory of the nature of chorea, as stated in the following proposition:—"Chorea is a functional disturbance of the nervous system which may give rise to organic lesions, and which arises from irritation dependent upon anomalous refraction of the eye, and, in a very large proportion of cases, on hypermetropia." At first he regarded the association of error of refraction and chorea as a mere coincidence; but during the last two years he has become convinced that such coincidence is unfailing. He has collected thirty-three cases of chorea, and in twenty-four he has found simple hypermetropia; in the other nine other optical errors were present. In no one of thirteen cases that had been under his own personal observation did proper convex glasses fail to give relief to the symptoms of chorea; and in several the relief was prompt and complete. The hypothesis advanced will seem less unreasonable to specialists in nervous diseases, and to oculists, than to the more general practitioner; but almost everyone is familiar with the aching eyes, the nausea, and the vertigo produced by the use of glasses which disturb the accommodation of the eye. Peripheral irritation, long continued at any part of the body, might give rise to serious nervous disturbance; and such cause Dr. Stevens regarded as abundantly potent to produce chorea. There was a constant state of confusion among the muscles of accommodation—an irrepressible conflict, which had given rise to a general nervous erethism,—and then came measles, scarlatina, fright, or some other exciting cause, by which the nervous system was still further disturbed and chorea developed.

During the discussion which followed, Dr. Seguin observed that while he regarded the paper as important, in being founded on several well-observed cases which entitled the matter to further investigation, yet he believed there were several objections to reception of the theory as explanatory of chorea in general:—1. The small number of cases of chorea in proportion to the large number of cases of myopia and hypermetropia found in the public schools. 2. Some of the sympathetic symptoms of error of refraction are remarkable for their definiteness and duration, as vertigo, headache of various forms, and nausea:

the same symptoms are very seldom observed in connexion with chorea. 3. Chorea may be produced by a great variety of pathological conditions, as possibly by lesion of the corpus striatum, dyscrasia, various kinds of peripheral irritation,—fear being probably the most common cause; and one of the most apposite under this head is the chorea of pregnancy. There is also the remarkable coincidence that has been noted between chorea and disease of the heart, so that a large class of pathologists believe that lesions productive of chorea exist somewhere in the brain, and are brought out by the cardiac disease. 4. The effect of treatment, which often produces a cure promptly by the employment of various agents.

REVIEWS.

Hooping-Cough: Remarks on its History, Prevalence, Symptoms, and Treatment. By Dr. Lee, Senior Assistant-Physician to the Hospital for Sick Children. London: Smith, Elder and Co. Pp. 14.

This little *brochure* calls attention to the importance of a disease which is exceedingly common, very infectious, and often fatal. It obviously does not pretend to be a description of the disease, but is intended simply to advocate the use of inhalations of carbolic acid. The author's experience of the disease is extensive, and we can only regret that the subject has not been as fully gone into as his opportunities would have permitted. There are few contagia so little understood as is the contagium of whooping-cough, and few diseases which are so little influenced by treatment, though a very large number of so-called "specifics" have been invented. To deal, however, with what there is, rather than with what there might have been; we would say that the author has found marked benefit from the daily use of carbolic acid inhalations. The carbolic vapour ought to be diffused through the atmosphere of the room, in a certain proportion, and the patient must be confined to this atmosphere for several hours daily. Dr. Lee has had a vaporising apparatus constructed on purpose, and he has exposed his patients (out-patients, for the most part) to this vapour, in a little room adjoining his consulting-room, for an hour or so once or twice a week. "Even under this limited use there was undoubtedly an amelioration of the severe spasmodic cough." This treatment is so simple that we hope an extended trial will be made of it."

The Last Act: being the Funeral Rites of Nations and Individuals. Collected and arranged by William Tegg. London: William Tegg and Co. 1876. Pp. 404.

This book has a cunningly devised frontispiece, which alone is likely to insure it a large sale. It represents a funeral scene, with the coffin descending to the furnace for "cremation." Above is represented a kind of chapel, with a priest in canonicals blessing with uplifted hands the corpse as it retreats from view. On either side weeping relatives fashionably dressed. Within a railed-off space the attendants are lowering the coffin, through a chasm in the floor, into a shaft leading to a furnace, whilst a man below waits to close the iron doors upon it. The text contains a confused account of Siemens's furnace; it also contains cuttings from newspapers relating to the Towers of Silence at Bombay, Mr. Seymour Haden's letters to the *Times* on "Earth to Earth," and some other points of interest. But it is a mere bundle of cuttings, strung together without any sign of literary manipulation or arrangement, and many things of great interest are not noticed at all.

A Clinical Study on Herpes Zoster. By L. D. Bulkley, M.D., New York. Extracted from the *American Journal of the Medical Sciences*, July, 1876.

A case of "lymphosarcoma" of the neck, interesting in itself from being cured by arsenic, was complicated by a herpes which followed the course of several cutaneous nerves of the arm, whose roots were probably involved in the tumour. The object of Dr. Bulkley's critical study of the case is to point out that "whatever may be the cause of the nerve irritation, herpes zoster is always of nerve origin," and that since the eruption of zoster is an "epiphenomenon to a primary neuritis and neuralgia," our attention in cases of herpes should be directed less to the eruption than to the antecedent neuritis. A searching investigation of the causes of this neuritis cannot fail to elucidate some of the obscurities which surround this part of the nerve pathology, and Dr. Bulkley's essay shows what line investigation should follow. The author speaks highly of phosphide of zinc, in doses of one-third of a grain *tertiis horis*, as an abortive of herpes zoster. The drug was first recommended by Dr. Ashburton Thompson, and it is a great thing if a remedy has been found for a disease which for the time is often so painful and disabling.

Reports of the Medical Officer of the Privy Council and Local Government Board: Annual Report to the Local Government Board with regard to the Year 1875. London: George E. Eyre and William Spottiswoode. 1876.

The foregoing Report refers to proceedings directed to be taken during the year 1875, through the Medical Department of the Local Government Board, in matters concerning the public health. The first question dealt with is vaccination, and Dr. Simon remarks that the success of our modern vaccination laws in enforcing the general vaccination of infants is to be measured by the periodical returns which are made to the Board under the Act of 1871, by the (so-called) vaccination officers throughout the country. A digest by Dr. Seaton of these returns, so far as received up to January 31, 1875, with regard to births registered in the year 1873 is appended, which shows that of the 826,508 children registered as born in England and Wales during this latter year, all, up to a margin of less than 5 per cent., had at the time of closing the return been accounted for by the vaccination officers; that of the 95⅔ per cent. accounted for, 85¼ were accounted for as vaccinated, and 9¾ as having died early and unvaccinated; while the small residue (not quite ⅔ per cent.) on the whole number of births included infants who had contracted small-pox before they were vaccinated, infants who had been certified as insusceptible of vaccination, and (by far the largest item) infants whose vaccination had for the time been postponed under medical certificate.

We further learn that in 1875 twenty-seven local inquiries were made by the inspectors of Dr. Simon's department with regard to particular facts of disease in particular places, or to conditions which were deemed likely to cause disease; in two of these cases the reports by Dr. Buchanan are given in full. The first relates to a considerable prevalence of enteric fever in the town of Croydon, and the other to a curious outbreak of scarlatina in South Kensington among certain persons—a private family and its guests, who had met on a festive occasion, and who, it seemed probable, might have got their infection in common from partaking of an infected article of food.

The Report concludes with a very interesting memorandum by Mr. Netten Radcliffe on the modern history and recent progress of "Levantine plague."

The Corporation of Dublin has just passed a resolution fixing the salary of the coroner at £500 per annum, with a salary for a clerk.

A serious outbreak of typhoid fever has occurred at Padstow, Cornwall, where, in a population of 2000 persons, 200 have been stricken down with the fever. It would appear that a system of drainage has been constructed, chiefly at the expense of the proprietor of the land there, Mr. Prideaux Brune; but during the summer months there was not sufficient water to carry the matter out of the drains, where it lay till the heavy rains stirred it up, with the result of poisoning 10 per cent. of the population. There have as yet been only four deaths, so that the fever has fortunately assumed a mild form.

West Kent Medico-Chirurgical Society.—The first meeting of the twenty-first session was held at the Royal Kent Dispensary, Greenwich-road, on Friday, October 6; Dr. J. N. Miller in the chair. The following gentlemen were elected office-bearers for the session 1876-77:—*President:* Thomas Creed, M.D. *Vice-Presidents:* John Prior Purvis, M.R.C.S.; W. Johnson Smith, F.R.C.S. *Council:* John Anderson, M.D.; Hughes Cable, M.R.C.S.; William Carr, M.D., F.R.C.S.; Ralph Gooding, B.A., M.D.; H. W. Jackson, M.R.C.S.; W. Lockhart, F.R.C.S.; F. Moon, M.B. *Treasurer:* Prior Purvis, M.D. *Honorary Secretary:* Harry Knight Hitchcock, M.D. *Librarian:* J. B Saundry, L.R.C.P., M.R.C.S.

GENERAL CORRESPONDENCE.

THE CHAIR OF MEDICINE IN THE UNIVERSITY OF EDINBURGH.

LETTER FROM DR. R. HALDANE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have to complain of a very serious misstatement in an editorial article in your last number, headed "Chair of Medicine in the University of Edinburgh." In that article the following passage occurs:—"Dr. Rutherford Haldane was at one time accounted the best lecturer on, and teacher of medicine in Edinburgh, but it is now a good many years since he ceased to lecture and to have any connexion with the Royal Infirmary." The statement contained in the latter part of this sentence is entirely erroneous. Since my appointment as Physician to the Royal Infirmary, in 1862, I have annually delivered a winter course of lectures on the practice of medicine, and have been engaged summer and winter in teaching and lecturing on clinical medicine. The mistake on the part of the writer of the article is the more extraordinary as my name duly appeared in the advertisement in your "Students' Number" of the School of Medicine, Edinburgh, as Lecturer on Practice of Medicine and on Clinical Medicine.

I trust that you will give the same prominence to this rectification as you did to the original statement.

I am, &c., D. R. HALDANE.

22, Charlotte-square, Edinburgh, Oct. 7.

*** We are exceedingly sorry that such a slip was allowed to pass uncorrected. The error was speedily discovered, but too late for rectification. The mistake will not injure Dr. Haldane, whose claims are too well known locally to be thus affected. We most regret the error, as it may seem to give a colour of partisanship on our part, which we are far from feeling. We desire, above all things, to be fair and just. The suppression of the truth, or the statement of what is false, is at once beyond us and beneath us.—ED. *Med. Times and Gaz.*

OBITUARY.

THOMAS LAYCOCK, M.D.

DURING the last ten or twelve years the Medical Faculty in the University of Edinburgh has suffered repeated and severe losses by death. One after another, Simpson, Syme, Goodsir, Henderson, and Bennett have passed away; and now we have to lament the loss of one who, if not in the foremost rank as a successful teacher, was certainly one of the most profound, laborious, and far-seeing of our thinkers on medical subjects.

Thomas Laycock, M.D., F.R.S.E., F.R.C.P.E., Professor of the Practice of Physic in the University of Edinburgh, and Physician-in-Ordinary to the Queen for Scotland, died on September 17, at his residence in Walker-street, Edinburgh, after a lengthened illness. The disease, which ultimately proved fatal, commenced in May last, as a recurrence of pulmonary phthisis, from which he had suffered twenty-five years before.

Thomas Laycock was the son of a Wesleyan minister, and was born at Witherby, in Yorkshire, on August 12, 1812. He was thus at the time of his death sixty-four years of age. His preliminary schooling was received at the Wesleyan Academy, Woodhouse Grove, where he would appear to have obtained a good classical education. At the early age of fifteen he was articled as apprentice to Mr. Spence, F.R.C.S., of Bedale. In 1833 he went to London, where, for three winter and two summer sessions, he pursued his studies at University College; afterwards he proceeded to Paris, and studied there for one session at La Pitié, under Louis, Lisfranc, and Velpeau.

At the termination of this period, in 1836, he was appointed Resident Medical Officer in the York County Hospital, which post he held for three years. After a session spent at the University of Göttingen, he graduated there as Doctor of Medicine, "*summa cum laude.*" In 1841 he returned to York, where he practised both medicine and surgery, until some time in the following year, when he was appointed Physician to the York Dispensary. In 1844 he was elected Statistical Secretary to the British Association; and two years later he was appointed to the chair of Theory and Practice of Medicine at the York School of Medicine, which then existed.

In 1855 the chair of Practice of Physic in the University of Edinburgh became vacant, in consequence of the resignation of Professor Alison, and Dr. Laycock became a candidate. Although he had for his opponents Professor Bennett, Dr. W. T. Gairdner, Dr. Alexander Wood, Dr. McCormac (of Belfast), Dr. Craigie, Dr. Munro, and Dr. Halliday Douglas, and the contest was a keen one, Dr. Laycock was successful, and thus became the occupant of the chair of Cullen, which he has held up to the date of his death. His success on this occasion was not a little aided by the energetic support of Sir John Forbes and Sir James Young Simpson, the former of whom was then editor of the *British and Foreign Medico-Chirurgical Review*, and had formed a very high opinion of Dr. Laycock's talents from his writings.

Shortly after going to Edinburgh, Professor Laycock was elected F.R.S.E. and F.R.C.P.E. He also practised in that city as a consulting physician, but his work in this field was not great.

During only one session of his long professional career was his work seriously interrupted. In the winter of 1866-67 he suffered from a painful affection of the knee-joint, which necessitated amputation. The duties of the chair were, in his absence, ably discharged by the late Dr. J. Warburton Begbie.

It is as an author, however, rather than as a teacher or practitioner of medicine, that Dr. Laycock is best known, and will be longest remembered. His labours in the field of medical literature have been enormous. When it is stated that there have come from his pen upwards of 300 papers, besides several larger works, embodying the results of much thought and research, it must be obvious that, within the limits of an obituary notice, anything like an attempt to review his works is impossible. We can merely glance at some of the more important of them.

His favourite subject throughout his lifetime was psychology, and many of the most important of his writings are upon the functions of the brain and nervous system. It is in treating of such subjects that he has most displayed the quality of genius.

The first of his efforts in this field—a work "On the Nervous Diseases of Women," in 1840—attracted much attention, and tended greatly to elucidate the nature of many obscure diseases, such as hysteria, which were at the time little understood.

A paper "On the Reflex Functions of the Brain," published by him in the *Medico-Chirurgical Review*, July, 1855 has entitled him to be regarded as the author of that doctrine which was afterwards much amplified by Carpenter; the time that elapsed before it became generally accepted as law by physiologists, as it now is, perhaps indicates as well as anything else how far-reaching was his philosophical insight. His work on "Mind and Brain; or, the Correlations of Consciousness," published in 1860, must be regarded as his masterpiece. It is a work which, while it deals with many problems that in the state of this science when it was written hardly admitted of being solved satisfactorily, nevertheless it contains many able and ingenious speculations which are eminently suggestive. It is not a little remarkable that the progress of physiological science has tended rather to confirm than to refute the theories which he has propounded in this and other works.

This is not the place to refer in detail to Dr. Laycock's other published works, which range over the whole field of medicine. Many of his papers appeared in, and enriched, the columns of the *Medical Times and Gazette*. Amongst the most important of these may be mentioned the lectures on "Physiognomical Diagnosis," which appeared in 1862; another series on the "Method of Clinical Observation of Diseases of the Nervous System," and the very valuable lectures on the "Systematic and Practical Consideration of the Influence of the Nervous System on Diseases of Organs and Tissues,"—both of which appeared in this journal in 1871.

With a decided bias towards psychological study, it was natural that he should have turned his attention very specially to mental diseases, and the conditions which lead to them. By far the most effective appearance which he made as a teacher was in the summer course on medical psychology and mental diseases which he instituted. His lectures in connexion with the class were highly esteemed by those who had the privilege of attending them; and perhaps it is not to be reckoned the

least of his labours in his favourite subject—psychology—that he inspired in the minds of many of his ablest students enthusiasm in the study of it which may yet yield fruit.

It is much to be regretted that Professor Laycock's literary style was not more attractive. His views remained a sealed book to many, simply on account of the obscurity of his language. He will, however, be remembered by those who knew his works as a medical philosopher of no common order; a speculative and ingenious generaliser of facts gathered from the observations of others, as well as from his own, and an intense and laborious thinker and writer on medical subjects. Time may yet show the truth, as it has already done in some measure, of many of his speculations; and it is possible that Laycock's name may be held more largely in estimation in the future than in the past or present.

Dr. Laycock was of a retiring disposition, and made comparatively few friends; but by those who knew him intimately he was much loved. In 1848 he was married to Anne, daughter of Mr. William Lockwood, of Easingwold, Yorkshire, who died in 1869. There survive from this marriage a son and daughter, the former of whom graduated as Bachelor of Medicine in August last.

FRANCIS SIBSON, M.D. Lond., F.R.S.

The painfully sudden death of Dr. Sibson, which took place at Geneva on the 7th ult., has already been referred to in these columns, but in justice to his memory we are bound to give a short sketch of his life and character.

Dr. Sibson was born at Maryport, in Cumberland, and received his early education in Edinburgh, where also he first entered upon hospital practice and the study of the profession of which in later life he became so bright an ornament. To complete his professional education he left Edinburgh, came to London, and entered to the practice of Guy's and St. Thomas's Hospitals. At these institutions he displayed such zeal in the prosecution of his studies, and such devotion to hospital work, that he gained the good opinion, and won the lasting friendship, of his teachers. In 1835 he was appointed Resident Surgeon to the Nottingham General Hospital, which post he filled with the highest credit to himself for thirteen years. Whilst holding this appointment he pursued the investigations connected with the physiology and pathology of the organs of respiration on which were based his valuable papers on the Position of the Internal Organs in Health and Disease, the Mechanism of Respiration, and the Movements of Respiration in Health and Disease. In 1848 Dr. Sibson graduated as M.B. of the University of London, and later in the same year he took the M.D. degree. At the M.B. examination his name stood fifth in the honours list in medicine, and at the M.D. examination he distinguished himself by taking the gold medal for his commentary on a case in medicine. During the time that he was studying for his university examinations Dr. Sibson was engaged in private practice, notwithstanding which he succeeded in taking higher honours than many who were solely engaged in studying at the medical schools of the metropolis. In June, 1865, he was elected a member of the Senate of the University of London; and he also filled the post of Examiner in Medicine.

In 1849 Dr. Sibson became a Member of the Royal College of Physicians of London, and four years later he was elected to the Fellowship. After taking the Fellowship, Dr. Sibson devoted much of his time and energies in promoting the interests of the College. For several years he was Secretary to the College Committee on the Classification of Diseases, in which office he worked incessantly until the publication, under his editorship, of the well-known nosology which is now acknowledged by the profession throughout the kingdom.

Having contributed two learned papers to the *Transactions of the Philosophical Society*, he was in 1849 elected a Fellow of the Royal Society, and in 1872 he was elected to a seat on the Council of the Society, which post he occupied for the usual period of two years.

His career in the profession was one unbroken success. When St. Mary's Hospital was founded in 1851 he was selected one of the Physicians; and when, some few years afterwards, a medical school was started in connexion with the Hospital, he became one of the Lecturers on Medicine. Dr. Sibson retained his connexion with St. Mary's Hospital as a physician and a teacher of clinical medicine for twenty years, at the end of which time he was by the rules of the institution obliged to resign his physicianship, and was placed on the consulting staff. Dr. Sibson's contributions to medical literature have been very numerous. Some of his earlier papers have already been referred to. Among his other contributions were a paper on Pericarditis, published in the *London Journal of Medicine* for October, 1849; a paper on the Falling-in of the Chest during Inspiration in some Diseases of the Chest, read before the Westminster Medical Society in December, 1849; and a lecture on the Influence of Distension of the Abdomen on the Heart and Lungs, published in the *British Medical Journal* for August 2, 1873. His most recent literary works are two monograms on Pericarditis and Endocarditis, which will appear in the next volume of Dr. Russell Reynolds's "System of Medicine." He has also recently prepared for publication in the *British Medical Journal* his two Harveian Lectures on Bright's Disease in Relation to the Heart and Arteries. His great work was his "Medical Anatomy,"—a work of high merit, and the result of enormous labour and research.

Dr. Sibson was a very energetic and enthusiastic member of the British Medical Association, and from time to time he held various positions of honour and great responsibility in that Society. He was one of the earliest members of the Metropolitan Counties Branch of the Association, and in 1861, and again in 1864, 1865, and 1866, he was chosen to represent the Branch on the General Council of the Association. On the death of Sir Charles Hastings, in 1866, he was elected President of the Council for three years, and on his retirement from that office he was appointed a Vice-President of the Association for life. At the annual meeting of the Association in Dublin, in 1867, the University of that city conferred on him the honorary degree of M.D.; and at the annual meeting at Newcastle-on-Tyne, in 1870, on which occasion he read the Address in Medicine, the honorary degree of LL.D. was conferred on him by the University of Durham.

He was a most painstaking physician, and possessing as he did profound knowledge of his profession, and being kind, sympathising, and agreeable in manner, it is not surprising that he achieved considerable professional success almost from the commencement of his career as a London consulting physician.

By his pupils at the Hospital he was much loved and deeply respected, and he was at all times ready to befriend them and most anxious to promote their welfare.

Few men were better known in professional circles in London than Dr. Sibson, and still fewer were more highly respected. His goodness of heart, integrity of character, and personal worth endeared him to a wide circle of professional brethren, as also to numerous private friends and patients, by all of whom his sudden death is felt as a great and irreparable loss.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 5:—

Brett, James, South-parade, Leamington.
Browne, Henry, Lidford-road, Stoke Newington.
Messum, Julian Alex. Broker Galsworthy, Grasmere Villa, Dulwich.

The following gentlemen also on the same day passed their primary professional examination:—

Gamble, Henry W. B., St. Bartholomew's Hospital.
Grimbly, Richard Henry, St. Thomas's Hospital.
Thurston, Edgar, King's College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Canton, A. F., L.D.S.—Dental Surgeon to the National Dental Hospital, Great Portland-street, *vice* Mr. Perkins, deceased.

Casley, Reginald Kennedy, M.B., C.M.—House-Surgeon to the Royal Surrey County Hospital, Guildford.

Joseph, S. W. Jorweth, M.R.C.S., L.S.A., L.R.C.P. Lond.—House-Physician to the Hospital for Women, Soho-square, *vice* Robert Manser, M.R.C.S., L.S.A., resigned.

BIRTHS.

Batterbury.—On October 11, at 45, Park-road, Haverstock-hill, N.W., the wife of Richard Legg Batterbury, M.B. Lond., of a son.

Beadles.—On October 7, at Park Lodge, Forest-hill, S.E., the wife of Arthur Beadles, M.R.C.S. Eng., of a daughter.

CASSIDY.—On October 7, at the County Asylum, Lancaster, the wife of D. M. Cassidy, M.D., of a daughter.

COE.—On October 9, at Great George-street, Park-street, Bristol, the wife of Robert William Coe, F.R.C.S.E., of a son.

HOPKINS.—On October 5, at Oak Cottage, Eastbourne, the wife of Alfred Boyd Hopkins, M.R.C.S. Eng., of a son.

MOSS.—On October 7, at Thame, Oxon, the wife of Herbert Campbell Moss, M.B. Lond., of a daughter.

POWELL.—On October 4, at 15, Henrietta-street, Cavendish-square, the wife of Richard Douglas Powell, M.D., of a daughter.

WRIGHT.—On October 4, at 5, Oxford-street, Wellingborough, the wife of J. Brampton Wright, M.D., of a daughter.

MARRIAGES.

CARR—STUART.—On October 4, at St. Margaret's Church, Lee, William Ward Carr, M.D. Lond., M.R.C.S., eldest son of Wilham Carr, M.D., F.R.C.S. Eng., of Lee Grove, Lee, to Emily Jane, daughter of the late Robert Sturt.

KIMPTON—THORNHILL.—On October 5, at the Collegiate Church, Wolverhampton, John Groome Kimpton, to Eleanor Elizabeth, eldest daughter of J. H. Thornhill, M.R.C.S. Eng., of Willenhall.

MANBY—HARDINGE.—On October 10, at St. George's, Hanover-square, Harry Lyndsay Manby, of Tettenhall, Staffordshire, to Jane Elizabeth, only daughter of the late Henry Hardinge, M.D., of 18, Grafton-street, Berkeley-square.

RAVEN—DANIEL.—On October 3, at St. George's, Ramsgate, Thomas Francis Raven, L.R.C.P., of Broadstairs, to Margaret Maxwell, youngest daughter of James Stock Daniel, of Ramsgate.

READY—CLARKE.—On September 25, at St. Mary's Catholic Church, Newport, William G. Markham Ready, M.R.C.S. Eng., to Frances Mary, third daughter of John Clarke, Esq., of Alteryn House, Newport, Mon.

SCOTT—STRICKLAND.—On October 5, at St. Mathias', Richmond, Surrey, William Gifford Scott, M.B., of Newton Abbot, to Caroline, youngest daughter of the late Walter Strickland, Esq., of Clarendon-road, Nottinghill.

WATSON—HARVEY.—On October 4, at St. John's Church, Newcastle-on-Tyne, Percival H. Watson, M.R.C.S. Eng., of Sunderland, to Julia, fifth daughter of the late James S. Harvey, Esq.

WILLIAMS—EVANS.—On October 4, at the parish church, Wrexham, Joseph Llewellyn Williams, M.B., of Wrexham, to Margaret Rimmer, eldest daughter of Edward Evans, Esq., of Bronwylfa, Ruabon.

WRIGHT—KING.—On October 3, at Prestwich, James Wright, M.D., of Northumberland House, Stoke Newington, to Charlotte Dundas, second daughter of the Rev. Richard King, of Prestwich.

DEATHS.

CORMACK, MARGARET JANE ANNE, daughter of Sir John Rose Cormack, M.D., at 7, Rue d'Aguesseau, Paris, suddenly, while apparently convalescent from a severe attack of rheumatic pleurisy, on October 4.

GOSS, ELIZABETH, wife of T. Biddulph Goss, M.R.C.S.E., at 36, The Paragon, Bath, on October 8, aged 32.

SIMOENS, JERONIMO, M.R.C.S. Eng., at Twickenham, on October 6, aged 85.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

LEEDS PUBLIC DISPENSARY.—Assistant Resident Medical Officer. Candidates must possess a registered qualification. Applications, with testimonials, to A. F. McGill, 23, Park-square, Leeds, on or before October 14.

NORTHAMPTON FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Medical Officer. Candidates must be duly qualified members of one of the Royal Colleges of Surgeons of the United Kingdom, and registered in accordance with Act of Parliament. Testimonials to the Secretary, 22, Cromwell-street, Northampton, on or before October 23.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Testimonials to the Secretary of the Medical Board, the Infirmary, Sunderland, on or before October 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bakewell Union.—Dr. James H. Clay has resigned the Cromford District; area 2662; population 3984; salary £15 per annum.

Mutford and Lothingland Incorporation.—Mr. Prentice has resigned the Lowestoft District; area 12,154; population 17,268; salary £85 per annum. Also the Workhouse; salary £25 per annum.

Tisbury Union.—The Donhead District is vacant; area 19,842; population 4014; salary £74 10s. per annum.

APPOINTMENTS.

Ashton-under-Lyne Union.—Wm. J. Allkin, M.R.C.S. Eng., L.R.C.P. Edin., to the Second District.

Edmonton Union.—John Desne, M.R.C.S. Eng., L.R.C.P. Edin., to the South Hornsey District.

DIMINUTION IN THE NUMBER OF FOUNDLINGS IN PARIS.—According to the Report of the Assistance Publique, the number of *enfants abandonnés* admitted to the special Hospice during 1875 was 2338, being 808 less than in 1874. In fact, so small a number has never been admitted since 1725, when the population of Paris was about one-third of what it now is.—*Gaz. Hebd.*, October 6.

MEDICAL STUDENTS.—The annual registration of the gentlemen pursuing their studies at the metropolitan schools will not be brought to a close until next week. We ascertain that, up to the hour of going to press, the gross number registered is 1255.

THE undermentioned gentlemen have been declared to have passed the Cambridge University Examinations in Sanitary Science:—Part 1.—C. W. S. Deakin, M.R.C.S.; J. C. Leach, M.R.C.S.; F. F. Parsons, M.D.; A. Skeen, M.B., M.C.; J. T. W. Tatham, M.D.; A. Tomes, M.R.C.S.; W. Williams, M.D. Part 2.—C. W. S. Deakin, M.R.C.S.; J. C. Leach, M.R.C.S.; H. T. Parsons, M.D.; J. F. W. Tatham, M.D.; A. Tomes, M.R.C.S.; W. Williams, M.D.

HEALTH AND SEWAGE OF TOWNS.—A meeting of the Executive Committee of the Society of Arts, in connexion with this subject, has been summoned for twelve o'clock on Tuesday, the 24th inst.; and an invitation has been addressed to the surveyors and medical officers of health of the Vestries and District Boards of Works of the metropolis, asking them to attend to meet the Committee, to confer with them on the subject of the house-drainage of the metropolis.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Marais, and Dr. Drysdale, New Zealand.—Received, with thanks.

A Student, wearied with the "introductory."—

"Whatever you have to say, my friend,
Whether witty, or grave, or gay,
Condense as much as ever you can,
And say in the readiest way."

Cyprus.—The epitaph on the coroner who put an end to his own existence was—

"He lived and died
By suicide."

Psychologist.—Eccentricity, it has been said, "is sometimes found connected with genius, but it does not live with true wisdom. Hence men of the first order of intellect have never betrayed it, and hence also men of secondary talents drop it as they grow wiser, and are satisfied to found their consequence on real and solid excellency, not on peculiarity and extravagance."

Practical.—In the consideration of the relation of facts to theory, Professor De Morgan, in his "Budget of Paradoxes," asks the question—"What are large collections of facts for? To make theories *from*, says Bacon; to try ready-made theories *by*, says the history of discovery; it's all the same, says the idolator; nonsense, say we!"

Seppens.—The first recorded facts undermining the old belief in "spontaneous generation" were those of Redi, published in 1638, leading to the first exact experiments in closed vessels of Needham in 1745, and of Spallanzani in 1765.

Alexis.—The joke of Dr. Johnson on Tom Davies, a bankrupt bookseller, who took to authorship, that he was "an author generated by the corruption of a bookseller," was no doubt a hint as to his connexion with Grub-street, through an allusion to the popular belief.

Edward Jenner.—A correspondent wishes to know if the illustrious discoverer of vaccination is likely to have left a son in most straitened circumstances, and, if so, about what age the gentleman would be.

Mr. Ford, Cambridge.—The physicians who attended Queen Caroline (1737) received 500 guineas each, and the surgeons 300.

John Williams, jun.—All candidates for the diploma of Membership of the College of Surgeons not possessing a recognised medical licence will have to undergo an examination in medicine by the examiners on that subject at the College. The Calendar of the College is just published the postage of it is 5d.

M.D.—No "rubber" or other quack was allowed to take part in the treatment of the illustrious lady.

Von Baer.—The first institution in this kingdom for the treatment of ophthalmic diseases was established by Dr. John Richard Farre with Mr. John Cunningham Saunders.

F. M.—Dr. Erasmus Darwin was a F.R.S. The lines will be found in the "Botanic Garden," canto ii.—

"Onward he steps; disease and death retire,
And murmuring demons hate him and admire."

X.—Sir James Paget, late President of the College, will deliver the Hunterian Oration in February next.

Bucks.—Dr. Martin Barry was adjudicated a medal by the Royal Society in 1839, for his papers entitled "Researches in Embryology," published in the *Philosophical Transactions* for 1838 and 1839.

COMMUNICATIONS have been received from—

Dr. Tidy, London; The Secretary of Apothecaries' Hall, London; Dr. Gairdner, Glasgow; The Secretary of the Harveian Society, London; Dr. Haldane, Edinburgh; Mr. Le Neve Foster, London; Dr. Althaus, London; Dr. Morell Mackenzie, London; Dr. Sparks, Honiton; Mr. Lowndes, Liverpool; Mr. Stone, London; Prof. Spence, Edinburgh; Mr. Morris, London; Dr. Brakenridge, Edinburgh; The Registrar-General, Edinburgh; Mr. Drury, London; Dr. Hitchcock, Greenwich; Messrs. Debenham, Tewson, and Farmer, London; Mr. E. Pope, London; The Secretary of the Medical Microscopical Society, London; Mr. J. Halliday Croom, Edinburgh; Mr. B. R. Wheatley, London; Dr. Thomas Savage, Birmingham; Dr. Dauitt, London; The Secretary of the Patuological Society, London; Mr. John Chatto, London; Dr. J. C. Ogilvie Will, Aberdeen.

BOOKS AND PAMPHLETS RECEIVED—

Tilbury Fox, M.D., Epitome of Skin Diseases—Thomas Dwight, M.D., The Anatomy of the Head—Sir John Rose Cormack, K.B., F.R.S.E., M.D., etc., Clinical Studies—George Paton, M.D., Researches on the Action and Sounds of the Heart—C. B. Taylor, M.D., Clinical Lecture on a Case of Cataract Extraction—Bernard E. Brodhurst, F.R.C.S., Lectures on Orthopædic Surgery—J. H. Baxter, A.M., M.D., Statistics Medical and Anthropological of the Provost-Marshal-General's Bureau, vols. i. and ii.—The Collected Works of Dr. P. M. Latham, vol. i.—Augustus J. Harvey, F.R.G.S., Intemperance in Food a National Vice—Andrew Buchanan, M.D., The University Court of the University of Glasgow—Erasmus Wilson, F.R.S., F.R.C.S., Healthy Skin—C. H. F. Routh, M.D., Infant Feeding and its Influence on Life—Charles S. Tomes, M.A., A Manual of Dental Anatomy—Jonathan Hutchinson, F.R.C.S., Illustrations of Clinical Surgery, fasciculus v.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Journal of Psychological Medicine and Mental Pathology—Indian Medical Gazette—The Shield—Calne Chronicle—Home Chronicler—Students' Journal.

APPOINTMENTS FOR THE WEEK.

October 14. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

16. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Opening Address by Mr. William Adams, the President.

17. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Patnological Society, 8½ p.m. Dr. Semple—Cases of Croup. Dr. Peacock—Medullary Sarcoma of Lung and Bronchial Glands causing Obliteration of Inferior Cava. Dr. Hilton Fagge—1. General Anchylosis of Ribs; 2. Aneurism of Pulmonary Artery in Vomica of Young Child; 3. Anteflexion of Uterus. Dr. Greenfield—Absence of One Kidney. Dr. Coupland—Absence of One Kidney. Dr. Cayley—Lymphadenoma of Stomach. Dr. P. Irvine—Aortic Aneurism. Mr. Butlin—Cancer of Bladder. Mr. Carr Jackson—Injury to Spine. Dr. Goodhart—Tumour from Upper Lip containing Cartilage. Mr. Barker—Popliteal Aneurism. Mr. Gould—Sarcoma of Thigh.

18. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. Dr. J. Milner Fothergill, "On Anhydrotics."

20. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Medical Microscopical Society, 8 p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 7, 1876.

BIRTHS.

Births of Boys, 1299; Girls, 1177; Total, 2476.
Average of 10 corresponding years 1866-75, 2156·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	629	580	1209
Average of the ten years 1866-75	670·1	628·4	1298·5
Average corrected to increased population ...	...	...	1389
Deaths of people aged 80 and upwards ...	...	...	34

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	3	...	...	1	4	1	6
North	751729	5	8	6	2	2	...	8	1	12
Central ...	334369	...	...	...	1	...	...	1	...	5
East	639111	...	3	18	...	3	2	1	2	7
South	967692	6	5	30	3	3	1	10	2	5
Total	3254260	11	19	57	6	8	4	24	6	35

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·756 in.
Mean temperature	58·0°
Highest point of thermometer	72·2°
Lowest point of thermometer	42·1°
Mean dew-point temperature	52·0°
General direction of wind	S.E. & S.W.
Whole amount of rain in the week	0·45 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 7, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Oct. 7.	Deaths Registered during the week ending Oct. 6.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2476	1209	72·2	42·1	58·0	14·44	0·45	1·14
Brighton	100632	42·7	64	34	69·0	48·9	59·2	15·11	0·06	0·15
Portsmouth ...	124867	27·8	70	45	65·0	52·0	58·2	14·55	0·80	2·03
Norwich	83430	11·2	49	44	71·8	43·0	57·2	14·00	0·53	1·35
Plymouth	72230	51·8	47	18	67·0	53·0	58·4	14·66	0·80	2·03
Bristol	199539	44·8	148	75	68·4	48·6	57·5	14·17	0·14	0·36
Wolverhampton ...	72549	21·4	51	31	67·2	42·0	54·3	12·39	0·47	1·19
Birmingham ...	371839	44·3	305	137	68·0	49·4	55·2	12·89	1·33	3·38
Leicester	113581	35·5	69	40	70·2	39·5	56·5	13·61	0·83	2·11
Nottingham ...	93627	46·9	44	31	69·5	40·0	54·7	12·61	1·87	4·75
Liverpool	521514	100·1	351	211	67·8	42·6	55·0	12·78	0·59	1·27
Manchester ...	357917	83·4	221	178	70·0	40·3	56·1	13·39	0·64	1·63
Salford	138425	26·8	147	69	69·6	38·1	55·2	12·89	0·86	2·18
Oldham	88609	19·0	84	41	...	...	...	...	...	...
Bradford	173723	24·1	144	59	65·0	42·0	52·1	11·17	1·34	3·40
Leeds	291589	13·5	251	117	68·0	40·0	53·0	11·67	1·67	4·24
Sheffield	274914	14·0	216	111	66·0	36·0	53·9	12·17	0·69	1·75
Hull	136933	37·7	124	53	67·0	41·0	55·2	12·89	1·32	3·35
Sunderland ...	108343	32·8	91	42	71·0	39·0	54·2	12·33	0·72	1·83
Newcastle-on-Tyne	139929	26·1	113	62	...	...	...	...	0·57	1·45
Edinburgh	215146	51·3	118	55	...	...	...	...	...	...
Glasgow	545144	90·4	364	225	62·8	40·5	52·9	11·61	1·43	3·63
Dublin	314666	31·3	141	96	68·4	47·5	57·5	14·17	0·72	1·83
Total of 23 Towns in United Kingdm	8028595	37·7	5688	2974	72·2	36·0	55·7	13·17	0·84	2·13

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·76 in. The lowest reading was 29·14 in. at the beginning of the week, and the highest 30·02 in. on Monday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE MEDICINE OF OUR TIME:

A LECTURE INTRODUCTORY TO THE COURSE ON THE PRINCIPLES AND PRACTICE OF MEDICINE TO BE DELIVERED DURING THE SESSION 1876-77.

By LIONEL S. BEALE, M.B., F.R.S.,

Professor of the Principles and Practice of Medicine in King's College, London, and Physician to King's College Hospital.

GENTLEMEN,—Although I am already well known to all of you, I cannot enter upon my new duties without taking up a few moments of our time in referring to matters which, though they be condemned as personal, may, nevertheless, be found not quite devoid of interest to you who are now in a position similar to that which I occupied just thirty years ago, when I attended my first course of lectures upon the Principles and Practice of Medicine in this College. Besides, a professor meeting his class for the first time, if he does not deliver a formal public inaugural lecture, will at least desire to say something by way of introduction to the great subject he has to teach. But I find myself in a position in many respects so exceptional, that I cannot forbear offering in addition a few general observations concerning the new work I have undertaken, and the chair of which I am to be for a time the unworthy occupant.

It has fallen to the lot of few public teachers to hold in succession three different professorships in the same College, and to still fewer to have been trained from boyhood in the institution in which their life's work was to be carried on. Here I have been for nearly forty years as schoolboy, student, and teacher. Well-nigh a quarter of a century has passed since I gave my first lecture as your Professor of Physiology. When I resigned that chair in 1869, the Council elected me to the Professorship of Pathological Anatomy then first established, and which, I am glad to say, is to be henceforth far better administered by my friend and colleague Professor Duffin.

It has, as you know, been my good fortune to have successively filled many posts in our College and Hospital, and it is remarkable that upon no single occasion have I succeeded on account of a vacancy caused by death. To the honour and satisfaction of holding an important appointment has invariably been added, in my case, the gratification of knowing that my predecessor had attained a higher and more advantageous position. In the present instance I am more fortunate than ever, inasmuch as we not only retain the services of my esteemed predecessor in this chair, but the school is strengthened by the foundation of a new professorship and the appointment of Dr. Johnson as first Professor of Clinical Medicine in King's College. By the new arrangement the Council have added to the many great advantages we already possessed for the successful prosecution of medical work in our Hospital, exceptionally well arranged for the purposes of clinical observation and instruction. If the present generation does not add to the numerous high honours in medicine already carried off by King's College men, the students cannot excuse themselves by pleading want of opportunity for clinical observation, or insufficient clinical instruction. You have undoubtedly to learn much more than was required of your predecessors, but it is equally certain that the facilities for gaining knowledge have increased, and in greater degree than the exactions of examining boards. We trust, then, that each member of our classes will make the most of the advantages offered, and do his utmost for the credit and honour of our Medical School, which is nearly fifty years old.

I propose now to say a few words upon medical science and practice, and it may be interesting if I refer briefly to some of the points in which the medicine of our time seems to contrast with the medicine of the past, and endeavour to indicate the particular direction in which, as it seems to me, medicine tends to advance, in the hope that we may be able to form an opinion regarding the main features in which the medicine of the future may be expected to surpass that which is now taught and practised. In the first place, it must be clear even to those who have little medical knowledge that in these days we are able to study and investigate disease more thoroughly and with greater precision than was possible even a few years ago. As a consequence, we have gained greater facility as well as increased accuracy of diagnosis, and we are able to impart to others a knowledge of the means by which such desirable ends are attained. For it is very certain that, as regards the wide diffusion of exact information, there is no comparison between the present time and the past. We can teach to others the principles by which we ourselves are guided in practice, and can give, at least in many instances, a clear account of the method we pursue in determining the nature of a particular malady; and we can, with some approach to clearness and accuracy, state the grounds upon which the particular plan of treatment we advocate is based. As scientific investigation advances—particularly the departments of physiology, minute anatomy, and minute pathological and therapeutical inquiry—will the probability of correct diagnosis in what are now considered doubtful and difficult cases be greater, and the confidence with which the practitioner carries out a definite line of treatment increased.

Even now, how many explanations which were formerly received as sufficient and final would be rejected as untenable by a second-year student! How different, too, is our method of teaching our profession nowadays from that relied upon by our predecessors in the last and early part of the present century! The medical teacher of that period would tell his pupils that he had been taught to treat this or that particular set of symptoms by such and such distinguished practitioner, and he would impress upon his hearers that such and such a drug cured such and such a malady. But if his practice seemed to fail—if the patient got worse instead of better, or died outright,—the treatment was not impugned, the physician's faith in it was not in the least degree shaken, but the result was attributed to some exceptional peculiarity of constitution of the patient, or to some other cause; and if the treatment failed in case after case, it was considered a proof that a change in the type of the disease had taken place. Bleeding, cupping, leeching, blistering, purging, lowering, might be followed by untoward results, but for a long time professional faith remained strong, and it is only within a comparatively recent period that we have dared to conclude that in many cases in which a lowering plan of treatment was followed the very opposite was indicated, and that patients who recovered, recovered in spite of, not in consequence of, the lowering treatment adopted.

But let us not boast of our new powers. Though we have, undoubtedly, advanced in medical knowledge, and enjoy considerable advantages on account of recent advances in scientific investigation, we have harder work to do. There is scarcely a medical question that does not require further investigation; and of the points considered settled, how many there are that will have to be further investigated, and the conclusions respecting them modified or changed! And though we have reason to be proud of the constant additions that are being made to our knowledge by self-denying workers, we must, at the same time, feel disappointed at the slow and slight influence which the results, for the most part, produce upon our practice. And it unfortunately sometimes happens that the men who are doing their utmost to advance knowledge do not have as much confidence reposed in them by patients as their more self-confident brethren, who convince themselves and their friends that they know all that is to be known. It is as remarkable now as it has been in all previous time, that the most thoughtful and best informed, as well as the most conscientious men, do not gain the confidence of the public, nor even of highly intellectual people, more readily than practitioners who are not equally burthened.

Nay, great lawyers skilled in the art of cross-examination and the extraction of truth have been led to rely upon the dogmatic assertions of quacks, and persuaded to reject the sound arguments propounded by highly intelligent, upright, well-informed men. At this very time we find side by side with intelligence, enlightenment, honesty, and devotion, the most abominable shams, mockery, and dishonesty. Nay, falsehood oftentimes seems to command more attention than truth; and too often pretence is believed, and honest statements doubted and suspected. But true and false systems are not peculiar to medicine. At this very time we have members of the British Association for the Advancement of Science investigating, or proposing to investigate, whether certain words written upon a slate were written with a pencil moved by the hand of a living man or by some spirit-scribe! There are even scientific authorities who are Fellows of the Royal Society who believe that chairs and other things will jump about, that human beings may pop out of one window and in at another

supported in the air, as well as a number of other things contrary to science, sense, and the experience of millions.

With the advance of knowledge we have to regret the advance of pretended knowledge—sham,—and it would almost seem that as truth spreads, imposture must also spread; and in matters medical we find now, as formerly, the quack may gain a high reputation and make a fortune, while clever, honest advisers may starve. I heartily wish we could with truth assert that it was only in the time of the Roman Empire that a certain class of practitioners brought the habits and arts of parasites into the medical profession—men supple and cringing, who studied even more to please than to relieve. Was it in that corrupt age only that the rich preferred practitioners under whom they could indulge every caprice, and in whom they could find apologists for habits and practices that were altogether bad? "What gives vogue to a physician," says Galen, "is not science, but skill in flattery. To him who is the best sycophant everything becomes easy; to him every door is open. In a short time he grows rich and powerful." Rome, too, like the great capitals of the modern world, had her ultra-specialists. Galen tells us that some confined their practice to the treatment of the uvula or the eyelashes; others attended to dropsy or fistulas. Some restricted themselves to the treatment of old men; others preferred to advise the strong and robust. Herbs were used by certain medical advisers, while others trusted only to gymnastic exercises, or were guided by the stars or dreams of their patients, or relied upon supernatural or mysterious agencies, and "all these folk had the presumption to call themselves physicians." But in those days, as in these, the intelligence, honesty, and earnestness of some in a measure checked the dishonesty, pretence, and selfish rapacity of others. Galen remarked that in his time the only difference between certain medical pretenders who dwelt in Rome and robbers who pursued their career upon the highway, was that the latter camped in the mountains and the former lived in the city. As the medical career became less honourable, the nobler minds ceased to be attracted to the pursuit of medicine as a profession. Practitioners became mere confident and vulgar braggarts, thought only of lucre, and studied to amass large fortunes by quackery and sycophancy.

To keep medicine pure, and to teach her followers to be high-minded, forbearing, and good, to encourage moral as well as intellectual ambition in those entering the profession, to teach them to choose a life of hardship in preference to one of success attained by unworthy means, as well as to encourage devotion to the work of advancing medical knowledge whenever circumstances were favourable, have always been considered to be among the duties of those to whom is entrusted the responsibility of teaching the young in an institution like ours; and I feel sure that in no school, ancient or modern, have more persistent efforts been made to give practical effect to these precepts than in King's College. More earnest teachers, more honourable practitioners, more upright men than those who have preceded me in this chair have never devoted themselves to the work of teaching the young. Long and honourably have they laboured to promote the best interests of medicine. Nay, they labour still, and the profession and this College have good reason to be thankful for the service they render and have rendered. Names more honoured than those of the four distinguished professors who have successively discharged the duties of this chair from the year 1830 to the present time are not to be found in any profession.

It is a matter of the highest gratification to me to commence my career as Professor of the Principles and Practice of Medicine during the lifetime of all former professors, and though I cannot hope to take the high position as a physician more than one of them have attained, I am sure I shall find them all among the most considerate of my critics, and ever ready to overlook the shortcomings of their latest successor. Dr. Francis Hawkins and Sir Thomas Watson taught here at the foundation of the College, now nearly half a century ago, and, full of years and honours, are, happily, still able to take an active part in the important work of legislating for the medical education.

There seems to be something in connexion with our Professorship of Medicine which favours health and longevity. For I remember, at our very last prize distribution, Lord Granville, who was in the chair, congratulated a former Professor of Medicine upon his health and vigour at the age, I think, of eighty-five; and I doubt whether there is not yet another who has attained, if he has not surpassed, that advanced age, and who, I think, must be in the possession of some wonderful secret remedy, which enables him to keep young in health and strength as years roll on.

Not a few of my colleagues, and several distinguished teachers in other schools, are deeply indebted to former Professors of Medicine of King's College, not only for early instruction and for counsel, but for having shown them what a physician ought to be. They have encouraged us to think and to work, and have impressed us with the importance of advancing and spreading medical knowledge, as well as of performing our duties to the sick with considerate care. We must never lose sight of the advancement of medical knowledge; for upon that depends the position which our profession takes in the intellectual world. It determines the kind of estimate that will be formed of us by the public. Thankful for care and kindness during sickness our patients will naturally feel, but we shall not be respected as were our forefathers unless at the same time many of us do our best to promote the application of scientific methods to medical inquiry, and take our part in the hard and unpaid work of scientific medical investigation, and thus become in every way as truly followers of science as those who profess to devote themselves exclusively to her service.

Of the teachers in our medical colleges and schools, how many have been successful in advancing our knowledge of the special subjects of which they had to treat. Not a few have been eminent as original investigators, and have helped in the scientific work by which the age in which they lived will ever after be known. Many of our most distinguished physicians and surgeons in days gone by have earned in science reputations as great as in their practical calling. Some practitioners have been great anatomists, others physiologists, others have studied and helped forward several departments of science—nay, there is not a branch of scientific information which has not been advanced by medical practitioners. And it is scarcely too much to say, that but for those members of the medical profession who have also been scientific investigators in many departments, British science would never have had any distinctive mark. And to me it seems certain that the influence and position of medicine in Great Britain will be maintained only so long as many members of it earn scientific reputations. If we had to take all our science second-hand, is it not obvious that the esteem in which the actual scientific investigator would be held by the public would be far higher than that entertained for us, of whom it would be said that we merely made use of and practically applied the discoveries made by other men?

It is by scientific inquiry that the greatest advances in medical work have in all ages been made; and every year we live, the dependence of the progress of medicine upon the progress of science becomes more and more manifest, and is more and more generally believed and acted upon. From time to time, no doubt, new remedies will be discovered, as many have already been, by accident or by experiments hardly to be correctly called scientific; but from this side we have, indeed, little to expect, compared with what we are certain to gain from the extension and development of various methods of scientific research. It is in this direction that medical work has been of late so manifestly tending, and, as Professor Baxter so eloquently told us yesterday, it is of the highest importance that we should all try to develope and encourage a scientific habit of mind.

But for many years past it has been only too evident that the tide of scientific distinction has been setting somewhat against us. Causes working in the profession, and more powerful agencies outside, have conspired to deter young practitioners from taking up scientific pursuits. There has been a strong effort to keep doctors to doctoring, to disparage the scientific labours of the scientific men in our profession, and to preserve scientific investigation as much as possible for those who take up science as a profession, and for others who are not engaged in medical work. Not a few of those who have endeavoured to lead opinion in this direction against us have been distinguished for their boastful proclamations about liberty of investigation, and the exceeding largeness of their views. What the scientific liberal may be in theory is not quite clear, but his practice seems to be based upon the doctrine that liberals ought to be liberal only to liberals. Men form societies and coteries for the purpose of exalting and spreading their own particular kind of truth, and for proclaiming that the truth taught by others is not truth at all. Science is to be a profession—a brotherhood,—and the workers and investigators are to constitute themselves into an

infallible conclave apart from men of other callings. The scientific caste is to be recruited by the introduction of those only who have been specially trained for scientific research. In this way the gate to the fields of science is to be locked, and there is to be but one key, which will always be in the possession of those self-styled high-priests of science who have of late years acquired such renown, and have assumed such high authority. They will take care that only those who will abjectly submit shall pass the portals of science. But science is free to all. If bars, and gates, and walls are erected they must be broken down. Men of every trade, profession, or calling are free to work at science; and though from time to time, and in certain places, exclusive cliques become powerful, the great body of scientific men spread over the world will interfere and restore the rights that have been unjustly seized.

Governments and individuals may endow research, but unendowed scientific workers and thinkers must be encouraged and protected in every possible way, for it is from such men, who are the last to seek for place and bow to the authority of the hour, that original work will come. It is miserable to hear the frequent cringing appeals and read the begging letters about "the endowment of research." The very last thing that is likely to be gained by endowment is discovery. Men are much more likely to discover if they are not paid. The value and importance of new work will probably be found to diminish as the rewards for original inquiry increase. Endowment would damage science in many ways, and it cannot be too widely known that many of those who have worked most successfully as original inquirers would have strongly objected to the proposals which have lately been made. Of all men, investigators and discoverers are the most independent. What they desire most is freedom,—thorough liberty to work when and how and where may seem best to them. What such men care for least is income, and what the majority would refuse with scorn would be the offer of a salary on condition that they devoted themselves to research. A man could not think exactly when his master might order him to do so, nor can he profitably work at original investigation for a stated number of hours per diem. He may, as the world would say, idle about for days, and suddenly wake up one night at the moment the means of pursuing a particular inquiry flashed, as it were, across his mind. He would get up, begin work at once, and go on, and on, and on, without rest, until the whole matter appeared pretty clear to him, and what remained to be done was mere laborious investigation. The idea of a man being paid for work like this, as if it were possible to measure it and find its value in money! Depend upon it, men who can advantageously prosecute research don't want to be paid for it. So strong is the longing to work, that such men are quite sure to find the means of living—and they want no more—in order that they may prosecute their inquiries. I have never come across an original investigator who was prevented from investigating by want of means. Plenty fancy they would make great discoveries if they had the means, but there is every reason to believe they are quite mistaken. I very much doubt whether a really original mind, that lives but to work and think, can help working and thinking. Everything will be made to give way to the prosecution of the dominant idea. Numerous instances convince us that the means, after all, is the least part of the business, and if there is sufficient strength of character to discover, there will be more than enough to find the means to do so. Every now and then one comes across a student who thinks himself a genius, and so, instead of being guided at the outset of his career by his teachers, he goes his own way, and wastes in what he dignifies by the name of original work the time that would be well spent in mastering the elements of anatomy and chemistry. In consequence, he gets rejected at his examination, and regards himself as an ill-used and blighted genius. The idea of a man who was able to intently devote himself to most difficult and laborious work not having strength of will to compel himself to master various subjects of study so that he might scrape through an ordinary examination! Our real investigators will think very little of such difficulties.

But of all the hindrances to scientific progress in medicine, the most unfortunate and the most serious will be found to be that which has arisen from the outcry recently made against all men who had to perform experiments upon living animals. People self-confident and most arbitrary, having no knowledge of science or respect for scientific methods, have not hesitated to publicly condemn as brutes some of the best of men, and to deliberately cause acute pain in the most sensitive of living beings, in order that they might not fail in their efforts to persuade the public that laws ought to be enacted which would prevent new information being gained in England from experiments upon the nerves of frogs and other animals.

Formerly cruel exhibitions were interfered with by law, upon the ground that by them the people were likely to be demoralised and degraded, because they might help to excite and encourage feelings which all right-minded persons would earnestly desire to repress, and because they outraged public morals. But in recent years a new principle upon which to ground legislation has been evolved and acted upon. The interests of the animal are henceforth to be paramount, and are to be forced under the notice of British law-makers. Though its sufferings might benefit an individual man, nay, even though humanity might reap great advantage, or even the lives of men be saved, the animal must be protected from pain!

In deference to the agitation of a few enthusiasts, wrongly represented to be public opinion, the English Legislature has been forced to pass laws by which severe punishment may be inflicted upon any scientific man who, without a licence, divides the nerve of a living frog or fish. Men may ill-use one another, and notably their wives, by violently crushing their muscles, stretching, tearing, or smashing their most delicate nerve-fibres, almost with impunity. Somewhat severe and not very gentle experiments, too, may be performed upon human beings who are not wives, at very moderate cost indeed. It appears that the hands and legs of a boy of fourteen may be tied together with his boot-laces, and the boy stripped naked, being thus prevented from inconveniently struggling, may be thrown upon a wasp's nest, and there successfully and severely stung. After having been left in that position for a sufficient time, he may be removed for the purpose of being carefully examined by the experimenters—all for the modest sum of 20s., in addition to 12s. 6d. for expenses! Now, if you tie up a frog with silken cords without being licensed, and place a particle of mustard upon one of his toes, or irritate one of his nerves, you may have to pay a penalty of £50!

But one must not be too hard in these philosophic days. Our legislators have probably been much affected by the new philosophy. Evolution teaches that man in his present state is but an animal, and exhibits distinct traces of his lowly origin. Man's derivation from creatures arboreal in their habits is considered as proved. These latter may be traced backwards through creatures of the frog type to certain molluscs. No wonder, therefore, that it has been deemed necessary, in accordance with modern discovery, to place men and frogs in the same category; for though frogs cannot make laws for men, men must remember that at an early period of development they actually possess many of the characteristics of the frog. Ought we not, therefore, to extend protection to the unfortunate descendants of the residue of the early frog community, who, failing to differentiate themselves into higher forms, were doomed to continue to develope frogs only—for, at one time, were not all frogs so nearly equal as to be indistinguishable from one another? Slight, and at that time inappreciable, advantages in the battles of frog-life led at last to those divergences in structure which culminated in the highest forms of present living things. Community of origin being acknowledged, philosophic man will regard with affection not only the lower creatures which are of use to him and are his companions, but he will revere his frogs, as the type without which neither they nor he would have existed. The solidarity of man and animals is acknowledged by all, and no government will long retain power that does not recognise this great principle and pass laws in accordance with the facts revealed by evolution. But we are only at the beginning of the construction of a code of new beneficent universal laws. Already the winkles, and the oysters, and the lobsters have organised a powerful political party, and a cry is ringing from the lowest deep, "Are we not also brethren?"

And now let me tell you in what way I propose we should employ the time allotted to the first few lectures of the course. I shall commence with some general remarks upon the maintenance of the healthy state, and refer very briefly to the influence of food, air, exercise, etc., upon the health. Then I shall direct your attention to some of the most common and most simple derangements from which we suffer. In this way I shall bring under your notice, very early in the course, not only matters connected with general pathology, but an

opportunity will be afforded me of discussing the first principles of treatment in a way that I think will be interesting to you. Lectures upon various inflammations and the several kinds of fevers will follow a few lectures upon the blood and blood diseases, and upon the nature of disease-germs. This will comprise the first part of my course "Upon Disturbances of the Health, not necessarily involving Structural Changes in Special Tissues and Organs." The second part will comprise the consideration of organic diseases, or of the structural changes in the several tissues and organs of the body, and the conditions which retard and favour their progress. In the proper place I shall allude to various instruments of use in medical diagnosis and treatment, and whenever I am able to do so shall show you the instruments, and explain the mode of using them.

Before I conclude, let me beg that you will all take notes. Indeed, I shall not regard anyone as properly attending my course who does not do so. There are different opinions concerning the usefulness of note-taking, and in some courses I think there are really valid objections; but as regards the course upon medicine these do not obtain. Do not suppose I advocate note-taking because I am vain enough to think that what I say deserves to be carefully recorded. Nothing of the kind. Nay, it is against my interests entirely, because by note-taking you will preserve all my mistakes; all my weak points will be exposed to adverse criticism. I beg you to take notes, because it gives you practice in condensing into as few words as possible the statements that are made and the arguments advanced; because it keeps your attention upon the subject of the lecture; because it enables you at any period of the course to recur to the subjects already discussed, and enables you, so to say, to take a general or bird's-eye view of a most extensive field of knowledge; and, lastly, because it gives you great facility in writing quickly, and, I hope, well—a matter of very great importance in these days of multitudinous examinations. I will do all I can to make my teaching of real use to you, but I can do little or nothing for you unless you take notes. Do not be influenced by idle discussions upon the uselessness of lectures, but gain knowledge in every way you can, and from all of us—not for the mere purpose of cram, to enable you to pass examinations (for public lecturers are not coaches), but in order to make yourselves good doctors, so that when the time comes you may be able to think over the cases that come before you to good purpose, diagnose them correctly, and act with judgment and discretion for the well-being of the suffering whom you are bound to help to the utmost of your power.

LECTURES ON THROAT DISEASES

(WITH ADDITIONAL NOTES),

DELIVERED AT THE LONDON HOSPITAL MEDICAL COLLEGE DURING THE SUMMER SESSION, 1876.

By MORELL MACKENZIE, M.D. Lond.

(Reported by Dr. Gordon Holmes.)

SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

Gentlemen,—The subject which I have to bring before your notice is one of considerable importance. The disease is common and very distressing to bear; it often obliges the patient to abstain from all convivial intercourse, makes life almost unendurable, and in some rare cases even ends fatally.

Etiology.—Spasm of the œsophagus, like other neuroses unattended with appreciable alterations of structure, occurs more commonly in the female than in the male sex. It is most frequent in young and delicate girls of the upper classes, but women of all ages and social conditions are liable to suffer from this complaint. It is often a symptom of hysteria. Those of the male sex who are attacked are always of a highly emotional and nervous temperament, and not unfrequently the subjects of hypochondriasis. The fear of hydrophobia has been known to produce it, the most remarkable instance(a) being that of a man who, returning to France after an absence of twenty years, heard that his brother had died from the effects of the bite of a dog, which had also bitten him. Shortly after hearing this news of his brother he was seized with spasmodic stricture, which quite prevented him swallowing, and he ultimately succumbed to the disease. Anæmia is very often present, and there is frequently some disorder of digestion. The late Dr. Brinton,(b) indeed, attributed many cases to the latter cause, and pointed out that spasm of the œsophagus was especially liable to occur where there was a gouty dyscrasia and an excessive acidity of the blood. This affection is apt to attack those who are in the habit of eructating wind. The spasm always comes on when the patient is no longer able to dispel the flatulence in the usual way. Middle-aged women are generally the subjects; and carminatives, by leading to expulsion of wind, soon effect a cure. It also occasionally appears to be due to a rheumatic affection of the muscular structure of the œsophagus. The disease is sometimes hereditary. I have at present under my care a young lady whose mother and grandmother both suffered from the malady. The spasm may be excited directly by some source of irritation within the tube, such as the temporary lodgment of a foreign body, or by irritation of the walls of the gullet—the bloodvessels being charged with acid salts; or the contractions may be due to reflex causes, such as disease or irritation of the gastro-intestinal canal, respiratory organs, heart, or reproductive system. It is frequently attributed to uterine irritation, and has been known to be caused by metritis,(c) and to disappear on the cure of that disease. I have met with two patients who always suffered when pregnant, but were relieved immediately after parturition. I have also seen one case in which the spasm came on whilst suckling, and recurred to such an extent at the birth of each child that the mother was always obliged to wean her infants. Howship(d) has related two remarkable cases in which disease of the stomach produced stricture of the œsophagus. In one of these the patient, a man, was treated by bougies for four months on account of stricture of the middle third of the œsophagus. After death no stricture was found, but the stomach was in a state of "fungous ulceration for a hand's breadth." In the other case a lady, aged sixty-nine, suffered from spasmodic stricture of the upper part of the œsophagus, which was relieved by the passage of bougies. The patient, however, still continued to vomit a glairy fluid, and to become progressively emaciated. At the post-mortem the stomach was found to be a mass of scirrhus, whilst the œsophagus was perfectly healthy. Bettali(e) has recorded a case in which the presence of tænia in the intestinal canal gave rise to spasm of the œsophagus; and Bouteille(f) refers to an instance in which the affection was caused by the presence of worms in the ear. In infants the troubles of dentition often give rise to severe and dangerous spasm of the glottis. It is occasionally associated with other diseases of the nervous system, as chorea, tetanus, epilepsy, and is the most prominent and fatal feature in hydrophobia.

Symptoms.—Dysphagia is always complained of. This is of a very varying intensity, from a slight feeling of difficulty in performing the act of deglutition, which can be overcome by a powerful effort of the will, to an almost total inability to swallow. In slight and recent cases solids or semi-solids are swallowed more easily than liquids, but as the disease becomes chronic fluids pass the more readily. The dysphagia also is more or less paroxysmal, and not continuous and progressive. Sometimes the patient will be able to eat with little or no difficulty, and again, shortly after she will scarcely be able to swallow at all. Another peculiarity is that the patient not only only says she cannot swallow, but generally has no inclination for food. In cases of organic stricture, on the other hand, the patient craves eagerly for food. Regurgitation, though more often wanting, is sometimes present, and, when it does occur, comes on immediately after swallowing, there being no appreciable interval as in organic stricture. The food under these circumstances is rejected with great force, so as to be sent quite beyond the mouth. Odynphagia is often present, especially in those cases connected with flatulent dyspepsia. Emaciation is often altogether wanting, and never bears any proportion to the duration and apparent severity of the obstruction; often, indeed, well-nourished women are met with who declare that they cannot swallow at all. Expectoration is almost always absent, and only exists in any degree in the rarest cases. There is seldom any alteration of the voice or cough, except when the spasm of the œsophagus is reflected from the larynx. A laryngoscopic examination should, however, be made in all cases to ascertain the condition of the wind-pipe.

Physical Signs.—Auscultation of the œsophagus often affords

(a) "Biblioth. Méd.," t. xxxix., p. 234.
(b) *Lancet*, 1866, pp. 2, 253.
(c) *Archives de Médecine*, t. xxxi., p. 474.
(d) "Practical Remarks on Indigestion." London. 1825.
(e) Velpeau, "Dict. de Médecine," art. "Œsophagus."
(f) *Idem.*

valuable information. Thus *the point of obstruction may be heard to vary in situation.* The first morsel may be arrested or retarded at the upper part of the œsophagus, whilst the second or third morsel is stopped two or three inches lower down; or whilst the act of deglutition is interrupted or delayed one moment, it may be performed perfectly the next. This is an absolute proof of the spasmodic character of the affection. Again, the morsel may be heard to be arrested or forced upwards for a second, and then to pass down the gullet. There is generally not nearly so much of the bubbling or gurgling sound as is met in organic stricture or œsophageal diverticula.(g) On passing a bougie, an obstruction will generally be felt in the region spasmodically contracted, but this can often be overcome by moderate force. Sometimes, however, the spasm is so tight that it cannot be overcome by anything short of violence. Several attempts should be made on different occasions to pass the instrument; and if possible a time should be selected for using the bougie when the patient is free from difficulty of swallowing. Sometimes a rapid attempt to pass the instrument will succeed when a more deliberate one fails. If the patient be placed under the influence of ether, all difficulty in passing the instrument will be removed.

Diagnosis.—The age and sex of the patient are usually of much aid in diagnosis. It is most common in young women between the ages of eighteen and thirty, but it often occurs in females between thirty and forty; and I lately treated two little girls for this affection, one of whom was aged nine, and the other eleven. The intermittency of the dysphagia, absence of emaciation, suddenness of regurgitation (when it occurs), and the fact that in most cases we can overcome the obstruction with the bougie, suffice to allow of a correct conclusion being drawn as to the nature of the case. Cases sometimes occur, however, in which the judgment must be suspended until the progress of the complaint clears up any doubt. The course of a malignant stricture is always progressive, whilst that of a spasmodic obstruction is variable and intermittent.

Pathology.—The affection consists essentially of a spastic contraction of the circular fibres of the muscular coat of the œsophagus. Its more frequent occurrence at the extremities of the tube is explained by the greater abundance and higher development of the circular fibres in those situations. The spasm is due to an excitation of the pharyngeal and œsophageal plexuses, induced in most cases by irritation of a branch of the vagus. A perverted or unstable condition of the nervous centres is doubtless necessary for its production, and hence the complaint occurs in connexion with hysterical and other nervous disorders. Owing to the wide distribution of the vagus, the irritation may be in the œsophagus itself, in the larynx or larger air-passages, in the lungs, or in the heart. It may proceed from some disturbed or diseased condition of the stomach or intestines, or of the other abdominal viscera. It may be caused by some alteration at the roots of the pneumogastric in the medulla oblongata. The origin of the pneumogastric being near the great vaso-motor centre, any lesion in that situation accounts also for the other phenomena of the hysterical condition—the coldness of hands and feet, the alternate flushing and blanching, the so-called "hysterical attacks," and the passage of large quantities of limpid urine. Dr. Brinton thought that in lithæmia the acid condition of the blood causes spasm of the œsophagus, in the same manner that it produces "cramp" in the legs, or numbness and formication in various parts of the body.

Prognosis.—The prognosis is generally very favourable in recent cases, but where the disease is of very long standing, like many other nervous affections it becomes intractable, is apt to lead to narrowing of the œsophagus, and probably either predisposes to cancer or determines the site of its development. The cure is often protracted, and relapses are apt to occur. Cases have been reported which have resulted in death, whilst no disease could be found in the œsophagus. Mr. Power relates a remarkable instance which was seen by several eminent members of the profession, in which the stricture was sufficiently severe to destroy the patient, a man aged forty-eight, by inanition, and yet after death no organic lesions whatever in or around the œsophagus could be found to account for the symptoms. Such cases are extremely rare, but the possibility of their occurrence should be borne in mind.

Treatment.—Whenever the cause, whether of constitutional or local origin, can be discovered, it should be removed. All reflex sources of irritation—especially those connected with the gastro-intestinal and uterine systems—should be most carefully sought out, and, if possible, got rid off. The nervous system must be braced up by moral, as well as by hygienic and medicinal agencies. It must not be forgotten that the hysterical disposition prevails in by far the largest number of cases. The mind should, if possible, be kept employed by regular and interesting occupation, or by change of scene and travel. Certain nervine tonics are specially valuable such as the valerianate of zinc. I generally give it in combination with assafœtida, but it acts very well alone.

The dietary in these cases is of the greatest importance. If the spasm is very severe, thickened liquids should be given, and it is well to bear in mind that warm drinks are much less apt to bring on spasm than cold ones, and in nine cases out of ten if the drink is sweetened it is better borne. Many patients discover these circumstances without medical advice. Gradually the food may be thickened, and panada(h) may be allowed. If the case progresses favourably, the patient will be able to return by degrees to ordinary diet. Stimulants should not as a rule be allowed, and all *piquant* food should be prohibited. It is the greatest mistake to force these patients to take solid food. They may sometimes be tricked out of their malady when it is slight and recent, but rough measures always fail.

As regards local treatment, much can be done with the continuous current. The electrode should be introduced into the œsophagus at least once a day, and kept in position as long as the patient can bear it. I generally use a ten- or twelve-celled battery. The application should be made soon after a meal, so that a considerable time may elapse between the treatment and the next time of deglutition. The muscles should also be galvanised externally. This treatment generally requires to be continued for some weeks or months. Sometimes great benefit, and indeed a complete cure, may be obtained by passing bougies. It is best to use an instrument with a metallic or ivory knob, and, if possible, to keep the extremity of the instrument opposite the seat of spasm. This treatment affords relief in the same way that passing a sound sometimes relieves irritability of the neck of the bladder. I have never obtained any satisfactory results from the application of stimulating or astringent solutions to the œsophageal mucous membrane. It has already been pointed out how easily those cases dependent on flatulent dyspepsia can be cured. It must not, however, be forgotten that in a large number of instances the dysphagia is a mere fancy, there being, in fact, no spasm. By passing a bougie and assuring the patient that there is no obstruction, such persons may sometimes become aware of the groundlessness of their sensations, but they are often more difficult to cure than true spasm.

Before dismissing the subject of œsophageal spasm I must briefly call your attention to what has been termed *dysphagia lusoria.* It has been stated that when the right subclavian artery is the last branch given off from the arch of the aorta, wending its way from the left to the right side of the chest, and passing either between the trachea and œsophagus, or between the vertebral column and the œsophagus, the gullet is occasionally compressed, and difficulty of swallowing thus produced. It is extremely doubtful, however whether the artery is capable of producing any appreciable effect in this way, unless it has undergone aneurismal dilatation.

(g) The so-called "globus hystericus," so frequently complained of by hysterical patients, is probably nothing more nor less than a passing spasm of the œsophagus. The patient complains that she feels "a ball" rise from under the breast-bone into the throat, where "it appears to stick," and produces a feeling of choking. Hamburger was the first to explain satisfactorily this phenomenon by auscultation. If a patient can be examined at the moment she experiences the sensation of "the ball" rising, on applying a stethoscope, a sudden contraction of the œsophagus and the ascent of a bubble of air will be heard. On the other hand, Rosenthal ("Handbuch der Diagnostik und Therapie der Nervenkrankheiten," p. 245) found in two cases that galvanisation of the hypoglossal nerve immediately inhibited the spasm of the œsophagus. He asserts that the "globus hystericus" is not really a cramp of the œsophageal muscles, because the patient can swallow whilst this phenomenon is present. Hamburger's observations, however, appear conclusive.

(h) Panada is generally made of chicken or some white meat, but mutton and beef may be employed. The essence of the meat should first be extracted, and the residue reduced to the finest pulp. The whole should then be mixed together and passed through a fine sieve. It should then be heated, and in the case of invalids should be served with fresh gravy.

THE ADDITION OF GLYCERINE TO GUM.—A little glycerine added to gum or glue is a great improvement, as it prevents the gum or glue from becoming brittle. It also prevents gummed labels having a tendency to curl up when being written on.—*Philadelphia Med. Times*, September 2.

ORIGINAL COMMUNICATIONS.

ON A CASE OF INTESTINAL PERFORATION FROM ULCERATION,

WITH ABDOMINAL TUMOUR OF OBSCURE ORIGIN.(a)

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The following case appears to me to be of considerable interest, both clinically and also from a pathological point of view. Clinically, owing to the scanty evidence that there was during life of the existence of any acute abdominal affection before perforation occurred; and pathologically, on account of the obscure nature of a tumour that was found to be present.

The patient was a married woman, forty-seven years of age, admitted into the Bristol General Hospital, March 30. Her history was the following:—An attack similar to the present first occurred five years ago, when there were considerable abdominal pain, and constipation lasting for ten days; injections were used, and she recovered. Since that time she had always more or less suffered from diarrhœa, which was painless and without any special peculiarities of the stools. About two years ago she had a second similar attack, when constipation lasted for about a week, and two months ago a third attack. Between these attacks of constipation, more or less diarrhœa was present. The patient had been losing flesh for the last few months. There was no history leading to a suspicion of syphilis.

The present illness began ten days before admission, with some chilliness for a night and a day, followed by sharp cutting pain across the epigastric and hypochondriac regions; this continued up to admission. Vomiting set in on the second day, and occurred after everything that was taken, the vomited matter being sometimes very offensive. Constipation was complete, and no flatus had been passed.

State on Admission.—When I saw the patient, she was lying comfortably on her back in bed; the legs were not drawn up, and she moved about freely without any expression of pain. There was no evidence of the so-called malignant cachexia; the patient was rather thin, but not markedly so; the face was of a fairly healthy aspect, and the expression of countenance was bright and cheerful, not indicative of the least anxiety or pain. She answered questions cheerfully, smiling when spoken to. The pulse was good, 96; temperature 97° (in the evening 99°). The tongue was clean; the skin warm and moist. The abdomen was very much distended, globular in form, without any peculiarities of surface; it was resonant all over, but a little defective over a small area in the hypogastrium; there seemed to be specially marked resonance along the course of the colon. There was nothing to be made out by palpation. There was entire absence of all pain and tenderness. Examination by rectum and vagina gave negative results, and I could discover no hernia. Soon after admission the patient vomited twice, and the vomited matter was said by the nurse to be brown and unpleasant; after that, however, the patient took her food and kept it down, sickness having entirely ceased.

It will be evident from the above description that there was a total absence of all acute symptoms. Ordered laudanum ℥xx. every four hours, hot fomentations to the abdomen, a simple enema as large in amount as possible, and spoon diet.

Next day (April 1) I saw the patient again. She said she felt rather better than the day before. Her general condition continued the same, and there were no fresh abdominal symptoms, no vomiting, no tenderness. An enema of three pints had been given without much difficulty, but nothing except a little flatus came away when it returned. Ordered the laudanum three times a day; an enema to be given night and morning, with a little castor oil in each.

At about 4 a.m. next day (April 2) sudden collapse set in, accompanied by all the symptoms of perforation, and the patient died at 11 a.m.

Post-mortem Examination, twenty-eight hours after Death.—The abdominal parietes were adherent to the great omentum, chiefly by old adhesions. The great omentum was spread out over the intestines, and was adherent in places to their surface, especially at the lower part of the abdomen. A tumour was seen in the hypogastric and lower umbilical regions, occupying the middle line, looking as if rising up amongst the intestines by which it was surrounded. At the upper part it approached the abdominal wall, and had given rise to the patch of diminished resonance noted during life. This tumour was perfectly symmetrical, placed with its long axis downwards; oval in shape, it was flattened antero-posteriorly, and measured four inches in length, three in width, and about two in thickness. As its upper part was seen amongst the intestines, its position and symmetrical appearance made it look not unlike the fundus of a pregnant uterus at about the fourth month. The great omentum was adherent to the upper border and sides of the tumour, and from the lower membranous adhesions passed down over the intestines, to be attached behind the pubes. On raising the omentum, fæces were seen in the abdominal cavity, especially at its lower part; and there was evidence of very intense inflammation. All the intestines were much distended as far as the lower part of the ascending colon: from that part to the end the large intestine was empty and covered by the other intestines. There was intense inflammatory injection of the peritoneum covering the intestines in the lower part of the abdomen; flakes of recent lymph were adherent to the intestines, the folds of which were glued together by it, but were easily separated. There was very little turbid fluid in the cavity. The peritoneal surface of the cæcum and the contiguous part of the colon was intensely congested and thickly mottled with dark ecchymoses and greyish-black gangrenous patches. A patch at the back of the colon, about three-fourths of an inch in diameter, had sloughed out, and from this hole fæces freely oozed. All the fæcal matter was quite fluid, no scybala being present. The lower part of the ileum was much inflamed externally. On opening the intestine, the mucous membrane of the ileum, chiefly at the lower part, was found to be considerably inflamed, with crimson injection of the surface. Peyer's patches at the lower end of the ileum looked slightly swollen, but were not ulcerated. The mucous membrane of the whole of the cæcum and the adjacent part of the colon was intensely inflamed, and there were gangrenous ulcers on the surface, with sloughy and blackly ecchymosed bases and edges. An opening about three-quarters of an inch in diameter showed where one of these ulcers had given way, and thus allowed escape of fæces; there was a tract of old ulceration, and the mucous membrane was thickened. The tumour was found to be attached to a narrow pedicle pressing directly downwards from its lower aspect; and this pedicle, at first sight, appeared to be connected with the end of the vermiform appendix. This pedicle was about one inch and a quarter long, and was twisted on itself so as to cause strangulation of the part attached to the tumour, and hence of the tumour itself; up to the twist the pedicle was normal in appearance, but beyond was of a dark purplish colour, and purple lines radiated from its attachment to the tumour over the lower part of the latter. The close adhesions of the tumour to adjacent parts would have prevented it from rotating on its own axis, and thus becoming strangulated, and this condition must therefore have been produced by twist of the other end of the pedicle, owing to the movements of the distended intestines, while the tumour itself kept its original position. On careful examination of the pedicle, I incline to the view that the attachment of the vermiform appendix to it was merely an accident, and that the growth originated from the mesentery. The appendix was pervious for two inches, and quite healthy, beyond that it apparently ceased, and the bulk of the pedicle seemed to be composed of tissue continuous with the mesentery; the only bloodvessel of any size that I could find also ran along the mesentery to enter the pedicle. Just beyond the end of the appendix there was, however, a small cyst in the pedicle containing fluid, which might be taken to represent a piece of the appendix cut off from the rest; if so, the hypothesis would suggest itself that a similar dilatation of the extremity might have been concerned in the production of the tumour. However, I think the balance of anatomical evidence was in favour of the origin of the growth from the mesentery. On section, the tumour was found to be a cyst, with walls varying in thickness from one-eighth of an inch to an inch and an eighth, very firm, and composed of laminæ of tough fibrous tissue, in some parts arranged somewhat concentrically, in others looking as if crumpled up and put inside the capsule. A thick fibrous capsule, covered by peritoneum, bounded the tumour, and the inner aspect of the wall was lined by a smooth

(a) Read before the Bristol Medico-Chirurgical Society.

membrane. On the inner surface of the latter were several small whitish elevations, which appeared to be cysts that had undergone degeneration, and contained calcareous particles. The cavity of the cyst was full of a brownish chocolate-coloured paste, in which glittering points were visible. The cyst was of irregular shape internally, owing to the projection into its cavity of thickened parts of the wall.

Microscopical Examination.—The paste contained in the cyst I found to consist chiefly of granular matter and fat globules, amongst which were numerous cholesterine crystals that had caused the glittering appearance. The cyst-wall, made up of the lamellæ before described, was chiefly composed of fibrous tissue; in some parts well formed and arranged in the characteristic wavy bundles of large fibres, in other parts very finely fibrillated, and in others simply structureless and finely granular. In the meshes of this tissue were scattered a few small round granular cells, apparently broken down, and fatty; more or less granular fatty degeneration was also visible in the sections. I could find no trace of muscular fibre in the outer layers, such as might have existed if the tumour had originated in the vermiform appendix. The minute cysts on the inner aspect of the wall contained granular *débris*, calcareous particles, and cholesterine crystals. I could nowhere discover any characteristic hydatid structure.

The chief clinical interest of this case appears to me to be in the entire absence of all acute symptoms of abdominal mischief up to the occurrence of perforation. As to the tumour, I do not think that that was in any way connected with the symptoms or with the fatal result. From a consideration of the history and the symptoms, I concluded that no acute abdominal affection was present—hernia, internal strangulation, intussusception, and acute enteritis from any other cause seemed to be excluded by the total absence of urgent indications; the absence of vomiting, the absence of tenderness, a clean tongue, a good pulse, a cheerful and fairly healthy aspect, seemed to negative the existence of these conditions. There remained the causes of chronic or non-acute obstruction, chiefly stricture and fæcal accumulation. With regard to stricture, gradually produced and suddenly obstructed, the history of chronic diarrhœa was the chief point in favour of this condition. But on the other hand, there were no stricture to be discovered, no specific history, no malignant cachexia, no peculiarities of the stools; and the history of repeated attacks did not favour the supposition, for I believe that obstruction of some duration, due to a narrowing stricture, would not occur three times during a period of five years, and each time be overcome. We know that generally obstruction from stricture once established is permanent. Pelvic examination gave no indication of any tumour outside the gut pressing on its lower end.

Having thus eliminated the above conditions, I concluded that in all probability the obstruction was due to fæcal accumulation; the history was certainly in favour of this view—several previous attacks of constipation, lasting from seven to ten days, not accompanied by acute symptoms, and the obstruction entirely passing off after use of enemata. The diarrhœa to which the patient was subject was the chief point against this conclusion, but it seemed probable that there might be, as there is in some cases, an alternation of diarrhœa with constipation.

The post-mortem examination showed that acute enteritis alone was the cause of the obstruction, as the inflamed tract of intestine no longer continued its peristaltic action. Ulceration had set up enteritis of a very intense character, and this condition must have been present at the time that there was a total absence of acute symptoms. There was no evidence of the existence of any other condition that could have caused obstruction. I believe also that there must have been considerable peritonitis existing at the same time, for it is not easy to see how enteritis affecting the whole thickness of the gut could have been present without it, and the lymph that glued the intestines together was so copious and well formed that it could hardly have been deposited only during the seven hours that intervened between the occurrence of perforation and the death of the patient. On this point, however, I cannot be certain, as, after operations for hernia, lymph is found sometimes within a few hours. The presence of old adhesions showed that peritonitis must have been present in previous attacks, which, according to the patient's account, were not accompanied by any marked acute symptoms.

We know that in some cases local symptoms may be almost absent when we have some acute abdominal mischief to deal with, but usually in such cases the general state of the patient would indicate the existence of very serious disease; whereas here both the local symptoms and the general condition were the reverse of those characteristic of the affection.

This case also illustrates a point in the treatment of intestinal obstruction—that in all cases it is prudent to avoid giving purgatives by the mouth, inasmuch as the symptoms may not indicate the gravity of the actual condition.

As to the tumour—how and where did it originate, and what was its primary nature? The character of the cyst-contents justifies the conclusion that they are altered blood; and I am inclined to think that the bulk of the tumour originated in a blood-clot, the fibrin from which has been deposited in more or less concentric laminæ, as occurs sometimes in hæmatocele, and more often in aneurism, while the rest of the effused blood has remained as the chocolate-coloured cyst-contents.

Supposing the tumour to be chiefly altered blood-clot, where did the hæmorrhage occur—whether into the cavity of a pre-existing cyst, or into the meshes of the mesenteric tissue? On this point I regret that I cannot satisfy myself. The structure, naked-eye and microscopic, does not throw much light upon the question; as there is no evidence of the existence of any new growth, properly so-called, this is so far in favour of the theory that this tumour originated as a blood-clot simply—but the retrogressive changes may have obliterated characteristics that were present at an earlier stage. Rokitansky describes a condition where the vermiform appendix gets blocked up and dilates into a kind of dropsical pouch: suppose that to have taken place, and hæmorrhage to have occurred into the cyst thus formed, we might have some such result as existed here. The greater part of the appendix is pervious and quite healthy, however, and, as I before said, the balance of anatomical evidence is against the view that this tumour originated in the appendix. Beyond this I cannot go in tracing the history of this very interesting pathological specimen.

4, Pembroke-road, Clifton.

TWO CASES OF RECOVERY FROM ASCITES.

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The two following cases were under treatment at the same time in the Royal Southern Hospital; both recovered.

The first case was that of William D., a man of colour, aged forty-five, who had acted as a ship's cook. He was admitted on September 23, 1875, and gave the following history:—He had followed the sea since he was twenty years old, and had been always fairly well up to twelve months before admission, when he began to suffer from shortness of breath, loss of appetite, and much pain over the liver. About six months subsequently, during a voyage to St. John's, he noticed, in addition to the above-named symptoms, that the right ankle first, and a day or two after the left one also, began to swell; that the urine became scanty; and a week later that the abdomen was enlarging. The breath became exceedingly short, and in consequence of it and of the dropsy he was sometimes unable to get about during the home voyage. He had had no treatment on board ship, but since arriving in Liverpool two months ago had taken medicine. His habits, he asserted, had always been strictly temperate.

On admission, he was suffering so greatly—the legs and thighs being very œdematous, the abdomen enormously distended, and the dyspnœa extremely urgent—that I was obliged to have paracentesis performed the same day. The breathlessness was almost entirely due to the mechanical pressure by the fluid, for there was scarcely any cough, and but a few faint râles heard on auscultation. The tongue, too, was moist and fairly clean; the pulse not hurried, and otherwise natural; the bowels acting regularly; and the urine, though scanty and turbid, free from albumen and bile. At the first tapping, fourteen pints of clear straw-coloured fluid were drawn off. Re-accumulation took place rapidly, and the operation had again to be performed in thirteen days—viz., on October 6. For the first week a diuretic mixture, containing the acetate and iodide of potassium in acetate of ammonium mixture, was given to him; and in addition, on the 19th, an ointment composed of equal parts of the mercury and iodine ointments was applied daily to the surface of the abdomen,

which was then swathed round with a flannel bandage. The night and morning urine during this period varied from twenty to thirty ounces. The fluid in the abdomen was steadily re-accumulating, and, in hopes of still further increasing the secretion of urine, copaiba in the form of capsules, one three times a day, was ordered on the 23rd instead of his mixture. On October 30, tapping had to be performed for the third time, fifteen pints being drawn off. He vomited shortly after the operation, and next day complained of feeling weak, but there was no fever; and a little pain beneath the liver, of which he had complained, disappeared. But little if any effect had been produced on the quantity of urine by the copaiba, even though after three days the dose was increased to two capsules. The second day after the operation its employment was resumed, but as he complained much of its nauseating him, it was omitted on November 4, and quinine and iron administered instead (quin. sulph. gr. j., tinct. ferri sesquichlor. ℥xv., aquæ ad ℥j.) three times daily. This was persevered with during the remainder of his stay in the hospital. He speedily began to improve. The urine was increased in quantity, from forty to forty-three ounces, being passed every night and morning, instead of from twenty to thirty ounces, as before; the appetite improved; the œdema of feet and legs diminished; and although fluid again collected in the abdomen, it did so much more slowly than before, and it was not until December 6 that it became necessary again to remove it, nine pints and a half being then drawn off. The urine continued to be secreted in greater abundance, and no further accumulation of abdominal fluid took place. On December 13 he asked permission to have coffee for his breakfast, and the use of this beverage seemed still further to increase the secretion of urine. He was kept in hospital until January 13, 1876, when, as there was no sign of re-accumulation, he was sent to the Woolton Convalescent Hospital. On his return, at the expiration of three weeks, I carefully examined him, as I had done before he left the hospital, and found, as on that occasion, that there was complete resonance over the abdomen down to the lowest point of either flank. The vertical measurement of hepatic dulness in the right nipple line was four inches. No nodulation of the margin of the liver could be detected. The girth of the abdomen one inch above the umbilicus was thirty-three inches and one-third. The patient went to sea apparently quite well.

The second case was that of J. L., a discharged soldier, aged thirty-six, employed up to the time of his illness as a porter. He had served in the army for fourteen years in various parts of the world, including India, the Bermudas, and the Mauritius, but with the exception of rheumatism, from which he had suffered at Halifax, U.S., some years ago, and diarrhœa, which had troubled him for about two months before he observed any swelling, he had always been well. He has had no vomiting of blood or other matter, and has never had hæmorrhoids. His present illness, according to his own belief, began eight days before admission, when he suffered from slight chills, and at the same time observed that his left ankle was swollen, and three days later that his abdomen was also larger than natural. When admitted, on November 4, 1875, his arms and all the upper part of the body, and the face, were thin, the cheeks being hollow, but having a high, though somewhat dusky, colour. The superficial veins of the chest and abdomen were much enlarged. There was no particular shortness of breath so long as he was resting. The lungs and heart were healthy, though much interfered with by the pressure of the fluid. The apex-beat was felt half an inch vertically below the left nipple. The tongue was clean, and he had a fair appetite and no nausea. The peritoneal cavity was tightly distended with fluid, the girth of the abdomen three inches and a half above the umbilicus being thirty-seven inches. During the first night only twelve ounces of urine were passed; this was clear, high-coloured, specific gravity 1025, and free from albumen and bile. He was placed on a milk diet, and on the fourth day after admission had fifteen grains of the extract of the resin of copaiba given to him three times daily in the following mixture:—Ext. resin. copaibæ ʒiij., sp. vini rect. ʒv., sp. chloroformi ʒj., mucilaginis acaciæ ʒij., aquæ ad ʒxij.; ʒj. ter in die. The extract was thrown down on the mixture being left to stand, and much time was taken up in diffusing it by shaking when each dose was given. It was varied, therefore, in the following way:—Ext. resin. copaibæ ʒiij., liq. potassæ ʒjss., mucilaginis ʒiij., aq. cinnamonii ad ʒxij.; ʒj. ter in die. In a day or two after commencing the copaiba extract the urine became much increased in quantity—viz., from thirty-nine ounces on November 9 to fifty-four on the 11th, and eighty-three ounces on the 15th. In consequence, however, of the great trouble experienced by the dispenser in compounding the medicine according to either formula, each mixture taking him half an hour, I prescribed it in the form of pills; but as the quantity of urine began at once to diminish, there being only thirty-eight ounces on the 19th, as compared with fifty-three ounces on the day previously, the capsules of copaiba were substituted. One of these was given three times daily during the first week, and after that two. The day after commencing these, seventy-four ounces of urine were voided. On the 25th his girth was still thirty-seven inches, and the same on the 29th, although he felt himself much easier, and could stoop better. Slight nausea was experienced on commencing the two capsules, but this soon passed off. Their use was continued until December 20, when they were temporarily discontinued, owing to vomiting. On the 23rd he resumed them, taking one three times daily. On the 27th he was again measured, the girth at the umbilicus being thirty-eight inches. On January 3, 1876, an ointment composed of equal parts of mercury and iodine ointment, mixed with a quantity of benzoated lard equal to that of both together, was spread over the abdomen, which was then swathed round with a large piece of lint. As the ointment caused some soreness after three days' use, it was still further diluted, the quantity of lard being doubled. The fluid began now rapidly to disappear. On the 10th the abdomen was quite soft and flat, and bagging out at the flanks. A clear percussion note was heard as low as the umbilicus, and the patient could move about and stoop with great facility. He continued to improve, and after having been for some time free from ascites, was sent to the Woolton Convalescent Hospital on March 2, 1876. He was examined before setting out, and again in three weeks' time after returning. The results were the same. There was no indication whatever of fluid in the peritoneal cavity. It was impossible to feel the edge of the liver. As the vertical dulness in the right nipple line was only two inches and two-thirds, it seemed probable that contraction of the organ had taken place. On his return from Woolton he looked and felt remarkably well, and returned at once to his work, since which time I have seen nothing of him.

These were two cases of pure ascites, uncomplicated by heart, kidney, lung, or stomach disease; but whether caused by a cirrhosed condition of the liver, was not clear from the history and physical examination, though this was rendered probable from other considerations. The dropsy was obviously not due to any irritation or inflammation of the peritoneum, of which there was at no time any indication. It is difficult, indeed, to assign any other cause for it than that of some change within the liver, which, by causing compression of the portal vessels, produced obstruction to the passage of blood through them, and hence dropsy; and the most probable change, in view of the signs and symptoms, positive and negative, is the pathological condition known as cirrhosis.

I am unprepared to hazard any opinion as to the special influence of the remedies employed. One thing, however, is certain—both men, from being entirely incapacitated, became strong, and able to work as well as ever.

I have since made some experiments on the action of copaiba extract when taken in the form of pill, which have led me to think that if I had persevered with its use in J. L.'s case, the secretion of urine, though at first diminished, would after a day or two have been increased. Thus, I gave it in doses of seven grains and a half three times daily to a stout man who was suffering from erythema of the single leg left to him, but was otherwise healthy. I confined him to bed, and had the fluid which he drank carefully measured. It amounted to two pints and a half daily. The urine for the twenty-four hours immediately preceding the employment of the medicine amounted to twenty-two ounces, and had the following characters:—It was acid, of a rather pale straw colour, had a light deposit of mucus, specific gravity 1019; the total solids amounted to 16·25 grammes, of which 11·7 grammes were organic, and 4·55 grammes inorganic; the urea amounted to 10·4 grammes.

During the next twenty-four hours he took three doses of the medicine, but the quantity of urine only rose to thirty-eight ounces. Its specific gravity was 1017; otherwise it resembled that of the day before. Total solids, 24·3 grammes—organic 15·975 grammes, inorganic 8·325 grammes; urea, 15·19 grammes. On the 22nd, forty-six ounces were passed,

specific gravity 1012; on the 23rd, sixty-four ounces; and on the 24th, seventy-four ounces, specific gravity 1014; This last urine contained 40·48 grammes of solids, of which 18·48 grammes were organic, and 22 grammes inorganic; the urea amounted to eighteen grammes. The medicine was continued up to July 30; the quantity of urine during the last twenty-four hours of its employment being eighty-two ounces. Immediately after ceasing to administer the copaiba the amount again fell. A noteworthy fact seems to be the disproportionate increase in the amount of inorganic solids eliminated under the use of the medicine, as compared with that of the organic products. Thus, during the first twenty-four hours the salts were nearly doubled in amount, while the organic solids were only increased by about a third, being still, however, considerably in excess of the inorganic. At the third estimation the latter were actually in excess, and were just four times what they were before the medicine was commenced; while the urea had only increased by four-fifths—viz., from 10·4 grammes to 18·48 grammes.

NOTES OF A CASE OF

PHOSPHORUS-POISONING SUCCESSFULLY TREATED

IN THE LUCEA PAROCHIAL HOSPITAL, JAMAICA.

By J. HOYSTED COURTENAY, L.K.Q.C.P., L.R.C.S.I.,
Government Medical Officer.

The scarcity of recorded cases of phosphorus-poisoning, either accidentally or criminally, and the uncertainty of treatment which must result from the indefinite and not at all hopeful remedies suggested in the various text-books, has induced me to write the following notes of a case successfully treated in my own hospital:—

On the morning of June 7, 1876, I received a hasty summons requesting my immediate attendance at the Lucea Hospital, as a child had been admitted suffering from the effects of a dose of poison. On arriving at the hospital the parents of the child, who had come with her, informed me that early that morning they had gone out to work and taken their child with them. While they were engaged in the field the child picked up two pieces of guava and ate them, and just as she had finished the second piece, and was proceeding to eat more, her mother came up and took the remaining piece of guava out of her hand. Immediately suspecting the object with which the guavas had been laid in the cane-field—namely, for poisoning the rats which abound there—on making inquiry the overseer confirmed the suspicion that the guavas were poisoned, and ordered the child to be taken at once to my hospital. On my first examining the child, the only indications present were extreme weakness, she being unable to walk without support; a dry, parched condition of tongue, and intense thirst. I commenced treatment by giving four-grain doses of sulphate of zinc, repeated every ten minutes until copious vomiting ensued. The vomited matter emitted the distinct phosphoric odour, and presented the characteristic luminosity of appearance of phosphorus when viewed in the dark. I next ordered quantities of demulcent drinks to be given. No urgent symptoms being now present, I left my little patient for about an hour and a half, and on my return I was distressed to find that during my absence the following changes had taken place:—The pupils of both eyes were greatly contracted; the temperature was exceedingly high; the pulse of a weak, thready character; and the child had relapsed into a state of semi-consciousness, broken only when fluids were given to relieve her thirst, which appeared insatiable. I immediately ordered a draught containing two drachms of castor oil and one drachm of spirit of turpentine to be given, this to be repeated every four hours, and in the intervals a draught composed of carbonate of magnesia, olive oil, and mucilage of gum acacia, to be given every two hours. Under this treatment the child improved considerably towards evening, having passed a number of tarry, very offensive evacuations. I ordered the draughts to be continued regularly during the night, and I was pleased to find on visiting the hospital next morning that the condition of the child was considerably improved. The pulse, though still very rapid, was much stronger, the evacuations of a much healthier character, the temperature decreased, and the pupils were now only slightly contracted. I now reduced the turpentine from one-drachm to half-drachm doses, continuing the magnesia draughts and in two days after this the child was so far recovered as to be in a fit state to be discharged from the hospital. I have since had an opportunity of seeing the child, and her appearance warrants my conclusion of her recovery being a complete one. I may mention that the child was between two and three years of age.

These very imperfect notes are merely written with the object and hope that the subject-matter of them may call attention to the treatment of such cases, and may induce others to publish the results of their experience.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE MIDDLESEX HOSPITAL.

CASES UNDER THE CARE OF MR. HULKE.

Case 1.—*Dislocation of the Foot backwards, with Fracture of the Fibula.*

Next in frequency to the outward luxation of the foot associated with Pott's fracture, statistics show that displacements of the astragalus, either in its entirety, or, when broken, of considerable fragments of it, are the most common luxations about the ankle-joint. In the following case the astragalus retained its normal relations with the bones of the leg, but the foot was thrust backwards beneath it.

A porter, aged thirty-three, being knocked down by a cab, twisted his left foot. Admitted soon afterwards into Broderipp ward, the house-surgeon found the foot fixed in flexion, with the toes pointed, the heel unnaturally long, and the instep correspondingly short. The convex, anterior, articular surface of the astragalus was conspicuously apparent through the greatly stretched skin, forming a very obvious projection, from which the contour of the dorsum pedis fell abruptly to the metatarsus. The body of the astragalus maintained its normal position between the malleoli, and the backward displacement of the foot was manifestly not at the ankle, but at the calcaneo-talar articulation. The leg was bent and fixed. Traction was made on the foot, then this was extended and drawn forwards, whilst the projecting head of the astragalus was pushed backwards. Reduction was easy. The foot and leg were fixed upon a splint, and the ankle covered with an ice-bag. The inflammatory swelling, never very great, soon subsided. After a few days a plaster-of-Paris bandage was substituted for the splint, and at the end of a month this was replaced by mole-skin strapping. A week later he went home When last seen, about two months after the accident, a slight stiffness was the only apparent trace of the injury.

Case 2.—*Lateral Dislocation of Tibia inwards at Knee.*

Dislocations of the knee, if we except those which are complicated with extensive lacerations and with fractures, such as are caused by machinery, are very rare accidents. When the extent of the articular surface is remembered, it seems scarcely possible for complete dislocation to happen without extensive tearing of the skin; yet cases of this kind, thoroughly authenticated, have been recorded—two by Pitha in the *Allgem. Chir.* In this case the luxation was incomplete, and the patient recovered as rapidly as after the more severe injuries described by Pitha.

A plumber, aged forty, treading upon a piece of orange-peel, slipped and fell, twisting his left leg beneath him. Being disabled, he was at once (February 15, 1876) brought to the hospital, where the House-Surgeon found the head of the tumour luxated inwards. The knee was fixed in extension. The inner tuberosity of the tibia projected strongly inwards beyond the contour of the corresponding femoral condyle, and the form of the inner division of the articular surface could be plainly discerned. Reduction was effected without difficulty by traction and manipulation. The injury was followed by less inflammatory reaction than might have been anticipated, and the patient was able to be discharged about three weeks after.

Case 3.—*Fracture of both Humeri, and Laceration of the Left Brachial Artery and of the Median and Radial Nerves—Rupture of the Quadriceps Tendon in Left Thigh.*

In the following case the absence of arterial pulse below

the seat of the fracture, the large extravasation of blood here, and the occasion of the accident, afforded a very strong presumption that the brachial artery was torn through, which raised the question of operative interference; but, as the extravasation did not increase, and as the artery was probably torn quite across—its ends, therefore, being free to contract and to retract,—and as collateral circulation is very readily set up in the forearm, and gangrene less to be apprehended, it was judged prudent not to interfere—a course which was justified by the result.

A silver polisher, aged thirty-one, was admitted into Broderipp ward, February 8, 1876, with injuries caused by a revolving wheel which, catching his shirt, drew in his arms and whirled him round, it was thought, fifty times, his legs striking the ceiling and floor, before the machine could be stopped. The right humerus was broken at its middle, and the left in its lower third. Both forearms were very much grazed and ecchymosed, especially their flexor surfaces. Sensation was absent from those parts of the hand and the fingers supplied by the median and radial nerves. No pulsation could be felt at the wrist in the left ulnar and radial arteries. The brachial artery was felt pulsating as low as the fracture, where there was a very considerable extravasation of blood; but below this no pulsation was perceptible. The hand and forearm were cold. Opposite the fracture at the inner side of the arm was a small wound, from which venous blood oozed freely. Those parts of the thumb and of the fingers corresponding to the distribution of the median nerve were devoid of sensitiveness. His left knee was distended. Immediately above its patella was a large gape, plainly a rent across the quadriceps tendon, and both legs and ankles were bruised and grazed. The shock was less than might have been expected with so many and such severe injuries; but, as was noticed throughout his stay in the hospital, he was of a very cheerful and calm temperament.

The fractures were set and splints applied to the arms, and the left forearm was wrapped in cotton-wool. A back-splint was put on the left thigh and leg, and an ice-bag placed on the knee. Next day a very feeble pulse was detected in both the radial and the ulnar artery at the left wrist. The circulation in the forearm became re-established; the fractures united. His left thigh and leg were put into a gypsum bandage, and on March 23 he was able to leave his bed. He was made an out-patient on April 3 following, having then free use of his right arm; stiffness of the left elbow, which was daily lessening under passive exercise; and some return of sensitiveness and of power in the numbed thumb and fingers. He came every morning to have the left forearm faradised, and, in fine, he had regained much power in his hand and fingers, and their sensibility was much greater. His knee had quite recovered; he walked without any limp.

Case 4.—Fracture of the Os Calcis.

A carman, aged fifty-three, admitted December 17, 1871. Fell off a ladder about ten feet high, alighting on his heels. When taken into the hospital soon after, the right heel was swollen and ecchymosed, and a fracture was plainly made out, splitting off the tuberosity of the os calcis. The direction of the split seemed to run downwards and forwards. The heel and foot were immovably fixed with a plaster-of-Paris bandage, provided with an opening over which an ice-bag was laid.

January 5, 1875.—He left the hospital. The broken-off piece had firmly united, and he walked well.

Case 5.—Dislocation of the Sternal End of the Collar-Bone forwards.

The sterno-clavicular joint, like the similarly constructed temporo-mandibular joint, enjoys a remarkable immunity from disease; and, considering how greatly it is exposed to sudden and violent pressure, a scarcely less striking exemption from luxations. Of the three recognised forms of luxation—backwards, forwards, and inwards—the first is the rarest, as it is also the gravest, in consequence of the pressure sometimes, but not invariably, exerted by the displaced end of the bone on the trachea and œsophagus and large blood-vessels. There have been admitted into the Middlesex Hospital within the last year two examples of the two latter varieties—one of dislocation inwards, under the care of the late Mr. C. De Morgan; and the one we now record, under Mr. Hulke. The retentive apparatus employed in this case was a modification of the figure-of-eight bandage, made of two well-padded rings encircling the shoulders, and joined by a strap buckled across the back. A pad was placed in the armpit, and the man was laid flat on a firm mattress, with a small pillow under the nape, and a small firm bolster between the shoulders, so as to favour the dropping of these by their own weight upon the bed. Some assistance was also gained from a guttapercha shield and gypsum.

A railway labourer, aged fifty-four, whilst walking by the side of a truck, stumbled against a sleeper, and was jammed between the truck and a wall. Admitted the same afternoon (February 14, 1876) into Broderipp ward. The sternal end of the right collar-bone was seen to project conspicuously upon the front of the sternum below the notch. The finger could be placed fairly upon the articular surface. He complained also of pain in the right side of the chest, and had rather copious hæmoptysis; no broken rib could, however, be detected. The dislocation was easily reduced by pulling the shoulder backwards and outwards, and pressing the end of the bone into its place. It was, however, impossible to retain it, the inherent difficulty being greatly increased by the man's obstinacy and inattention to the strict injunction not to disturb his bandages. He had a slight pleuro-pneumonia, but recovered, and was discharged towards the end of March, the end of the collar-bone then projecting slightly into the inter-clavicular notch. The usefulness of the arm did not seem much impaired.

Case 6.—Primary Syphilitic Sore on the Lower Lip—Enlarged Lymphatic Gland at Angle of Jaw and beneath Chin—Mixed Papulous and Scaly Rash.

A tall and comely brunette housemaid was admitted into Regent ward, November 4, 1875, with a swollen, ulcerated lower lip, which had been treated by her employer's family medicus, who, as it had resisted his measures, had, it was said, come to regard it as cancerous, and recommended her to enter the hospital for operation.

The left half of the lower lip was very much swollen; to the touch the swelling imparted the sensation of a rather firm œdema, with a central more indurated part corresponding to the red margin, the surface of which was excoriated and scabbed. Between this swelling and the chin were clusters of papules; and below the chin, and below the left angle of the lower jaw, overlapping it and the body of the jaw, were considerable indurated masses, which by their knobby outlines could scarcely be anything else than enlarged lymphatic glands.

Her shoulders and the front of her chest were beset with papules; and her arms and thighs were sprinkled with small slightly raised circular spots of a coppery hue, upon which the cuticle was desquamating.

The left tonsil was red and swollen, and its follicles were distended with grey plugs of sodden exfoliated epithelium.

She said that the affection of the lip had begun about three months previously as a little pimple, which her employer's doctor had touched with caustic, and that about eight weeks passed between its appearance and that of the rash. She was ignorant of the nature of her illness, and could not account for its origin. She had a sweetheart who had sometimes kissed her, but sexual relations had never occurred; and the existence of a circular hymen with a small aperture and entire margin made it most probable that complete intercourse had never happened.

The extreme rarity of cancer of the lip in women, and her youthful age, made the diagnosis of cancer too improbable to be for a moment seriously entertained; whilst the character of the affection of the lip and of the rashes, and their sequence, left no doubt of their syphilitic nature. The unusually great œdematous swelling about the chancre and the lymphatic glands was attributed to the irritation of the caustics, which had not been powerful enough to destroy the indurated base of the pimply sore, and had only worried the tissues into more active growth. The lip was covered with simple water dressing. Five grains of iodide of potassium three times a day were given, and eight grains of calomel in the form of a bath were ordered every night.

In a very short time the chancre cicatrised, and the œdema around it and the swelling of the glands lessened; the rash also began to disappear. After six baths her gums were slightly spongy, and the calomel was diminished to four grains every second night.

November 22.—The arms were almost free from rash, and that on the legs was better. The disappearance of the diffuse œdema has now left unmasked the typical circular hardness about the cicatrix of the chancre.

December 16.—The rash having wholly gone, and the general swelling of the lip and glands disappeared, a slight hardness, however, being still present about the scar on the lip, she was made an out-patient, with a strict injunction to continue to attend for further treatment, but she never returned.

Case 7.—Secondary Syphilitic Sore on the Eyelid.

In the preceding case the patient was unable or unwilling to account for the origin of the sore on the lip. In such cases it should be borne in mind that the presence of a primary syphilitic sore on the lip does not necessarily imply immorality or direct infection by another primary sore, since the indirect transfer of infective substances from a secondary syphilitic sore is sufficient. A case of this sort, which was verified by strict inquiry, was some years ago published by Mr. Hulke, where an indurated chancre on the lower lip was traced to the use of a blowpipe, which was in habitual use by a fellow-workman who had at the time secondary syphilitic sores on the tongue and lips. Of more frequent occurrence in the face than hard primary sores are ulcerations occurring in the later stages of syphilis. These are not very rarely met with in the eyelids—a situation in which their ravages sometimes leave considerable deformity. In the following case the aspect of the sore, and its concurrence with other symptoms, left no doubt of its true nature, and it soon healed under appropriate treatment.

A cabinet-maker, aged thirty-three, was admitted in Handel ward, December 17, 1874, with a sharply cut ulcer, with slightly thickened sinuous margin, involving the outer half of the left upper eyelid. In front of the ear was an indurated gland. He had a rupial ulcer on the right cheek, and another on the left forearm. His pharynx was ulcerated, and he had also a fistulous opening into the urethra just behind the glans.

He said that he first had a sore on the penis eight years before, and since then he had led a very irregular life, and had very broken health. Under the topical use of diluted nitrate of mercury ointment and the internal exhibition of the biniodide of mercury with decoction of cinchona, and a generous diet, the sore on the eyelid soon healed, and his general health improved.

A Curious Will.—At a meeting of the Museum Committee of the Royal College of Surgeons, on Monday last, an extraordinary document was submitted to the chairman by Professor Flower, who received it personally from the lady in question. After an interesting discussion, Mr. Prescott Hewett, as President of the College, consented to accept the trust, Mr. Charles Hawkins, the Government Inspector of Metropolitan Anatomical Schools, not raising any objection to the wishes of the fair donor being carried out as detailed in the following will:—"This is the last will and testament of me, Susan Fletcher Smith, commonly known as Susan Ellis Laura Smith, of No. 5, Newman's-road, Lincoln's-inn-fields, W.C. I appoint the President, at the time of my decease, of the Royal College of Surgeons of England the executor of this my will. Believing that it is the duty of every member of the human family to devote their bodies, after death, to scientific examination until the principles of physiological science are thoroughly established: I direct that, in the event of my decease in the United Kingdom, my executor shall give my body immediately after my decease to the authorities of the Royal College of Surgeons of England. I desire that such body shall be completely dissected in the most thorough manner known to science. I desire that all possible facilities shall be given for the inspection of such body in its various stages of dissection by any person desiring to inspect it, and more particularly by persons of the female sex. I also desire that any facts that may come to light in consequence of such dissection that may be new, or in any other way advantageous to be made public, should be published. I also desire that after such dissection, as aforesaid, my body shall be destroyed in the most economical and expeditious manner possible, except that I should wish that some remnant thereof, if it can be preserved in an innoxious state, should be preserved in the College, and identified as a portion of my remains. I should also wish that if any of my friends should desire to have a remnant of my said body they should be at liberty to do so.—Signed by the said testatrix in the presence of both of us, and by both of us in her presence.—Susan Fletcher Smith.—Wm. George Smith, H. D. Brooke (Clerks to Ashurst, Morris, and Co., soliciters, 6, Old Jewry, London).—Dated the 20th day of September, 1876."

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Medical Times and Gazette.

SATURDAY, OCTOBER 21, 1876.

THE SUEZ CANAL AS A ROUTE TO WINTER QUARTERS.

In the *Medical Times and Gazette* of September 23 was given a short summary of the characters of the most frequented winter resorts for invalids. Following the guidance of Dr. More Madden, whose new work on Health Resorts is the latest authority on the subject, we left off at Egypt, because there are some features in the Egypt of to-day which Dr. Madden did not notice, but which are well worthy the attention of invalids and physicians.

We all know Mr. Gladstone's expression, "the silver streak" of Channel which divides our shores from those of the Continent. Scarcely less important is that "silver streak" which appears in the latest maps as the Suez Canal, and which forms the quickest route, for purposes of commerce, government, and war, between Great Britain and her Indian possessions. To medical readers it presents some humbler points of interest, inasmuch as it gives easy access to one health-resort, Suez; it has created another, viz., Ismailia; and it furnishes an easy route for the man in failing health who desires to try the climate of Bombay, Ceylon, or Australia.

Whoever would understand the real nature of the Suez Canal should look at a good and large map of Lower Egypt, and, fixing his eyes on the Nile at Cairo, should observe how the river from that point divides itself into branches innumerable, which spread out like the sticks of a fan, and follow their radiating course through the Delta or triangular area which marks the filling up of the Mediterranean by the detritus brought down by the river. Some of these branches pursue their course to the Mediterranean further west than Alexandria, others as far east as Port Said. Yet neither by one mouth nor by seven does this ancient river flow abruptly into the sea; but the streams which irrigate and render fertile the vast triangle of the Delta seem to end in a vast complication of swamp and of inshore lakes, bounded by sand-banks thrown up where the

effluent Nile water is opposed by the waves and currents of the sea. The corner of the Mediterranean into which the Nile brings down its detritus has been filling for generations, is filling now, and will continue to fill—in this respect being like the Delta of the Ganges and of a thousand other large rivers. Homer (Odyssey iv.) speaks of the Isle of Pharos as at the distance of a day's voyage for a ship from the Egyptian coast; now it is continuous with one of the bars that form the harbour of Alexandria.

Between Port Saïd and Suez, in the line of the Canal, the land is of very little elevation, intermixed with inland lakes, and formed of a slightly raised sea-bottom, testifying to a time when the distance from the head of the Gulf of Suez to the Mediteranean was little, or none at all. The whole length of the Canal, from Port Saïd to Suez, is about 100 miles; and of this the first thirty, or thereabouts, are formed by dredging and scooping a track through Lake Menzaleh, one of the inshore lagoons whose formation we have described. South of this is another extensive lake, or swamp, through which the Canal has been dredged; and soon we come to a third, Lake Timsah by name, on the banks of which the newly created town of Ismailia stands like a gem. Then, after a dozen miles of deep cutting, we come to the Bitter Lakes, an old salt marsh, left by the retreat of the sea, or rising of the land: and from these about twenty miles of cutting lead to the Red Sea at Suez.

Now, what we desire to point out is, first, that the track of the Canal crosses an old sea-bottom, or raised portion of the Delta of the Nile; and that its depressed portions at the Bitter Lakes were converted by the Canal engineers from salt swamps into inland salt-water lakes, by letting in the sea-water from either end. Secondly, that the canal is not a new idea, for one was made more than 2000 years ago; only, instead of going straight from north to south—from Mediteranean to Suez, as the present Canal does,—it started from the Nile below Cairo, and went due east to the Lake Timsah (which was then filled with fresh water), and thence southward to Suez. Thirdly, that the desert through which the Canal passes is not sand, but a mixture of calcareous earth with clay—quite capable of raising a fine dust in a high wind. A large quantity of brown scrub grows upon it; but when irrigated with Nile water it is a very model of fertility. Fourthly, that the Nile is here, as elsewhere, the Mother of Egypt. It flows through "fresh-water canals," some of which date from remote antiquity, to Ismailia; thence it is pumped to Port Saïd through pipes, and flows to Suez in an open cutting. And wherever it goes its course is marked by a line of verdure, and cottages and gardens line its banks. There is something indescribably pure, soft, and delicious in the waters of the Nile, whose praises have been sung by many a poet. A navigable canal for barges, connecting the Nile below Cairo with the Suez Canal at Ismailia, is nearly finished, and it is to be hoped that trade and fertility will follow. The land of Goshen, where the Israelites were planted before the Exodus, must have been hereabouts; and the ruinous heaps of old cities which are found on the line of old and disused canals show what a large population the irrigated soil could support. Lastly, let us say that as the Canal is, except at the *gares*, or sidings, not wide enough for two large ships to pass each other, and only just deep enough to allow ships to go with an occasional scrape of the bottom; so, in case of war, a dozen resolute men, with a few pounds of dynamite, or by sinking a few barges laden with stones, might render it impassable at a dozen points, whilst whoever is master of the Nile could cut off the water-supply absolutely from Ismailia and Port Saïd. Without Nile water for the workmen to drink, the Suez Canal could not have been made, and cannot be maintained.

Now, if we wanted to lay out a plan for passing the winter, for an invalid who desired thorough change and warmth, we should say, apply to the P. and O. Company for the requisite tickets; and in saying so we may also say fairly that in many minor matters which are essential to the comfort of the invalid the arrangements of the ships are improved: we have met with good wine, good tea, and good butter, of late. Well, let the invalid start from Southampton. If sick he will be less sick in the Bay of Biscay than in crossing the English Channel and in the subsequent voyage, in small ships, from Brindisi to Alexandria. If he chooses to stop a week at Malta, the climate is quite unexceptionable in the autumn. Next he will arrive at Port Saïd, where there is nothing to detain him, and through the Canal to Suez. After a halt of a week or two there, down the Red Sea to Aden, and thence to Point de Galle. If the invalid were to go to Galle, eat a prawn curry at the Oriental Hotel, and come back next day, he would confess that his voyage had not been in vain. A few days might be spent at Galle; but anyone having time and money may go up to Colombo, and see something of the island. From Galle the traveller may go eastward to Japan, northward to Madras and Calcutta, or southward to Australia. But the mere winter-shelter-seeker, after he has spent as much time as he chooses in Ceylon, should go back to Suez, thence to Cairo, where six weeks or a couple of months may be spent. The Hôtel du Nil, in the heart of the city, is a quaint place, *sui generis*, within easy reach of all that is most Cairene, and the cuisine is unexceptionable, and the charges not so high as are those of the more European hotels in the outskirts. There are three points which will live in the memory for ever of anyone who even passes three days at Cairo. One is the view from the Citadel, across the Nile Valley, with the Pyramids of Ghizeh and Sakkara on the edge of the opposite desert. This shows at a glimpse how truly the Nile is the Mother of Egypt. There is the narrow Nile Valley, with the city and cultivated land adjoining the river, and the stony desert beyond; the burial-places placed by the wise Egyptians where they can do no harm to the city. The second is Old Cairo, with its ruinous mosques with their ancient pointed arches. Thirdly, the traveller will give as many days as possible to the Museum of Egyptian Antiquities at Boulaq, where, with the aid of M. Mariette's "Aperçu sur l'Histoire de l'Egypt" and the latest edition of his catalogue, he will get a clearer idea of ancient Egypt in one day, than from weeks spent in the less orderly collections of Egyptian antiquities in Europe.

Of the voyage up the Nile into Upper Egypt, and of the journey *viâ* Brindisi and Alexandria, it is not our present purpose to speak. We merely wish to point out an economical and quiet way of living through the winter. We know invalids, who intended only to stay a day or two at Suez, and who remained there some weeks at the hotel, where are good quarters, good food, and no immoderate expense. Boating and walking supply plenty of recreation, and the air and sunshine are superb. There is a constant current of travellers. But the traveller ought to be well supplied with books, and be prepared to fill his time with reading, sketching, or chess. The same remark applies more forcibly to Ismailia. It is a much brighter looking place than Suez, but as yet not much frequented by travellers in winter. It is a good place for April. There is a pretty good hotel, with a fair cuisine, and oysters from the lake (these lakes ought to supply the world). If a visitor can get introductions to the Canal officials, and see the wonderfully orderly way in which the Canal is managed, and the place and speed of every ship that passes it is regulated, he would not want objects of interest.

INTRAVENOUS INJECTION OF AMMONIA IN SNAKE-BITE.

Whatever may be the ultimate fate of Professor Halford's method of treating snake-poisoning by the intravenous in-

jection of ammonia, it must be admitted that the profession have shown a disposition to test it fairly. Since the Professor first published the result of his experiments, many medical men in Australia have tried the intravenous injection of ammonia in cases of poisoning from snake-bites, or what were believed to be such, and in a very large proportion of cases so treated the patients recovered. The opponents of Professor Halford contend that many of the cases which have been reported as recoveries under his method of treatment were not cases of snake-poisoning, but that the patients were simply suffering from fright or from the effects of overdoses of alcohol which had been given by friends to counteract the virus. However, such was the repute gained by the new treatment that it attracted the attention of the authorities in India, and a Commission was appointed to report upon it. This Commission performed a large number of experiments on animals which had been bitten by venomous snakes obtained for the purpose of the inquiry. Not only did the Commission experiment with Indian snakes, but it also obtained a number of Australian snakes, and in each series of tests the intravenous injection of ammonia failed to produce any effects to shew that it could be relied on either as an antidote or a remedy in snake-poisoning.

The conclusions of the India Commission have already been published in these columns, but it may, perhaps, be as well to refer to them again. They were as follows:—"That effective poisoning after the bite of an Australian snake is the exception rather than the rule, and that in the case of the most poisonous species a large proportion of bites are ineffective. That although the virus of the Australian and Indian snakes acts in precisely the same manner, that of the cobra is proportionately more powerful and more rapidly mortal than that of Australian snakes. That the intravenous injection of ammonia possesses no antidotal or remedial power; indeed, it rather expedites than retards the tendency to death." By a large proportion of the profession in Australia the report of the India Commission was received with a feeling almost approaching indignation, and it was asserted that Professor Halford's remedy had been treated unfairly. The subject was discussed at meetings of the Victoria Medical Society early in 1875, and Professor Halford prepared for that body a digest of his experiments on animals, which gave results opposed to those of the India Commission, together with a report of forty-two cases in which the intravenous injection of ammonia had been followed by reaction and restoration to consciousness, where death appeared to be imminent from the bite of Australian snakes. Resolutions were submitted to the Society, approving of Professor Halford's treatment, but the members very properly declined to pronounce a verdict without further evidence, and a sub-committee was appointed to investigate the subject independently of Professor Halford.

In an article published in the *Medical Times and Gazette* of July 24, 1875, we stated our belief that the India Commissioners could not have desired to treat Professor Halford unfairly, or to knowingly pass an unmerited verdict on his mode of treatment; and that, notwithstanding the Professor's experiments, it remained to be shown that their conclusions were not fully borne out by the investigations and experiments conducted by them. Having thus expressed our unwillingness to doubt the *bona fides* of the members of the India Commission, we have waited with some degree of impatience the publication of the report of the Special Committee of the Victoria Medical Society, in the hope that it would at least set this point at rest. The report is now before us, but it is too lengthy to reproduce entire. We will, however, quote sufficient to show that the experiments of the Committee confirm in a remarkable degree the conclusions of the India Commission—indeed, the members are unanimous in the opinion that the ammonia treatment as practised by them on dogs was not in any way beneficial. The Committee met upwards of fifteen times, and altogether performed eighty-one experiments, chiefly on dogs, in each case using the virus of the tiger-snake, the most poisonous of Australian reptiles. Before every experiment the weight of the animal about to be experimented on was taken. Owing to the necessary uncertainty of the quantity of poison injected by a snake at a bite, it was determined to rely, in attempting to estimate the value of ammonia as a remedy, on the more precise method of the hypodermic syringe and the balance. The first step was to obtain the virus from the snakes. This was done by making them bite a capsule covered with oil-silk or muslin. The poison deposited in the capsule was then carefully weighed to determine the quantity given by each snake, and an accurately weighed dose was immediately injected with the hypodermic syringe under the skin of the dog to be experimented on, and the time and effects duly noted. The following are the symptoms observed after injecting a dog with half a grain of the poison:—About ten or fifteen minutes afterwards, uneasiness, followed by vomiting, walking with staggering gait, paralysis, especially of hind-quarters, passing on to complete loss of muscular power. The animal then lies down, respiration becomes slow and irregular, and finally gasping, and the tongue falls out of the mouth. As death approaches, the pupils begin to dilate, but up to this the animal remains perfectly sensible. After a time the pupils become fully dilated and the gums livid. Convulsions and complete insensibility follow. Respirations now become slower and gradually cease. The heart's action continues one or two minutes after the complete cessation of respiration. There is no approach to coma or insensibility until after the dilatation of the pupils immediately before death, which evidently takes place by apnœa. After a dose of one grain of poison, dilatation of the pupil and convulsions, with profuse salivation and howling, quickly come on, and the animal dies rapidly. The above refers to cases in which no treatment was adopted to counteract the effects of the poison, but the symptoms were found to run just the same course after the intravenous injection of ammonia, as will be seen by the following report of the thirty-seventh experiment:—"At 12.10 p.m. on February 27, half a grain of tiger-snake poison was injected hypodermically into the inside of the right thigh of a dog weighing thirty-one and a half pounds. 12.14: Uneasy; down on belly, with legs under him. 12.27: Vomited twice. 12.33: Thirty minims of liq. ammoniæ injected into the vein of right hind leg; the dog immediately was convulsed, struggled, and howled. 12.35: Breathing fast; lying on side; got up; salivated; panting hard. 12.42: Lying on side; breathing very fast. 1: Breathing quieter. 1.15: Thirty minims of liq. ammoniæ injected into vein of left hind leg; dog convulsed; commenced to pant hard; more lively. 1.27: Vomited, after severe effort; standing; vomitted matter very frothy and viscid. 1.40: Pupils dilated; lying flat on side; breathing slow; very restless. 2: Fifteen minims of liq. ammoniæ injected into vein of right fore leg; gave a gasp; heart still beating; tongue and gums livid; pupils dilated. 2.3 (one hour and forty-three minutes after injection of poison): Dead." The above may be taken as a typical case, illustrating the effect of the poison when hypodermically injected, and the failure of the ammonia treatment. It is therefore unnecessary to quote more experiments in full; but it may be stated that thirty-one dogs were treated with the intravenous injection of ammonia after varying doses, ranging from one-fifth to one grain, of poison had been hypodermically administered, and in every instance save one the animal died from the immediate effects of the poison. On account of the failure of the ammonia treatment in the hands of the Committee, Professor Halford was invited to personally inject the remedy. He attended two meetings of the Committee, and experimented on

five dogs, all of which died. In the case of the dog that recovered, only one-fifth of a grain of the poison was injected; but it was afterwards found necessary to kill the animal on account of sloughs caused by the injection of ammonia. Six animals were bitten by tiger-snakes, and treated by the intravenous injection of ammonia, of which one recovered. In one instance the usual dose of ammonia was injected about an hour before the dog was bitten, but the dog died fifty-one minutes after the bite. In eight instances poison was hypodermically injected, and no treatment adopted, the object being to ascertain the smallest fatal dose. In no instance did recovery take place after a half-grain dose. A dog, forty pounds weight, recovered from a quarter of a grain dose; but another, thirteen pounds and a half, died in eight hours from one-fifth of a grain. In nine experiments dogs were bitten by tiger-snakes, and no treatment adopted; of these one recovered. In five instances healthy dogs were injected intravenously with ammonia, the dose varying from ten to sixty-five minims; of these one died three minutes after thirty minims had been injected, the others recovered. The most marked symptoms in these cases were vomiting, dilatation of pupils, and convulsions. After the failure of the ammonia treatment, the Committee tried a few other remedies, including the injection of hyposulphite of soda and yellow prussiate of potash and the inunction of ozonic ether, but without any good results.

The report from which the above particulars are taken was presented at a meeting of the Victoria Medical Society on April 5 last, when Professor Halford took the opportunity of explaining that in his experiments on dogs, instead of injecting the poison subcutaneously, he either scratched the abdomen of the animal with a lancet, and then rubbed in the virus, or he made an incision and inserted the poison under the skin. There could be no doubt that the animals were all poisoned, but on the injection of ammonia they all recovered. He could come to no other conclusion than that the dogs lived because they were thus treated. He did not doubt the correctness of the experiments performed by the Committee; neither did he doubt the correctness of the conclusions he had formed from the experiments he himself had made. Professor Halford did not state the doses of poison administered in his experiments. This is, of course, a most important point, for if less than the dose which may kill—say a quarter of a grain—were given, the treatment might have had but little influence on the result. As might have been expected, the report gave rise to a discussion on the whole question of the treatment of snake-bites, and such was the interest taken in it by the members of the Society that it extended over several meetings. Ultimately the following resolutions were adopted by thirteen votes to four:—"1. That the bites of Australian snakes are extremely deadly. 2. That the symptoms are the same in Australia as in India; that they differ somewhat in the lower animals and in man, and that they are distinct in character from those of alcoholism. 3. That ammonia is the best form of stimulant to exhibit, and that the intravenous injection is the best method for its administration."

As regards the last of these resolutions, it is only fair to assume that the members of the Victoria Medical Society who voted for it were guided in their decision by other evidence than that contained in the report of their Select Committee. If this report proves anything, it demonstrates conclusively that in dogs the intravenous injection of ammonia is inoperative either as an antidote or a remedial agent in snake-poisoning. There is no doubt that it acts as a powerful stimulant and quickens the heart's action, and in cases where death is imminent from failure of this organ it might be the means of saving life; but it has been proved by the experiments of the Committee that in snake-poisoning the function of respiration ceases a minute or two before the heart stops beating. We have no desire to condemn Professor Halford's treatment, but before accepting it as an efficient remedy in snake-poisoning we must have more positive evidence as to its value than has yet been brought forward.

THE CHAIR OF PHYSIOLOGY IN GLASGOW UNIVERSITY.

No university appointment could be more satisfactory than that of Dr. M'Kendrick to the chair of Institutes of Medicine in Glasgow University. The prolonged illness of the late Professor Bennet afforded Dr. M'Kendrick the opportunity of showing that he possessed all the qualities necessary in a good teacher of physiology; and the manner in which he has more especially devoted himself to the practical teaching and demonstration of vital phenomena in such a well-furnished laboratory as that of Edinburgh University is a sufficient guarantee that, in the chair to which he has just been appointed, he will persevere in the demonstration of the many new methods of physiological research which have made physiology one of the most important and progressive sciences of the day. It happens that the position which Dr. M'Kendrick occupied at Edinburgh University brought him into contact with large bodies of students, between whom and their teacher there existed a more familiar friendship than generally prevails between students and professors; and scattered as these generations of students now are, they will hail the news of Dr. M'Kendrick's appointment with delight, and experience a sense of almost personal satisfaction that his ability as a teacher and a *savant* has been satisfactorily recognised and appropriated. Those also who in various societies have acted as fellow-workers with him in the field of science will congratulate both him and the western university on the decision of the Secretary of State, who certainly cannot be accused of having allowed himself to be influenced by local and political pressure, since his nomination is one which must have been decided upon by him after an impartial consideration of the evidence of special fitness for the chair of which he is the patron. The appointment of Dr. M'Kendrick will constitute the beginning of a new era in the teaching of physiology in Glasgow, and one which has been much longed for by many of her students. It is to be hoped that at the present time the University will recognise how important it is, if pace is to be kept with other schools, that a good laboratory should be attached to the chair of physiology, and ample opportunities afforded for practical demonstrations, and for the initiation of students into the methods of original research. Every day makes it more evident that the rational progress of medicine depends on advances in physiology, and progress in physiology is best promoted by combination with physics. It would well become the authorities of Glasgow University—so distinguished in the physical sciences—to afford the means of allowing physiology to work in combination with physics for the elucidation of obscure bodily phenomena. If they do so, they will find that the outlay necessary for the furnishing of a good physiological laboratory will be fully repaid by the increase of reputation which will follow on the publication of Dr. M'Kendrick's original researches, and the increase of students which may reasonably be expected when physiology is taught in accordance with the advanced ideas of the time. Dr. M'Kendrick's work is so well known that it is almost useless to refer to it. Perhaps his researches regarding the antagonism of drugs, and his beautiful experiments on the physiological action of light, will be most readily called to mind; and his recent address on "The Future of Physiological Research," delivered to the anatomy and physiology department of the British Association of the present year, is characterised by a breadth and truthfulness which are good omens of his future academic career. Those who have been associated with Dr. M'Kendrick

personally, know how indefatigable he is in original research, and how eager he is at all times to disseminate the results of his own observations and those of others, and to instruct less experienced men in the method of employing the multiplicity of instruments which have been recently called in to the aid of physiologists.

THE WEEK.

TOPICS OF THE DAY.

At the second meeting after the vacation of the Port Sanitary Committee of the Corporation of London, recently held, the Medical Officer of Health reported that during the month of September 1118 vessels of all descriptions had been visited by the officers of the Committee. Of this number, the deck-houses or forecastles of thirty-seven required cleansing; eight foul cargoes were found, and orders given for their disinfection and immediate removal; and thirteen sick sailors were found afloat, and were referred or sent to the Seamen's Hospital at Greenwich. A case was also reported to Dr. Leach, which, though occurring only in the course of routine business, shews that the sanitary authorities on the Thames are thoroughly in communication as to work with those at the outports. In consequence of the arrival of a vessel at Swansea a few weeks ago with small-pox on board, the port medical officer at that place communicated immediately with the London port sanitary authority, as he learnt that the vessel was about to sail for Woolwich. An opportunity was thus given, and of course acted on, for inspecting the vessel closely on her arrival in the Thames, so as to be perfectly sure that no small-pox was brought into the metropolis through this particular channel. There can be no doubt that until the last two years a great deal of infectious disease was imported and exported through the medium of vessels arriving in and departing from our river, and it is difficult to exaggerate the importance of the recent arrangement, by which movements of epidemic disease afloat are thus communicated by the sanitary authorities of one port to those of another. This plan, if properly and carefully administered, fulfils all practical sanitary requirements, and at the same time creates no obstruction to the exigencies of commerce.

From time to time cases occur which point out the advisability of legislation for the supervision of all lodging-houses as regards their sanitary condition. The lodging-house keepers themselves are averse to any such inquiry. The necessity for some movement in this direction has just been illustrated by the lamentable death of a barrister from an attack and subsequent relapse of typhoid fever, contracted under the following circumstances:—This gentleman went to Thames Ditton for change of air and boating exercise; after a short time he found his health and strength decline, and eventually he had a decided attack of enteric fever. On examination of the drinking-water of the house in which he lodged, which was obtained from a well, it was found to be contaminated with sewage matter. On recovering, he was removed to lodgings at a seaside town in Kent, and soon suffered a relapse, from which he died. Again the water was examined, when, like the other, it was found to be contaminated with sewage. This water was also procured from a pump, although water of a fairly good quality could have been obtained from the local water company's mains. The present instance is no doubt exceptional, but it undoubtedly proves the necessity, in the public interest, for a medical supervision of all houses let out for lodgings. In the long run the keepers of these houses would be the gainers, for a medical certificate of the sanitary condition of a building would comfort the timid, and frequently insure the letting of apartments in country and seaside towns when ugly rumours of fever and small-pox in the locality were causing the heads of families to hesitate about choosing a destination for the summer.

At last week's meeting of the South Dublin Board of Guardians it was stated that porter and whisky were allowed, by order of one medical officer, to other inmates of the workhouse besides the sick and lunatics. It was also reported that the quantity of stimulants now used in the workhouse was only two-fifths of what it was in April last, when a discussion was held on the subject. It was unanimously resolved to request the Local Government Board to inquire, with the aid of medical and other skilled assistance, into the necessity for giving stimulants to any class of inmates of the workhouse.

The lengthened inquiry relative to the death of J. T. Lomas, a sewer-flusher in the employ of the Wandsworth Local Board of Works, who was killed in the New-road sewer, Battersea, on August 9 last, was brought to a termination last week. After the evidence of several scientific witnesses had been taken, the jury returned the following verdict:—"We find that the deceased was killed by poisonous gases emanating from refuse chemical matters discharged into the New-road sewer from the works of Mr. Hugh Wallace, but by whom they were thrown in there is no evidence to prove. The jury are of opinion that great censure is due to the Wandsworth Board of Works for permitting these chemical matters to be discharged into the sewer, thereby perilling the lives of the men who were employed in the sewer, and endangering the health and comfort of the inhabitants of the neighbourhood."

A case which has lately been reported from Paris shows a fresh danger from accidental arsenical poisoning. A rich lady, residing in the Faubourg St. Honoré, found herself growing very ill, and her doctor pronounced her to be suffering from the effects of some slow poison. The idea was rejected as absurd, but on rising one morning the lady found a glass of water, which was usually placed by her bedside, to be discoloured by a white filmy powder. On shewing this to the doctor he at once pronounced it to be arsenic. All inquiries failed to fix suspicion upon anyone, and the next night the lady filled the glass herself, and kept careful watch that no one tampered with it. Nevertheless, in the morning the white powder again made its appearance, and the doctor was fairly at his wits' end to find the cause. Finally, he discovered that his patient was in the habit of reading in bed, and for that reason candles were kept burning all night long in her room. These candles, of a dazzling whiteness, had been strongly impregnated with arsenic during their bleaching process, and the arsenic becoming volatilised by the combustion thus poisoned the air of the bed-chamber.

In the Public Health Department of the Social Science Congress, held at Liverpool, the special question for discussion on the 12th inst. was—"What further enactments, if any, are required with a view to arrest the spread of infectious fever; and how far national and municipal registration is desirable as a means thereto, and, if so, what should be the nature of such registration?" In the discussion which followed, a general opinion was expressed that it was necessary to establish hospitals for infectious diseases, to which sufferers should be sent under some compulsion. The difficulty which presented itself was, who should be the informant, various medical gentlemen being of opinion that a private practitioner would be guilty of a breach of confidence in reporting to the public authorities cases of infectious disease in families of which he was the private medical attendant. It was resolved to ask the Council to appoint a committee to consider the whole question, and report. It should be distinctly understood that the medical profession, as a body, would decidedly object to any legislation which would add to their already onerous duties the necessity of giving information of the outbreak of every case of infectious disease treated by them. Such information

ought to be made compulsory on the head of the family, or the landlord or owner of the house in which the outbreak occurred. The duty to be imposed on the medical attendant should be that of informing the responsible head of the nature of the disease. At a subsequent meeting of the Congress, Dr. Lowndes read a paper on "Infanticide in Large Towns: the difficulties of Detection and Conviction, and the Means to be adopted for its Prevention." At the conclusion of the reading, Dr. Whittle and Dr. Hardwicke offered some remarks; and on the motion of Dr. Shrimpton, seconded by Mr. Haviland, the paper was referred to the Council.

For some time past the officials of the Metropolitan Board of Works have been making inquiries and obtaining information relative to a place known as Crosby-row, in Bermondsey. The place has been certified as unhealthy, and when the Board of Works obtain the necessary information which will enable them to decide on the matter, plans will be prepared, the old rookeries will be pulled down, and improved dwellings, intended for the working-classes, will be erected in their stead. This action will be taken under the provisions of the Artisans' Dwellings Act.

A Glasgow paper states that in consequence of the disgraceful sanitary condition of Blantyre an alarming epidemic of fever has occurred there. In August last twenty persons were simultaneously prostrated with typhoid fever, and in September the number was augmented to about twenty-five. In the same period a number of cases of diphtheria, scarlet fever, and typhus fever were treated. The deaths have been, on an average, about 10 per cent. In a family of ten, fever broke out, and now no fewer than eight of the members are suffering from the malady. The children were allowed to attend school, and thus spread the contagion. Five cases of fever have been reported in another house, one of which has had a fatal termination. At Hayle, Cornwall, scarlatina is so prevalent that the Local Board have resolved upon closing all public schools in the district.

DR. WHITMORE ON THE SPREAD OF INFECTION.

Dr. John Whitmore, the Medical Officer of Health for the parish of St. Marylebone, in his monthly report to the Vestry, for September, observes that the outbreaks of small-pox which have occurred very recently in different parts of England, and which are also reported to have occurred in some of the metropolitan parishes, must be accepted as warnings that this formidable disease will possibly before long assume an epidemic character. From diligent inquiries he has ascertained that only four or five cases of small-pox have been treated in his own parish during the Vestry recess; all of these were of a mild type, and in every case he was assured that prompt and efficient sanitary measures had been adopted. But at any moment he felt that he might receive intelligence of some serious outbreak among the destitute poor in one or other of the most crowded districts; and, if he did, he should certainly have occasion to lament that our Sanitary Acts, as at present in force, do not provide adequate means for arresting its progress. It is true the Vaccination Acts have been found to be most beneficial in their results, and in his parish have been efficiently and vigilantly carried out; and also that sanitary work has been fairly performed. But the one thing needed of all others to stamp out the malady is still wanting: no power is given to the sanitary or any other authority to enforce the perfect isolation of an infected person; and until this is done Dr. Whitmore thinks we may despair of making small-pox a disease of the past. With reference to this and other contagious epidemics for which asylum hospitals are provided, he expresses a strong opinion that the delay which frequently takes place in the removal of patients to these hospitals is often productive of serious risk and inconvenience. The sanitary inspector is informed of a case of scarlet fever; he visits it, and finds a child in bed suffering from the disease; the family has only one room, and there are probably three or four other children. Feeling the importance of promptitude in this case, he calls upon the relieving officer of the district, who is from home, and who, not returning until late in the evening, does not visit the case until the next morning. He, in his turn, sends to, or calls upon, the medical officer, whose certificate is required to obtain the patient's admission to hospital, but he also is out, probably visiting his patients, and the consequence is that further considerable delay intervenes before the patient is seen by the medical officer. In the meantime the infection is becoming stronger, and before the parish conveyance arrives to remove the patient every other child in the family has taken the disease. It is only just to the board of guardians to say that they have been fully alive to all this, and have strongly represented to the Secretary of the Poor-Law Board that "serious delay" will in some cases occur if the regulations issued by the managers of the asylum hospitals—to receive only those cases which are accompanied by a certificate from a duly appointed parish or union medical officer—are in all cases strictly enforced; but up to the present time the Poor-Law Board have not thought fit to relax these rules, although it is impossible to understand why, in seasons of epidemic, a case of special urgency, such as is described, could not be received into hospital on the certificate of any legally qualified medical practitioner.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

At the Comitia of the Royal College of Physicians, held on Monday, the 16th inst., some commmunications were received from the Colonial Office on the treatment of leprosy by gurjun and casbew oils. The papers, which gave evidence of decided benefit from the employment of both drugs, but especially of the gurjun oil, were referred to the Leprosy Committee of the College. From the Foreign Office also a communication was received, accompanied by copies of a translation of various reports by Dr. Bernhard Beck "On the Disease which has recently prevailed in Mesopotamia"; and some of the copies were directed to be placed on the table of the reading-room for the information of the profession. A resolution was passed requesting the Council to consider and report to the College in what manner an increased knowledge of psychological medicine may best be required from the candidates for the College qualifications. It was also resolved—"That the Registrar make annually a return of the names of the candidates who have passed the primary and pass examinations for the licence, tabulating the number from each school of those who have passed and of those who have been rejected at each examination." But the most important business of the meeting was the consideration of a letter from the Royal College of Surgeons on the scheme for a Conjoint Examining Board for England, submitting, from the conference of the representatives of the medical authorities, alterations of the amended scheme suggested by the Medical Committee of the Senate of the University of London, and approved by the Senate accordingly. These were—1. That the Committee of Reference should be constituted of representatives to be appointed in equal numbers by each of the medical corporations and universities of England. (The number proposed being two from each.) 2. That the *appointment* of examiners from the list *nominated* by the Committee of Reference should be left entirely in the hands of the three medical corporations, whose diplomas or licences will be obtained by the candidates who shall pass the conjoint examinations. No details under this head were communicated, but it was understood, we believe, that the Committee of Reference would nominate double the number of examiners required, so as to give the corporations a real choice of appointment. At any rate, the details when

settled by the Committee will, we suppose, be submitted to the College for their consideration. After considerable discussion, the suggested amendments were approved of by the College. The following paragraph, copied from the minutes of the Comitia, suspended in the Hall of the College, shows that another matter of some importance was also before the Fellows:—"With reference to the question of admitting women to the conjoint examination submitted for the opinion of the several co-operating authorities by the Conference of Representatives, the College resolved that it would be time to consider this question when the Conjoint Examining Board was framed and the occasion arose." The acceptance of the amendment of the University of London is certainly another step towards the actual formation of the Conjoint Board; but we have not heard that the College evidenced any lively belief in the near approach of that consummation, and the resolution quoted above certainly shows that they feel there is no need to be in any hurry to consider a question that must be raised so soon as the new Board comes into active existence.

SMALL-POX IN LONDON.

On Saturday, the 14th inst., a special meeting of the Metropolitan Asylums Board managers was held, to take into consideration a letter from the Local Government Board, requesting the managers to provide still further for the rising epidemic of small-pox in the metropolis. The letter stated that "the Board feel that the managers have no alternative, under the present circumstances, but to make arrangements as soon as possible for the removal of the imbeciles from Hampstead Hospital to the Asylums at Leavesden and Caterham, with a view to making Hampstead available for small-pox patients." There was a general feeling that the Hampstead Hospital should not be used again as a small-pox hospital unless it was absolutely necessary; but as on Saturday there were already 178 patients in the Stockwell and Homerton Small-pox Hospitals—being only about thirty patients short of the number the hospitals were originally intended to contain,—and fresh patients were constantly being received, there seemed to be really no option but to bring the Hampstead Hospital into use. It was, indeed, suggested that many more patients might be provided for at Stockwell and Homerton by the erection of huts in the airing-grounds, and placing beds in the day-rooms. But it was well and justly objected that such an overcrowding of the hospitals might, to say the least, cause an increase in the mortality of the patients; and that such use of the airing-grounds might constitute a means of spreading the epidemic; whilst at Stockwell it would bring the patients close to a building containing scarlet fever patients. Eventually it was resolved that the Hampstead Hospital should be got ready as rapidly as possible for small-pox cases; and, "That, pending the provision of increased accommodation for small-pox patients, the Local Government Board be requested to authorise the managers treating in the hospitals at Homerton and Stockwell such number of cases as they may deem advisable beyond the numbers for which the hospitals are provided."

The fatal cases of small-pox, which had been fifteen and eleven in the two previous weeks, rose to sixteen last week, of which one was recorded in the West, seven in the North, and eight in the South groups of districts; one occurred in Nottinghill, one in St. Pancras, five in Islington, one in Stepney, four in Southwark, two in Walworth, one in Lambeth, and one in Lewisham. Of these fatal cases, six were certified as unvaccinated, five as vaccinated, and in the five other cases the medical certificates of the cause of death did not furnish any information relative to vaccination. The five deaths from small-pox after vaccination were all of adults who had been vaccinated in infancy, but not one of whom was stated to have been revaccinated. Only five of the sixteen deaths from small-pox last week were recorded in the small-pox hospitals; of the eleven other cases, nine occurred among the working-classes living in circumstances rendering isolation practically impossible.

MEDICAL STUDENTS.

The annual registration at the Royal College of Surgeons of gentlemen pursuing their professional studies at the eleven recognised hospitals in this metropolis has just been brought to a close, from which it appears that the total number amounts to 1793 (including dental students), distributed as follows:—

St. Bartholomew's	374,	including	131	new entries.
Guy's . .	317	„	95	„
University College	279	„	79	„
St. Thomas's. .	177	„	43	„
St. George's . .	136	„	33	„
The London . .	123	„	35	„
King's College .	105	„	28	„
The Middlesex .	101	„	38	„
St. Mary's . .	83	„	26	„
Charing-cross .	70	„	29	„
Westminster .	28	„	9	„

Taking the members entered at the different hospitals in numerical order, it will be seen that the new entries are as follows:—St. Bartholomew's, 131; Guy's, 95; University College, 79; St. Thomas's, 43; the Middlesex, 38; the London, 35; St. George's, 33; Charing-cross, 29; King's College, 28; St. Mary's, 26; and the Westminster, 9.

THE CHAIR OF PHYSIC IN EDINBURGH.

Public opinion is still greatly exercised on the subject as to who will occupy the most famous chair in the University of Edinburgh. The air has been full of rumours of all kinds, one of the most important of them being to the effect that Dr. Gairdner, of Glasgow, is at last in the field. The exact truth is not easy to arrive at, but this at least seems certain—that the 30th of this month has been appointed for the election. This day is singularly inconvenient for Dr. Gairdner, as on it the session opens in Glasgow, and his appointment in Edinburgh would entail a vacancy in Glasgow which could not be filled up in a hurry. This is certain: that Glasgow would be a great loser by the transference of Dr. Gairdner to an Edinburgh chair, for she has so few men of his stamp that she can ill afford to lose one of them. Dr. Grainger Stewart is still, we believe, looked upon as having the best chance of election in Edinburgh. But the time which has now to elapse until the day of election is so short that all hopes and fears will soon be set at rest. On one thing we can heartily congratulate the various candidates for this chair. It has been too much the custom to issue large volumes of testimonials; but on the present occasion the gentlemen who have come forward have displayed a becoming self-respect in resting their claims on a narrower but far more satisfactory basis.

TYPHOID FEVER AT LINCOLN.

An epidemic of typhoid of an unusually severe character is now prevalent at Lincoln. The disease broke out about a month ago in a school for young ladies, situated in a locality hitherto supposed to be the most healthy in the city. Three days after being attacked one of the pupils died. The school was then broken up, and the other children sent home to their friends immediately. Of these, several were attacked with fever at their homes, and other deaths have taken place. Several cases have occurred among members of the families of aldermen and councillors of the city. It is the same old story here as in many other towns—bad drainage and contaminated water. According to a correspondent, the superficial stratum of the city is honeycombed in every direction with cesspools, old and new, so artfully arranged that they never require emptying, but during unknown periods of time have emptied themselves

by soaking through the soil, to the detriment of the water-supply, and, it is to be feared, the destruction of many valuable lives. Acting under compulsion, the Corporation is about to construct a well-ventilated system of drainage, and the time may come when its members will voluntarily turn their attention to the water-supply, and see if it is not possible to provide the inhabitants of the city with an uninterrupted supply of pure and wholesome water.

CONVICTION OF AN IRREGULAR PRACTITIONER.

At the Clerkenwell Police-court, last week, the Medical Defence Association instituted proceedings under the Medical Act against "Dr." Kahn, whose name is somewhat notorious. Recently the "Dr." has opened an establishment in Sidmouth-street, Gray's-inn-road, and numbers of men have been engaged daily in distributing his pamphlets throughout the North of London. The Association engaged a detective, who waited on the "Dr" as a patient, and received from him a pamphlet, in which he described himself as a "Dr." For the defence Mr. Ricketts contended that his client had a perfect right to call himself "Dr.," as he was a graduate of the University of New York, and he produced the diploma granted by that corporation to the defendant. Mr. Cooke said it was clear to him that the defendant had infringed the Medical Act by holding himself out as a "Dr." He had looked through the pamphlet, and in no place did he state that his diploma was a foreign one. The defendant might, if he pleased, appeal to a higher court, but he should inflict a fine of £5 and £2 2s. costs. In endeavouring to put a stop to the practices of such parties as "Dr." Kahn, the Medical Defence Association are doing a public service for which they deserve encouragement and support.

ANNUAL MEETING OF THE SENATE OF THE QUEEN'S UNIVERSITY IN IRELAND.

His Grace the Duke of Leinster, Chancellor of the University, in opening the proceedings at the annual meeting of the Senate for the conferring of degrees and rewards, observed that in the Faculty of Medicine 86 candidates had sought the degree of Doctor in Medicine, and of these 53 had satisfied the examiners; 47 out of 76 candidates had passed for the degree of Master in Surgery, and 27 out of 55 had been deemed qualified for the separate diploma which the University grants in Midwifery. One hundred and fifteen candidates presented themselves at the second University examination in Medicine, of whom 65 had come up to the standard required by the examiners; while 112 out of 186 candidates had been successful at the first University examination in this Faculty. The Senate had passed a special grace to confer the honorary degree of Doctor in Medicine upon Fleet-Surgeon Eustace, of the Royal Navy, who highly distinguished himself in his care of the troops placed under his charge after the Ashantee war. He also mentioned that ten students of the University had won appointments in the Indian Medical Service or at the competitions for the Army and Navy Medical Services. At the competition for the Indian Medical Service the first place was taken by Dr. James Moorhead, a graduate in Arts and Medicine of this University.

NEW MEDICAL WORKS.

The following are among the new medical works which are announced by Messrs. Churchill as in preparation, and will shortly be published:—Lancereaux's "Atlas of Pathological Anatomy," in sixty-four coloured plates, with explanatory text; "A Guide to the Anatomy of the Joints," by Mr. Morris, of Middlesex Hospital; "Diseases of Women," by Dr. Lloyd Roberts; "A System of Preventive Medicine," by Dr. Thursfield; "A Manual of Diseases of the Throat and Ear," by Dr. Morell Mackenzie; and Braune's "Atlas of Topographical Anatomy." Messrs. Macmillan and Co. will shortly issue the following works:—The fourth volume of Dr. Reynolds' "System of Medicine," dealing with the various forms of heart disease; "The Practitioner's Handbook of Therapeutical Treatment," by Dr. J. Milner Fothergill; and "A Treatise on the Germ Theory as applied to the Elucidation of the Phenomena of Disease," by Dr. Maclagan, of Dundee.

THE SEAMEN'S HOSPITAL.

A meeting of the Committee of the Seamen's Hospital (*Dreadnought*), Greenwich, was held last week; Mr. Joseph Moore in the chair. It was reported that 650 seamen had been admitted as in-patients during the past quarter from British and foreign ships, of which number 128 came from London, 43 from Liverpool, 25 from Glasgow, 18 from North and South Shields, 10 from Hull, 289 from other ports in Great Britain and Ireland, and 146 were foreigners. The contributions received from seamen during the quarter amounted to £189 5s. 1d. At the request of the Duke of Northumberland, the Committee have named one of the wards the "Northumberland Ward," in memory of the late Duke, who was for many years president of the Society. The Committee still require £1000 to meet the current expenses of the year, as, owing to the depressed condition of trade, the spontaneous contributions have this year fallen far below the average.

ATHENÆUM NORTH LONDON MEDICAL SOCIETY.

The following officers have been appointed for the ensuing year:—*President:* Thomas S. Dowse, M.D. *Vice-President:* George Henty, M.D. *Treasurer:* Robert Hilliard, M.D. *Secretary:* W. H. Kesteven, M.R.C.S.

THE YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

This Association will meet at the Town Hall, Selby, on Wednesday, October 25, at 2 p.m., for the following business:—1. Discussion on paper read by C. B. Hicks, Esq., at last meeting, "On Sanitary Reform from a Rural Point of View." 2. Paper by T. Britton, M.D., "The History of an Outbreak of Enteric Fever." 3. Paper by G. Goldie, Esq., "What has Sanitation done for the Promotion of Public Health and Prevention of Disease in Leeds during the past Decade." 4. Paper by H. F. Parsons, M.D., "On the Reduction of Mortality effected by Sanitary Improvements in Selby."

Testimonial.—Dr. A. B. Steele, of Liverpool, has received a gratifying proof of the esteem in which he is held by his professional brethren of that town and the neighbourhood. He has recently been presented with a testimonial consisting of a silver salver, with an appropriate inscription, and a purse containing 100 sovereigns, in recognition of his many public services, especially in connexion with the Lancashire and Cheshire branch of the British Medical Association, of which he was secretary for several years, and which office he resigned at the last annual meeting of the branch in July.

Royal College of Surgeons, Edinburgh.—At the annual meeting of this College, held on the 18th inst., the following office-bearers were elected for the ensuing year:—*President:* Henry Duncan Littlejohn, M.D. *Secretary and Treasurer:* Joseph Bell. *Librarian:* David Wilson, M.D. *President's Council:* Andrew Wood, M.D.; William Walker; Joseph Lister; Patrick H. Watson, M.D.; John Smith, M.D.; James D. Gillespie, M.D.; *Ex Off.*—Joseph Bell. *Examiners:* Archibald Inglis, M.D.; Peter David Handyside, M.D.; James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D.; David Wilson, M.D.; John Smith, M.D.; Argyll Robertson, M.D.; Joseph Bell; Thomas Annandale; John Duncan, M.D.; Robert J. Blair Cunynghame, M.D. *Assessors:* William Brown; James Spence; William Walker; James S. Combe, M.D. *Conservator of Museum:* Robert J. Blair Cunynghame, M.D. *Clerk:* James Robertson. *Officer:* John Dickie. *Assistant to Conservator:* James Grandison. At the same meeting Dr. Andrew Wood was unanimously elected representative of the College in the General Council of Medical Education and Registration of the United Kingdom for the period of three years from the 9th inst.

FROM ABROAD.

Alum in Affections of the Conjunctiva.

Dr. Hugo Magnus, Privat-Docens in Ophthalmology at the Breslau University, after observing (*Deutsche Med. Woch.*, September 16) upon the great use made of alum by the oculists of antiquity, and its insignificant employment in modern times, states that according to his own experience it is a most valuable remedy in conjunctival affections, and one that is alike convenient to the surgeon and agreeable to the patient. It is indicated in all catarrhal conditions of the conjunctiva, being suited not only to the simplest forms of this, but also to cases attended with tumefaction, and to the muco-purulent form. So marked and certain is its influence in all these that he gives it the preference to all other means; and quite recently he has employed it extensively in intense conjunctival catarrh, accompanied by tumefaction, which has attended an epidemic of measles at Breslau. The tumefaction, which in some of the cases was very great, showed a tendency to abate, even the day after the first application, and the secretion soon underwent a considerable diminution. The same success has followed its use in numerous other cases which formerly would have been treated with strong zinc solutions or milder ones of nitrate of silver. The same report may be made respecting chronic (the so-called "dry catarrh") conjunctival catarrh, the results in some of these cases being quite surprising, and greatly contrasting in their promptitude and completeness with those obtained by the other usual remedies. In the slight and medium forms of granular conjunctivitis also the alum pencil is a most suitable remedy, being quite as efficacious as the sulphate of copper, and far more agreeable in its application.

For the application of alum to the eye the solid form is by far the most suitable, and in its crystallised form the alum lends itself admirably to this form of employment—care being taken to select a piece without cracks or fissures that may readily be filed into a suitable pencil. Its employment in this form is very convenient to the surgeon, and especially when in his dispensary work he has to do with many young children. But, independently of this, the pencil is of great advantage in those cases in which it desirable to localise the application of the alum, as, *e.g.*, in angular conjunctival catarrh. The exact dosage of the remedy is also rendered much more possible than when a collyrium is used, for accordingly as we apply the pencil gently and rapidly or more forcibly we can exert a moderate or a considerable effect upon the diseased membrane. But supposing these advantages did not exist, the alum should still be preferred, as its application is unattended with the troublesome effects that attend that of zinc or copper, and continue for so long a time after. Immediately after the use of the alum pencil a sense of burning and pricking is produced, but this lasts scarcely a minute, and is succeeded immediately by complete ease. Even in sensitive subjects, as young delicate children or nervous women, no trace of unpleasant feeling continues after two minutes at most. How great the advantage of this is, especially in treating the moderate forms of granular conjunctivitis, need not be remarked. If treatment should be *cito, tuto, et jucunde*, the treatment of this affection by sulphate of copper can certainly not be adduced as regards the last requirement; whereas with the alum pencil we may realise the three postulates. The copper should indeed be reserved for the more intense forms of the disease, and the bulk of cases of medium severity are best treated by the alum.

Anæsthesia in Children by means of Chloral.

At the late Medical Congress at Brussels, on the occasion of the discussion on Prof. Oré's paper on the administration of chloral by injection into the veins, Dr. Bouchut observed that he took that opportunity of again directing attention to the fact that children can be placed in a state of absolute anæsthesia by means of chloral given by the mouth. Its effect so given is both certain and easy of production; and the fact that this is not the case with regard to the adult is a new proof of the difference which exists in the action of certain medicinal substances in adults and in children. Whether it is that the adult cannot swallow without disgust and intolerance a sufficient dose (eight or ten grammes) of the chloral, certain it is that he cannot be anæsthetised by it. In the child, on the contrary, chloral in doses of three or four grammes is taken without difficulty, and without inducing pyrosis, gastritis, vomiting, or diarrhœa, and induces more or less intense anæsthesia. It commences a quarter of an hour after the ingestion of the chloral, and is complete by the end of an hour. If at this period an abscess be opened, caustic applied, or a tooth extracted, the sleeping child may heave a sigh, or move a limb, and again become immovable, waking up four hours afterwards quite unconscious of what has passed. At the Hôpital des Enfants Malades a sister at eight o'clock administers three or four grammes at once, according to the age of the child, and at nine the dentist arrives and draws a tooth, or sometimes two in succession, without the child being in the least aroused. By those who know the trouble there is in drawing teeth in children, the value of chloral so employed will be readily appreciated.

Arsenic in Diseases of the Skin.

The following are the conclusions of Dr. Bulkley's interesting paper "On the Use and Value of Arsenic in the Treatment of Diseases of the Skin," read at the meeting of the American Medical Association, and published in full in the *New York Medical Journal* for August:—

"1. Arsenic, when administered in medicinal doses, has quite another action from that manifested by poisonous doses. The average dose of the former is one-twenty-fourth of a grain of arsenious acid, while the smallest toxic dose is stated at two grains. 2. Arsenic in medical doses does not produce any slow poisoning, but has been administered for months or years in quantities a small portion of whose aggregate amount would destroy life at once. Hebra has administered a total of more than half an ounce to a single patient. The accounts of the toxophagi of Styria are true, and arsenic is eaten by some for many years without apparent ill-effect. 3. Arsenic given by a careful practitioner, in doses to be effective, need never produce any symptoms which should cause regret. 4. Arsenic is eliminated very rapidly, chiefly by the bowels and kidneys, so that the urine shows evidence of it in a few hours. No trace of it can be found on careful analysis of the body after death, two weeks after the last dose. 5. Arsenic, therefore, does not accumulate in the system, and no fear of this need be entertained; but when it is administered in increasing doses absorption may be hindered, and, when the doses become very large, active absorption of the large dose may give rise to a suspicion of cumulative action. 6. The first symptom of a full dose of arsenic in a very large share of cases is a fulness about the face and eyes, and conjunctival irritation and tenderness. This need not be exceeded, but may be often kept up with advantage to a slight degree until the disease yields. Before any harm is done by the arsenic, either this or a slight nausea or diarrhœa manifests itself. 7. Arsenic should always be given with or just after meals. It is often best to give it alone, or with a small amount of bitter infusion. 8. The bowels should be first well purged, and an occasional laxative will both assist the action of the drug and prevent or modify some of its unpleasant effects. 9. If the urine becomes loaded and the tongue coated, it is best to stop the medicine for a short time and give diuretics; some of these disturbances can be prevented by combining an alkali, as acetate of potash, carbonate of soda, or aromatic spirits of ammonia, with the arsenic. 10. The most serviceable forms in which to use arsenic, named in the order of their value, are—solution of the chloride of arsenic, solution of the arseniate of potassa, of the arseniate of soda, and the arseniate of ammonia, arsenious acid, iodide of arsenic, and the arseniates of iron and quinia; of as yet untried efficacy, solution of the chloro-phosphide of arsenic and arseniate of antimony. 11. The dose of arsenic, small at first, is to be increased slowly until some of its physiological effects are manifested or the disease yields; it may then be somewhat diminished. 12. It is very important that arsenic be taken very regularly and persistently, and always under the supervision and frequent inspection of the physician. 13. Arsenic is valuable in chronic rheumatism, hence is useful in arthritic eruptions. It is serviceable in certain neuroses, as chorea and neuralgia, therefore in skin diseases with neurotic elements; and it possesses anti-malarial properties, and is consequently serviceable in diseases of the skin showing periodic symptoms, as intermittent urticaria, etc., likewise in patients with other skin diseases who have be enexposed to miasmatic influence. 14. Arsenic is certainly valuable in psoriasis, eczema, pemphigus, acne, and lichen, in proper cases, and when due attention is paid to the secretory organs, and to the diet and other elements of general health. Of less certain value in lupus, ichthyosis,

sycosis, verruca, and epitheliomatous and cancerous diseases, it is absolutely useless or harmful in the syphilodermata, the animal and vegetable parasitic diseases (except in rare cases), elephantiasis Græcorum and Arabum, purpura, true prurigo, herpes zoster, sclerodermia, molluscum contagiosum and fibrosum, keloid, vitiligo, nævus, etc. 15. The only local application of arsenic which is justifiable is either one where the strength is so weak, and the extent of its use so small, that there is no danger from absorption, which may occur when not expected; or one of such a strength as to kill the adjoining tissues at once, and so prevent absorption, as is the case with Marsden's mucilage."

REVIEWS.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine at Munich. Vol. IV.—Diseases of the Respiratory Organs. English Translation. London: Sampson, Low, and Co. 1876.

This volume of Ziemssen's Cyclopædia does not exhaust the subject of diseases of the respiratory organs, although it extends to the length of 775 pages. It contains articles by Dr. Fraenkel, of Berlin, on the general diagnosis of diseases of the nose, pharynx, and larynx, as well as on the general therapeutics of the same, and on the diseases of the nose; by the editor, von Ziemssen, on the catarrhal inflammations of the larynx; by Dr. Steiner, of Prague—alas! now no more,—on croup; by Dr. Franz Riegel, of Cologne, on the diseases of the trachea and bronchi, including acute and chronic bronchitis, bronchial stenosis, foreign bodies in the air-passages, and bronchial asthma; and lastly, by Dr. Fraentzel, of Berlin, on diseases of the pleura.

We may as well say at the outset that the work of translation has been on the whole well done by Dr. Burney Yeo (of London), Dr. J. S. Cohen (of Philadelphia), Dr. Brayton Ball and Dr. G. M. Lefferts (of New York), and Dr. Edward W. Schauffler (of Kansas City, U.S.A.). Most of the chapters have copious bibliographies attached to them, which not only testify to the diligence and eruditiou of their authors, but will form most valuable aids to future investigators.

Dr. Fraenkel's instructions for the proper performance of laryngo- and rhino-scopy strike us as for clearness and compactness the best we have ever read; and the various instruments required are illustrated by extremely good and mostly original woodcuts. We are a little surprised, however, in the enumeration of "those persons who have done much to develope and perfect the method of examining the larynx and nose," to find neither the names of Morell-Mackenzie and Gibb in England, of Störck, Tobold, and von Bruns in Germany, of Cohen in America, nor of Mandl and Fournié in France.

The omission of Mackenzie's name is too important to be passed over unnoticed. We owe to him in the main the introduction of the laryngoscope into this country; his rack-movement lamp is superior to any other; he has simplified the instruments for removing growths in an admirable manner; and his laryngeal galvaniser has been accepted throughout Europe as the most practical that could be devised.

Dr. Fraenkel has some very good remarks on the treatment of bleeding from the nose, and the whole section on diseases of the nose is worth careful reading.

Laryngeal catarrh is treated of, both in its acute and chronic forms, by von Ziemssen, but he does not regard the treatment of chronic catarrh with much satisfaction. Like most Continental laryngoscopists, he prefers nitrate of silver to any other astringent in this disease, even applying it in substance to the larynx in very inveterate cases. Chloride of zinc he does not mention at all.

The excellent article on croup by Dr. Steiner interests us chiefly, first, on account of the author's disbelief in its fungous origin—"If vegetable parasites are found upon such exudations, they are probably merely accidental, and are not an essential part of the disease"; and, secondly, because his immense experience at Prague is unable to do more than sum up the treatment of croup as follows:—"If the treatment by cold water and emetics fails to improve the condition of the child, but one resource is left—tracheotomy. This operation is no more curative of croup than are emetics; it cannot even arrest the croupous process. Its only office is to establish a new provisional air-passage while the danger of death from laryngeal stenosis lasts, and to assist nature in her effort to cure; and no other means fulfils these indications so certainly and so directly." Dr. Steiner agrees "with those writers who urge an early operation,"—"The beginning of the third stage—the so-called stage of asphyxia—is the moment when the operation becomes necessary." Before Dr. Steiner used tracheotomy he only saw three recoveries out of a large number of cases, but since then the mortality has varied at different times between 60 and 70 per cent.

We must leave Dr. Riegel's capital articles on bronchitis and croupous bronchitis unnoticed for want of space, only recalling the fact, which he has ignored, that apomorphia and its properties were discovered in England by the late Dr. Mathiessen and Dr. Gee, and that our knowledge of it is not entirely due to Germany.

An article on bronchial asthma by a new writer must be always a subject of interest after the discussions which have taken place on the subject of late years; and we may as well say at once that Dr. Riegel believes "that after excluding all forms of paroxysmal dyspnœa, in which alterations occur in the bronchial mucous membrane, the parenchyma of the lungs, the heart, the large vessels, and the like, there remain an *idiopathic* form in which no alteration can be discovered on the minutest examination of the organs during the interval of the paroxysms, and a *symptomatic* form—*e.g.*, in emphysema and chronic bronchitis—characterised also by the fact that the physical exploration of the various organs in no wise reveals sufficient alterations to account for the severe symptoms which appear so suddenly." We should have been glad to have seen the notes of a few carefully reported cases inserted in proof of the existence of an idiopathic asthma, for we are a little sceptical about it. The mechanism of the production of a paroxysm of asthmatic dyspnœa is treated very fully, and the various views which have been advanced are balanced against one another with great care. Dr. Riegel believes that three factors may give rise to a paroxysm, but that all three factors are not necessarily present in any one case; they are—(1) spasm of the bronchial muscles; (2) tonic spasm of the diaphragm; (3) a swelling of the bronchial mucous membrane, owing to dilatation of its bloodvessels through vaso-motor influence. The chapter on treatment contains an account of all the remedies on which any reliance may be placed in asthma, among which we may notice chloral hydrate and nitrite of amyl as specially valuable.

We have left ourselves very little space to notice Dr. Fraentzel's article on pleurisy, but we can strongly recommend its perusal, and especially the part bearing on treatment, in which will be found an elaborate account of the modern methods of tapping the pleura. The plan which the author advocates, of incising an empyema with all the precautions of Lister's method, is especially deserving of notice, and he has got good results by it in at least 50 per cent. of his cases. The idea of counteracting the compression of a contracting pleura by "lung gymnastics" is a good one—if it answers. It consists in making the patient place his arms on a table or chair to fix the thorax, and take from twenty to thirty deep inspirations, repeating the process six or eight times a-day. This is followed after a time by a cure in the high mountains. Hydrothorax, pneumothorax, and growths in the pleura, which close the volume, are adequately treated.

The index is full and, as far as we can judge, accurate. On the whole, vol. iv. of Dr. Ziemssen's Cyclopædia is a valuable addition to our medical literature; and if the publishers of the American translation could be induced to sell it separately, instead of enforcing a subscription for the complete series, it might have a deservedly large sale.

Analysis of One Thousand Cases of Skin Disease, with Cases and Remarks on Treatment. By L. Duncan Bulkley, A.M., M.D., Physician to the Skin Department, Demilt Dispensary, New York. Louisville: John P. Morton. 1875.

Analysis of Six Hundred and Seventeen Cases of Skin Disease treated at Demilt Dispensary during the Year 1875. By L. Duncan Bulkley, M.D., etc. New York: G. P. Putnam's Sons, 308, Fourth Avenue. 1876.

The first series of cases analysed were treated at the Bellevue Hospital, New York, in 1874. It is interesting as showing the relative frequency of various skin diseases in America as compared with Great Britain. Thus, acne in all its forms is much more frequent, owing, Dr. Bulkley thinks, to "the almost universal habit of frying much of the food, together with the

great use of potatoes and over-indulgence in tea." Lupus is less common than here, only just over 1 per cent., instead of 1·55 to 2 per cent. Dr. Bulkley passes in review the different species of skin disease, and makes some valuable remarks on treatment, many of his suggestions being novel, and deserving of trial in this country.

The second series of cases is even more valuable for the therapeutic hints which it contains than the first. A case of infantile eczema cured with immense doses of Fowler's solution (fifteen and twenty minims ter die), the boy being only five years old, is worthy of notice. The treatment of a case of urticaria, which was complicated with exophthalmic goître, by tincture of belladonna, with "the effect of benefiting the Graves' disease and removing the urticaria," is an instance of the application of theoretical knowledge to practical medicine, and we mention it here because another observer, Dr. Fraentzel, of Berlin, has independently hit upon the same method of treating urticaria, and with equal success. His remarks will be found in the recent volume of the *Charité-Annalen*.

Dr. Bulkley complains of the uncertainty of bicyanide of mercury as a remedy in syphilis. Our own experience is that it is perfectly certain and very mild in its action if given *alone* in a pill, with extract. gentianæ—or, better still, milk sugar. To give it with iodide of potassium seems to us a very unchemical proceeding.

We have only space to mention one other point which occurs to us with reference to Dr. Bulkley's remarks on prurigo (page 9), second analysis. He says he restricts the term wholly to the eruption which Hebra has described under that name, and which is excessively rare in America. Does he recognise the child's disease, the so-called lichen urticatus, as a true prurigo? There is still much dispute about prurigo in England; but we believe those who have examined a large number of cases with a view to decide this question, and who have seen some of Hebra's own cases, will admit that this answers to the prurigo vera Hebræ in all particulars, except that it is rarely or never met with in England in *adults*.

We recommend those practitioners to whom new ideas about treating skin diseases are acceptable to procure Dr. Bulkley's *brochures;* and we hope that he will give us another series next year.

Die neueren Methoden der Wundbehandlung auf Statistischer Grundlage. (*The more Recent Methods of Treating Wounds, and the Support they derive from Statistics.*) Von Dr. Paul Gueterbock, Privat-Docent an der Friedrich Wilhelm's Universitat zu Berlin. Hirschwald: August. Pp. 192.

We are afraid that this book will scarcely commend itself to those of our readers who may have the patience to wade through it. The author begins by telling us in the preface that he has nothing new to lay before the profession, but that his endeavour has been, by the careful compilation of facts and statistics, to arrive at some trustworthy conclusion as to the influence which three of the more recently introduced methods of treatment have had upon the mortality after operations and injuries. He then apologises for bringing his work before the public at what may appear, both to friends and enemies, rather an early period, by his fear that possibly the ardour of inquiry on this very important subject may begin to cool, and also because his work is one which has already been for some months in a state of completion, and therefore not open to the accusation of being launched upon the world in an undigested condition.

We must confess to finding the second chapter long and rather wearisome. It is devoted to a discussion of the fallacies which are connected with the methods of drawing up of hospital statistics, and the constant variations to which they are liable; so that the average mortality at a given institution is scarcely a fair thing to talk about. All this is now pretty generally understood. Since the time when Simpson's dogmatisms on the inverse ratio between the size and health of hospitals was the subject of somewhat angry discussion, we have been overburdened with complaints on this score, and many, if not most, of our author's lucubrations have been for a long time almost painfully evident truisms. That the varying constant is sufficiently great to make it impossible to draw any accurate conclusions from such tables we fully agree; but, for the very same reason, we should be sorry to join with Dr. Gueterbock in deducing from them an opinion that none of the recently introduced methods of treating wounds are more effectual than those which we inherit from our predecessors.

In the discussion of statistics, which forms, indeed, the substance of the work, Dr. Gueterbock appears to us to conduct his argument in the style of a special pleader who has been retained to argue a question from one point of view only. We fail to see much of that spirit of judicial fairness which such an effort as the present should eminently command, but we find him making the most of little points in favour of the side which he has himself espoused, without, it must be added, shaking to any extent the statistics which have been already published. Take, for instance, one of his remarks on the tables published by Kroenlein, comparing the mortality at Zürich under Billroth, 1860-67, with that when E. Rose was adopting the open method of treatment, 1867-71. The difference is remarkable, amounting to not less than 21 per cent. Dr. Gueterbock expresses great chagrin because Kroenlein, in compiling these statistics, has lumped together his primary and secondary amputations, although in the second period the number of secondary amputations was much reduced. After all it would only make a difference of ½ per cent. in the mortality of the amputations for injury, but, surely, Dr. Gueterbock cannot have overlooked the fact that if a new treatment be really an improvement, it will show itself, amongst other things, in a reduction of the number of secondary amputations, and that it is, accordingly, hardly fair to object to this point appearing in the statistics. Billroth amputated, as we find in another part of the book, no less than 42·5 per cent. of his compound fractions, with a mortality of 61·7 per cent. Rose only amputated 29·4 per cent., and of these only 33·3 per cent. proved fatal.

It would be a tedious and unsatisfactory task to endeavour to expose the numerous fallacies which are to be found in the chapter on the effect of the antiseptic treatment upon amputations. An elaborate comparison is first made between the amputations of two years by Lister and Spence, published by Reyher; then between those of something less than a year at the Glasgow Royal Infirmary, published by Dunlop; with those of a considerably longer period at St. George's Hospital, although the appliances at Glasgow during this period were confessedly imperfect. After this follows a discussion of the early experience with antiseptics of Bardeleben and Volkmann at Berlin and Halle; while the later and better results obtained by Volkmann, as well as the very striking revolution enacted in the Munich Hospital by von Nussbaum, are passed over almost without a comment. We will not burden our readers with a lengthened analysis of the figures presented to us, but will content ourselves with drawing attention to the following statements as indicating the way in which the subject has been treated. Dr. Gueterbock has been commenting on the statistics of the amputations at Halle in 1873, and the effect of the antiseptic treatment upon them; after which he proceeds to enumerate in illustration the total number of cases of erysipelas and pyæmia occurring in all cases of wound in the institution. He does indeed mention the fact that four out of the eight cases of pyæmia were being dressed openly, while only six (or seven?) of the seventeen cases of erysipelas were dressed on Lister's plan. But, he adds, surely if Lister's treatment is really a prophylactic against hospital disease, its good influence ought to be exerted on other cases, who "with the exception of the dressing were under precisely similar conditions as themselves." The whole thing is so monstrous, and betrays such complete ignorance, not only of the working of the antiseptic treatment, but also of the claims of its supporters, as to make further comment unnecessary. It has often been pointed out by Lister and others, and has been urged by him as a reason for omitting the publication of his own statistics, that it is almost impossible from hospital statistics compiled in the usual way to arrive at anything like a trustworthy opinion as to the efficacy of his treatment. Such a partial performance as the present is a notable example of the truth of the assertion. The fact that a rigid application of antiseptic principles enables the surgeon to pack his beds more closely than before, and to operate with confidence in overcrowded and therefore presumably unhealthy, wards upon cases which he would not otherwise dare to interfere with, while it is claimed, at the same time, that the number of secondary amputations is considerably diminished, make it obvious that the final judgment of the surgical mind will ultimately have to depend upon a much more searching comparison than any which has yet been presented to us. The

time when such a comparison may be possible must be looked forward to with equal anxiety by the friends and opponents of any line of treatment which may at any time be under discussion.

The remaining forty-four out of the 184 pages are devoted to the treatment of amputations by cotton-wool, and to the application of this and the other methods of treatment to compound fractures.

GENERAL CORRESPONDENCE.

CHOREA AND DISTURBANCE OF VISION.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the *Medical Times and Gazette* for October 14 appears a new theory of chorea by Dr. Stevens, of Albany, in which a connexion is shown between chorea and imperfect vision. It is supposed that the distress of the nervous system caused by anomalous refraction, and other causes of indistinct vision, acts in such a way as to cause chorea. I believe in the connexion of the two phenomena; but would state that indistinct and double vision of a distressing kind is a consequence of irregular muscular action, affecting the muscles of the eye, and one of the earliest symptoms of chorea and muscular tremor. In one case under my care, double vision coming on in fits, and arising from irregular action of the muscles of the right eye, was the first symptom. In the intervals the sight was as usual. To this succeeded tremors and agitation of the left arm; then of the left leg; of the right side afterwards. But the most distressing symptom still is the double vision, which clearly comes on in paroxysms, as the other muscular tremors do.

I am, &c., A Practitioner.

QUINETUM AND ITS SULPHATE.

Letter from Dr. J. C. Thorowgood.

[To the Editor of the Medical Times and Gazette.]

Sir,—I should like, in a few words, to draw attention to the sulphate of quinetum as a useful tonic, suitable, it appears, in some cases where the sulphate of quinia does not agree. Quinetum itself, as prepared by Mr. T. Whiffen, of Battersea, is an amorphous, pale brown powder, consisting of a mixture of the various alkaloids found in the East India red bark. From this quinetum the white crystallisable sulphate is prepared, and it is this salt that I have lately been using among out-patients at the Victoria-park Hospital for Diseases of the Chest. The dose I have employed has ranged from one to three grains three times daily, held in solution with a few drops of dilute sulphuric acid. Given thus as a tonic I have found the medicine act in a very satisfactory way in promoting increase of appetite and strength in cases that had made, at previous times, but slow progress when treated with iron or bark. Specially I noted the sulphate of quinetum to prove valuable in the case of E. F., a woman aged forty years, who had long been ailing with chronic rheumatic pains. She told me that at one hospital she had been treated with quinine, which always caused headache, but during the three weeks of treatment with the sulphate of quinetum she had no headache, and her pains decreased materially.

Another patient, K. B., also a female, had severe neuralgic headaches, which got rapidly well under sulphate of quinetum, and a pill at bed-time containing a quarter of a grain of extract of belladonna.

As yet I have noted seven cases where the sulphate has been given for three weeks, and in every case it has agreed remarkably well as a general tonic, while in no case has any unpleasant result followed on its administration. Sulphate of quinetum appears to embody all the valuable alkaloids of bark, without any admixture of astringent or colouring matter. It is, moreover, cheaper than the sulphate of quinine, and this for hospital purposes is a recommendation.

I am, &c., John C. Thorowgood, M.D., F.R.C.P.
Welbeck-street.

Russian Medical Aid to Servia.—The number of "sanitary trains" is, according to the *St. Petersburg Med. Wochenschrift*, increasing daily. One hundred and six medical men and sixty of the sisterhoods have already gone from Russia to the various Servian battle-fields.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, October 10.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

Subcutaneous Division of the Neck of the Femur.

Mr. William Adams read a paper giving details of a case in which subcutaneous division of the neck of the femur was performed for anchylosis of the hip-joint. During the six years and a half which have elapsed since the operation was first performed by the author on December 1, 1869, he has collected from published and unpublished sources the details of twenty-two cases in which the operation has been performed, including five operated upon by himself. A tabular form of these cases accompanied the paper, giving the date of operation, name of surgeon, and result. In this table it is shown that the operation was successful in twenty out of twenty-two cases; death from pyæmia resulting in one case, and death accelerated by chronic suppuration following the operation in another case, in which the patient died eight months afterwards with symptoms of kidney disease, with albuminuria, as well as tubercular deposit in the lungs. Such a result bears good testimony to the general safety of the operation, the dangers of which may be greatly diminished by the judgment of the surgeon in selecting his cases and the skill shown in the performance of the operation. In cases where there is a doubt as to the possibility of the neck of the femur being divided subcutaneously, in consequence of alterations which may have taken place at the articulation, it should not be attempted, but some other operation below the joint, such as that first proposed and successfully performed by Mr. Gant, should be adopted. In two cases of anchylosis of the hip-joint, with malposition of the limb, Mr. Gant divided the shaft of the femur subcutaneously, just below the small trochanter, using instruments similar to those employed by Mr. Adams. This operation can be performed without difficulty or risk of hæmorrhage. Mr. Adams has twice divided with the subcutaneous saw the shaft of the femur for great deformity resulting from badly united fractures, and once the shaft of the humerus for straight anchylosis. No suppuration whatever occurred. Mr. Maunder has also operated in similar cases by dividing the shaft of the femur below the small trochanter, using the chisel and mallet instead of the saw—an operation resembling those performed by Langenbeck, Meyer, Pancoast, Brainard, L. S. Little, and others. The general result of the operation in the twenty-two recorded cases has been to correct the deformity, and to obtain bony anchylosis, with the leg in a straight position. In several cases useful motion has been obtained, especially by Mr. Jessop (of Leeds), Mr. Lund (of Manchester), and Dr. Sands (of New York).

Mr. Holmes said he had had only one case, and that was not included in Mr. Adams's list. The result was fatal. The operation could hardly in strictness be called subcutaneous from the condition of parts. His opinion, as cited by Mr. Adams, was founded on this case and on certain pathological specimens he had examined. Mr. Adams said that such cases as his ought to be excluded from the list of those where the operation might be performed. But how to exclude them? As defined by Mr. Adams, the list of suitable cases would exclude some of the worst. Hints as to diagnosis were wanted, especially as to the cases which were suitable and unsuitable. Division of the shaft of the femur would be successful in a good many cases, but not where there was much distortion of the spine.

Mr. Gant thought his own operation best suited for cases of strumous disease with extreme malformation. It was not possible to diagnose the quantity of bone deposited round the joint; but if the neck was greatly shortened, or if the bone was still actively diseased, it was best to cut it below the neck. His own two cases did well.

Mr. Maunder said that probably no example in modern operative surgery could be found associated with such great success, and apparently with so little risk to life, as subcutaneous osteotomy. Mr. Adams had formerly pointed out the pathological conditions to which section of the *neck* of the bone was applicable, with which he (Mr. Maunder) cordially

agreed. It was in consequence of failure of section of the neck of the thigh-bone associated with tenotomy and forcible attempts at extension, in a case of fibrous anchylosis following strumous hip-joint disease operated upon by himself, and a week subsequently in another instance by Mr. William Adams, that he (Mr. Maunder) was led to resort to division of the femur below the lesser trochanter, with a view to remedy this deformity. This Mr. Maunder has accomplished seven times with chisel and mallet. In two instances slight suppuration occurred, for reasons explained in his paper on the subject at the Clinical Society. In five instances (in one of which the shaft of the femur was divided to remedy deformity consequent on mal-union after fracture) primary union occurred, not one drop of pus being secreted. Mr. Maunder was of opinion that in performing osteotomy, whether with the saw or the chisel, the surgeon should scrupulously avoid penetrating cicatricial tissue. To do so, he thinks (knowing the tendency of new tissue to resent injury and to take on ulceration and suppuration rather than repair), would mar the operation. He believes this to have been the source of ulceration and suppuration in three instances which have come to his knowledge. He expressed surprise that, such decided success having attended the use of the chisel, Mr. Adams should speak of it as less subcutaneous than when the saw was used. Mr. Adams had himself performed the operation five times, and in two of these cases, death in one, and serious suppuration in another, had occurred. It was even a question yet to be determined whether the chisel would not replace the saw.

Mr. Hulke was surprised that the cases referred to were all cases of fibrous anchylosis. In a large number of instances these were amenable to treatment by manipulation and plaster-of-Paris bandages when the patient was under chloroform.

In reply to Mr. Hulke, Mr. Maunder said that osteotomy had been gradually led up to by reason of the repeated failure of protracted attempts to promote extension, to which Mr. Hulke had alluded.

In reply, Mr. Adams said there was no more important subject than that of the selection of the proper cases for this operation. Three classes of cases seemed specially well adapted for it—viz., the rheumatic, the pyæmic, and early cases of strumous disease. Where the bone was diseased his operation was not suitable. He thought manipulation was only applicable where there was bony anchylosis in the adult.

Resection of the Tarsal Bones for Congenital Talipes Equino-Varus.

Mr. J. N. C. Davies-Colley read a paper on a case in which the above operation was performed, of which the following is an abstract:—Notwithstanding the recent improvements in the treatment of club-foot, cases from time to time occur, which, from the age to which the patient has attained, the rigidity of the tissues, and the altered shape of the bones, present insurmountable obstacles to a cure by the ordinary methods. It is not improbable that many of these cases might be successfully treated in the way which was adopted in the following instance:—Edwin H., aged twelve, was admitted into Guy's Hospital on May 8, 1875, under Mr. Cooper Forster. He was found to be the subject of severe talipes equino-varus, both feet directed inwards, the soles backwards, the heels raised, and he could barely walk, on account of the suppuration of bursæ which had formed on the back of the cuboid bones. He was kept in bed, and splints were applied. In September, 1875, Mr. Davies-Colley took charge of the case, and divided some tendons of the left foot. As very little advantage was thus gained, it was decided to take out a V-shaped piece from the tarsus. On October 12 this operation was performed. It was found necessary first to dissect out the cuboid bone, and then with knife and saw to cut away portions of the os calcis, astragalus, scaphoid, and cuneiform bones, together with the cartilage of the two outer metatarsal bones. There was troublesome oozing of blood after the operation, which was performed antiseptically, so a sponge was put in, and the foot left in its old position for a week. A peculiar splint was subsequently used, in order to twist the anterior half of the foot into its proper position. He recovered rapidly, and on November 23 a similar operation was performed upon the right foot. Less than six weeks after the second resection he was able to get about in a wheel-chair. In nine weeks he could walk with help; and in ten weeks the wounds were quite healed, all apparatus was left off, and he was able to walk alone. He was shown at a meeting of the Royal Medical and Chirurgical Society in April last, and he could then run, jump, and hop with considerable agility. He has since this time gone to work, and in September a letter was received from his father, which stated that he had walked six miles with but little fatigue. The operation performed upon the boy is somewhat similar to one which was suggested by Dr. Little, and has been employed several times by Mr. Davy—viz., excision of the cuboid bone. If, however, it be the object of the surgeon to restore at once a severe case of talipes to the normal position, it is necessary to cut away large portions of the adjacent bones, as well as to remove the cuboid. This mode of proceedure appears to have been once adopted by the late Mr. Solly, but without a very satisfactory result. The operation must be much simpler when the foot is rendered bloodless by Esmarch's bandage. The careful use of antiseptic precautions diminishes very much the danger which would otherwise arise from the opening of so many joints and synovial sheaths. Finally, the splint which was afterwards used renders the subsequent moulding of the foot into its proper relations a very easy matter. It is an operation which may be adopted with great advantage where other methods of treatment have failed, or when the patient desires to avoid the long and painful treatment and the costly apparatus which are required for the cure of the severe examples of this deformity.

Mr. Adams thought that with such an operation unfavourable results were sure to occur from the opening of so many joints and sheaths of tendons. Excision of the cuboid bone he considered quite unnecessary; the mechanical means of treatment were sufficient. Moreover, the tendo Achillis was so important that it should be divided last instead of first.

Mr. Brodhurst thought such an operation was hardly necessary in a boy of the age of twelve, or even of anyone up to the age of fifty. He had never seen it necessary to remove bone. He saw Mr. Solly's patient a year after operation, and his condition seemed then to be worse than before the operation.

Mr. R. Davy had repeated Solly's operation, but in a manner different from that adopted by that gentleman. In removing the cuboid bone there was neither difficulty nor danger. He had latterly been more and more inclined to follow Mr. Colley's plan. If successful the patient gained much, but removal of the cuboid was not always enough.

Mr. Carr Jackson thought that if this operation was successful, and taken as established, it would lead to much unnecessary interference. Relapsed varus was really one of the most common forms of malformation, and this was due to want of the necessary prolonged mechanical treatment. With that almost every case did well.

After a few remarks in reply by Mr. Colley the meeting adjourned.

CLINICAL SOCIETY OF LONDON.

Friday, October 13.

Thomas Bryant, F.R.C.S., Vice-President, in the Chair.

Intestinal Occlusion dependent upon Tubercular Disease of the Intestines.

Dr. Wolston read notes of this case, which had also been seen by Dr. Sutton and Mr. Maunder. The patient was a young lady, twenty-five years of age, and somewhat mentally deficient, though quite capable of expressing all her sensations and wants. Up to the time of her illness she had been considered by her friends to be in robust health. In the afternoon of February 20, having appeared perfectly well in the morning, she complained of headache, and in the evening sickness with colicky pains in the bowels came on. For the next few days she was better, and then the sickness and colicky pains, with constipation, returned, and continued, with slight intermissions, till Friday, March 3, when she was first seen by Dr. Wolston. The patient looked as if there were nothing much amiss. The face was apathetic, but with no expression of distress or anxiety. There had been no pain or sickness that day. The tongue was white at the back, but clean at the tips and edges. There was slight febrile excitement. Pulse 80; temperature 99·5°; urine thick and high-coloured. The most marked symptom was extreme tympanites; but there was no tumour to be detected anywhere, and there was no pain or tenderness on pressure. The catamenia were two months overdue. The history of the case, with the constipation and extreme tympanites, led at once to the suspicion of intestinal obstruction. With that view, purgatives being contraindicated,

the bowels were directed to be well fomented with hot water, and copious water-enemata to be administered, whilst nothing was to be taken by the mouth but a little milk-water to allay thirst. March 4: The patient had passed a restless night, with a good deal of pain coming on in paroxysms, but no sickness. There was no pain or tenderness on pressure, but the tympanites had increased. Urine had passed freely. The enemata had caused no action from the bowels. The tongue was more coated. Pulse 80; temperature 90°. An enema, containing castor-oil and turpentine, was directed to be administered. This freely opened the bowels, but was followed by extreme pain and sickness, with no relief of the tympanites. March 5: There had been much pain and sickness during the night, nothing being retained on the stomach. Another enema was administered, which had the effect of quite emptying the bowel below the constriction, though it caused no relief to the tympanites. March 6: She was much worse; there was more pain and sickness; the vomited matters were stercoraceous; the abdominal distension was extreme; pulse 100; temperature 99·5°. Several attempts were made to overcome the obstruction by means of the forcible injection of tepid water, but the only result was increase of pain and sickness. She was ordered nutritive enemata of eggs, milk, and beef-tea thickened with arrowroot, with a dessertspoonful of brandy and fifteen drops of opium, to be administered every three hours, and ice dipped in brandy to be given freely by the mouth; the bowel to be washed out once in twenty-four hours with tepid water and turpentine. March 7: She had passed an easier night, with fewer paroxysms of pain, and had several hours' sleep. There had been some vomiting and hiccough. The tympanites was extreme, but there was no pain or tenderness on pressure; pulse 100, full and firm. The tongue was cleaner; the urine free and normal. In the afternoon the patient was seen by Dr. Sutton, who confirmed the diagnosis of intestinal occlusion, probably from a band over which the intestine had twisted, but without strangulating it completely. No change was made in the treatment. March 8: The patient had passed a good night, without pain or sickness, and had slept a good deal. There was some hiccough. Flatus had passed freely, and the abdominal distension was less; occlusion plainly not complete. Pulse 82; tongue clean; temperature 99°. During the next few days there was slight improvement; but on March 11 the paroxysms of pain and vomiting returned; the tympanites again became extreme, and was but slightly relieved by puncture of the bowels with a small trocar. In the afternoon of this day the patient was seen by Mr. Maunder, who confirmed the diagnosis as to the probable cause of the occlusion, but deprecated any surgical interference in her present state. He put her under chloroform, and by manipulation of the bowels and inverting the body, tried to free the supposed entanglement of the intestine. Some flatus passed, but no other result ensued. March 12: There had been some pain and sickness during the night; in other respects there was no change; pulse 82. From March 13 to March 28 the condition of the patient varied very little. The pulse remained about 80, and temperature 99°; the tongue kept clean and moist; sickness was pretty constant, but the pain was comparatively slight, and easily relieved by hot fomentations and rubbing. A good deal of flatus was passed at times, but never any fæculent matter. The urine was free and normal. The nutritive enemata were all well retained, and, save that wasting became manifest, the patient retained the appearance of health. March 28: Sickness and pain existed; the pulse was 90; tongue clean. On this and the three succeeding days the electro-magnetic current was several times applied, and the peristaltic action of the bowels was thoroughly aroused, but with no effect except the passage of flatus. Peristalsis was absent, unless when aroused by the electric currents. April 1: She was in about the same state; her tongue was clean, and pulse 80. During the next few days, the watery extract of aloes, podophyllin, calomel, and croton oil were given, but only with the effect of increasing pain and sickness. April 10: Much pain and sickness were present; flatus freely passed, and the bowels were softer. She was weak and low. The wasting was very apparent; pulse 100, and feeble; temperature 99·6°. From this date the patient steadily sank, and died somewhat suddenly on April 21. The post-mortem examination took place the next day, and the chief features were as follows:—On opening the abdomen, the intestines, moderately distended with flatus, presented the appearance as if they had been scattered thickly over with boiled sago; and, on closer examination, this was found to be a tubercular deposit, which extended throughout their entire length. Many of the deposits were as large as beans, looking like yellowish-white nodules on the surface of the gut, but being deposited really in the substance of the peritoneal covering. They were most extensively distributed in the neighbourhood of the cæcum. The intestines were extensively adherent to the peritoneum in many places, especially to the sides of the pelvis. They were also much glued together and puckered by adhesions, so that it was with much difficulty they could be removed and properly examined. Complete occlusion of the bowels was nowhere found, but they were tightly constricted in many places, so that their contents were contained in a succession of pouches. The internal lining of the intestines was healthy throughout. There were no signs of recent inflammatory action, nor appearance of recently-thrown-out lymph, all the adhesions being old and firm.

Mr. Maunder said that the case so admirably detailed by Dr. Wolston was one of those affections of a region (the abdomen) in appreciating the morbid conditions of which our art not infrequently failed. These failures must encourage us to observe more and more carefully, with a view to differential diagnosis. He had seen the patient once only, in order to consider the question of operative interference; but finding her absolutely free from symptoms of acute strangulation, and with an unobstructed colon, he had declined. Doubtless the semi-idiotic state of the patient added to the difficulties of the case.

Dr. Hilton Fagge said that no case had been heretofore reported of obstruction of the bowels from peritonitis caused by infiltration of tubercle. The diagnosis was not so difficult as the author supposed. There was obstruction, no doubt, but it was evident that it was not from a band, but rather from general causes affecting the whole intestine. He had made a special group of these cases. They came on gradually, and would probably be found to be due to chronic inflammation of the small intestine or bending of the large intestine, the latter of which was very rare in young people. He inquired if peristaltic action was observed without the use of medicine.

Dr. Silver briefly alluded to a practical point in these cases when the flatulent distension of the bowel was very great. That was, the employment of the finer aspiration needles, and allowing the escape of gas. This plan he had adopted in a good many cases where death was imminent, and the procedure was followed by very great relief and comfort. The important point was that in those cases where death followed, and a post-mortem had been obtained, there was no appearance of peritonitis round any of the punctures.

Dr. Southey objected to the diagnosis arrived at as insufficient. There were a good many cases of obstruction from chronic inflammation, but he had not seen one from tuberculosis. Such cases were quite easily distinguishable from those arising from constriction by a band.

Dr. Buzzard asked what was meant by the galvanism which was applied to the mouth and anus.

Dr. Coupland asked Dr. Silver if there had been any escape of fæces in the cases where he had punctured the bowels. In reply it was stated that there was escape of fæcal matter through the hollow needles, but not by their side. The punctures were made as far as possible valvular.

Mr. Furneaux Jordan suggested that the condition might depend on brain disease acting through the nervous system.

Mr. George Brown wanted to clear up the exact state of matters as regarded vermicular motion. Was it most notable with a band or with general disease?

Dr. Southey thought it was most marked in cancer of the colon.

The Chairman had seen a good deal of tapping of the bowels for the escape of gas. In two cases, both occurring in old men, fæcal extravasation had resulted, but he had also seen the plan had recourse to with perfect impunity. Peristalsis, he thought, was most marked in obstruction of the great or lower part of the small intestine. It was not very common in chronic peritonitis.

Dr. Wolston, in reply, said the low temperature was against the idea of tuberculosis. The obstruction, it was fully understood, was not complete. The electricity used was of the ordinary frictional kind.

Sequel to a Case of Gastro-Enterotomy: Artificial Anus in the Small Intestine.

Mr. Maunder read an account of the above case, from the time when the patient had been submitted to operation in

November, 1875. The patient's general health improved, and he was able to enjoy a good two hours' walk daily. The hard lumps which Mr. Gordon Brown had detected in the abdomen steadily increased in size; the appetite gradually fell off, and solid food became distasteful. Hiccough ensued, and week by week he became more feeble. The artificial anus which Mr. Maunder had made in the right iliac region in the small intestine continued healthy and adequate. To avoid inconvenience arising from the irregular action of the bowels through the artificial anus, Mr. Gordon Brown advised his patient to use an enema of half a pint of water daily. By this means he was able to clear his bowels before leaving his room in the morning, and had no further trouble. He wore a sponge-tent, which acted as a plug, and, at the same time, kept the orifice open. His death appeared to result from exhaustion, consequent on inability to take sufficient nourishment, and was most peaceful, seven months subsequent to the operation. Mr. Maunder thought he was entitled to say that the operation was eminently successful, inasmuch as it prolonged for seven months a life that threatened to become extinct in forty-eight hours. The patient was sixty-eight years of age, gouty, and with a feeble circulation. Much to the annoyance of Mr. Brown and Mr. Maunder, a post-mortem examination was obstinately refused.

Dr. COUPLAND said that in one case where he had cut down as indicated, the jejunum alone had been visible.

Dr. GREENFIELD had examined a number of bodies with a view to determine the parts brought into sight by following the directions of Trousseau's incisions. In several cases the cæcum had been opened.

Mr. MAUNDER said Mr. MacCarthy had tried the incisions in seventy or eighty cases. In the great majority of cases the small intestine was opened near the ileo-cæcal valve. His patient had lived for four months. Mr. Wagstaffe's patient was still alive.

(*To be continued.*)

EFFECTS OF GYMNASTICS.—Dr. Bureq states that the experiments which have been conducted during six months at the Ecole Normale de Gymnastique Militaire have furnished the following results:—1. Increase of the muscular force by 23 or even 38 per cent., and, as a mean, by from 15 to 17 per cent., the two sides of the body being at the same time brought into equilibrium. 2. Increase of the pulmonary capacity by at least one-sixth, as a mean. 3. Increase of weight by from 10 to 15 per cent., with a mean of from 7 to 10 per cent., and that with decrease of volume, the whole gain being muscular, as attested by the dynamometer. 4. The increase of strength takes place especially during the first half of the course, this generally tending to decrease more or less seriously at a later period. At this point, as in all cases in which the employment of gymnastics tends to become excessive, the dynamometer comes into play in a manner that is both precise and salutary, warning both masters and pupils that the exercises should be moderated or discontinued.—*Révue Scientifique*, October 7.

THE BUST OF DESAULT.—A great festival is to be held on the 15th inst., at Lure (Haute-Saône), for the inauguration of a bust of this great surgeon. The celebrated sculptor, Iselin, has executed one, which is an artistic work of high excellence, and presented it to the native place of the great surgeon. The founder of the first school of clinical surgery, Desault, in the words of Bichat, created surgical anatomy, and was the inventor of the apparatus for the permanent extension of fractured limbs, as also of a great number of instruments and operative procedures. He was, indeed, one of the glories of French surgery. A skilful operator, an eloquent professor, and a clinician of genius; he was the son of a poor peasant living in the hamlet of Lure, and raised himself solely by the force of labour and genius to the highest scientific position. As early as the age of twenty-two he attracted crowds to his lectures, and filled various posts of importance until made Surgeon of the Hôtel-Dieu. He was appointed Professor of Clinical Surgery in the Ecole de Santé organised by the Convention. In 1795, while attending the Dauphin, then a prisoner in the Temple, he died suddenly at the age of fifty-one, some said from low fever, and others from poison. He was the master of Bichat, of Dupuytren, Larrey, Chopart, and others, and, properly speaking, he is the founder of the French surgical school of the nineteenth century.—*Union Méd.*, October 12.

MEDICAL NEWS.

QUEEN'S UNIVERSITY IN IRELAND.—At the annual meeting of the Senate, held for the purpose of conferring degrees, on Friday, October 13, in St. Patrick's Hall, Dublin Castle, the following degrees in Medicine and Surgery were conferred by his Grace the Duke of Leinster, Chancellor of the University:—

Doctor in Medicine.—First Honour Class: William M'Geagh, Belfast; John Jagoe Welply, Cork. Second Honour Class: Jeremiah Mullane, Galway; Arthur A. Woods, Belfast. Upper Pass Division: Robert John Camac, Belfast; George Lewis Latour, Cork. Lower Pass Division: Alfred Allen, Belfast; Thomas Archer, Belfast; Samuel Bateman, Belfast; Robert Beattie, Galway; Robert Allen Brannigan, Belfast; James Fitzgerald Brodie, Galway; Richard John Burke, Cork; Michael Collins, Cork; Arthur Derham, Cork; Robert Eeeles, M.A., Belfast and Cork; John Baldwin Isaac, Cork; James Martin Kennedy, Belfast; Gilbert Kirker, Belfast; Robert M'Ivor, Belfast; Robert Blake M'Vittie, Galway; James Magill, Belfast; Henry Molony, B.A., Galway; John Mulrenan, Cork; Channing Neill, Belfast; Maurice Joseph O'Sullivan, Cork; Thomas Francis Riordan, Cork; Charles K. Deane Tanner, B.A., Cork. June, 1876: Charles Henry Bennett, Cork; David Bradley, Belfast; William Coates, Galway and Cork; Frederick H. Collins, Belfast; Jephson J. Connell, Cork; Patrick J. Dempsey, Belfast; J. Dunbar Dickson, Galway and Belfast; John S. Dillon, Cork; Justin F. Donovan, Cork; Michael Dundon, Cork; F. Meagher Geoghegan, Galway; Charles Good, Cork; Thomas Greer, M.A., Belfast; Henry Hunter, Belfast; George Laffan, Cork; William M'Afee, Galway; Michael J. M'Carthy, Cork; Mark A. MacDonnell, Galway; R. Dickie M'Master, Cork; Edward G. K. Marks, Galway; Francis H. S. Murphy, Cork; James Pedlow, Belfast; John F. Wales, B.A., Belfast; Archibald Wallace, Belfast; William Cotter Williamson, Cork.

Master in Surgery.—Thomas William Kyle, M.D., Belfast; David Robertson, M.D., Belfast; Alfred Allen, Belfast; Thomas Archer, Belfast; Samuel Bateman, Belfast; Robert Beattie, Galway; Robert Allen Brannigan, Belfast; James Fitzgerald Brodie, Galway; Richard John Burke, Cork; Robert John Camac, Belfast; Michael Collins, Galway; Robert Eeeles, M.A., Belfast; George Lewis Latour, Cork; William M'Geagh, Belfast; Robert M'Ivor, Belfast; Henry Molony, B.A., Galway; Jeremiah Mullane, Galway; Channing Neill, Belfast; Maurice Joseph O'Sullivan, Cork; Thomas Francis Riordan, Cork; Charles K. Deane Tanner, B.A., Cork; John Jagoe Welply, Cork; Arthur A. Woods, Belfast; Turner J. Fisher, M.D., Belfast; Samuel Fergus, M.D., Belfast; James Ross, M.D., Belfast; Charles Henry Bennett, Cork; William Coates, Galway; Frederick H. Collins, Belfast; Jephson J. Connell, Cork; Patrick J. Dempsey, Belfast; J. Dunbar Dickson, Galway; John T. Dillon, Cork; Justin F. Donovan, Cork; Michael Dundon, Cork; F. Meagher Geoghegan, Galway; Charles Good, Cork; Thomas Greer, M.A., Belfast; George Laffan, Cork; William M'Afee, Galway; Michael J. M'Carthy, Cork; Mark A. MacDonnell, Galway; Edward G. K. Marks, Galway; Francis H. S. Murphy, Cork; James Pedlow, Belfast; John F. Wales, B.A., Belfast; William Cotter Williamson, Cork.

Diploma in Midwifery.—Alfred Allen, Belfast; Thomas Archer, Belfast; James Fitzgerald Brodie, Galway; Richard John Burke, Cork; Robert John Camac, Belfast; Arthur Derham, Cork; William M'Geagh, Belfast; Jeremiah Mullane, Cork; Thomas Francis Riordan, Cork; John Jagoe Welply, Cork. June, 1876: Turner J. Fisher, M.D., Belfast; Samuel Fergus, M.D., Belfast; James Ross, M.D., Belfast; William Coates, Galway; Fred. H. Collins, Belfast; Jephson J. Collins, Cork; Patrick J. Dempsey, Belfast; J. Dunbar Dickson, Galway; John T. Dillon, Cork; Justin F. Donovan, Cork; F. Meagher Geoghegan, Galway; Charles Good, Cork; Henry Hunter, Belfast; William M'Afee, Galway; Mark Anthony MacDonnell, Galway; Francis H. S. Murphy, Cork; James Pedlow, Belfast.

The degree of M.D., *Honoris Causâ*, was at the same time conferred upon Richard Eustace, Fleet Surgeon, Royal Navy, as a recognition of his distinguished services, especially during the Ashantee campaign of 1874-75.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates on October 16:

Collins, Floyd, Ware.
Downes, Edmund, St. Mary's Hospital, W.
Dunbar, James John MacWhirter, 77, Ladbroke-grove, W.
Fry, John Blount, Swindon.
Greenish, Robert, 20, New-street, N.W.
Khory, Rustomjee Naserwanjee, 49, Elsham-road, W.
Merriman, John William Conyers, 45, Kensington-square, W.
Page, William Henry, 27, Flaxman-road, S.E.
Street, Alfred William Frederick, Royal Free Hospital, W.C.
Thompson, Arthur Hirst, Gomersal, Leeds.
Tomlinson, Edward Denham, Preston.
Traill, Mark Windeyer, University Hospital, W.C.
Woollett, Charles Jerome, Monmouth.

The following candidates, having passed in Medicine and Midwifery, will receive the College licence on obtaining a qualification in Surgery recognised by this College:—

Byam, Samuel Henry, 14, Milner-street, S.W.
Goulder, Frank Samuel, 16, Holford-square, W.C.
Sugden, D'Arcy, St. Bartholomew's Hospital, E.C.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the ordinary monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday,

October 10, 11, and 12, the following candidates obtained the licence to practise Medicine:—

Barber, Walter.	Hodgson, William.
Clibborn, James Barclay.	Kidd, Henry.
Fuller, Joseph.	Thomson, Henry Albert Richardson.
Harrison, Damer.	

The licence to practise Midwifery:—

Clibborn, James Barclay.	Hodgson, William.
Fuller, Joseph.	Kidd, Henry.
Goode, William Henry.	Molony, Henry.
Harrison, Damer.	Thomson, Henry Albert Richardson.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 12:—

Cree, Percy Kimburn, St. John's-park, Holloway.
Gamble, Hy. Warburton Banter, Brunswick Villas, Grosvenor-park, S.E.
Skerman, Sidney, Waltham Abbey, Essex.
Taylor, Henry Edward, Manor-row, Bradford.
Whitsed, John, Sutton St. Edmund, near Wisbeach.

The name of John Lloyd Thomas was omitted in the pass list (second class) of the Arts Examination on September 29 and 30 last.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

PRONGER, CHARLES EARNEST, M.R.C.S. Eng., L.R.C.P. Lond., F.R.C.S.—House-Surgeon to the North Devon Infirmary, Barnstaple.

BIRTHS.

BAKER.—On October 12, at Cheltenham, the wife of Surgeon-Major T. Y. Baker, M.R.C.S. Eng., of a son.

BRADSHAW.—On October 17, at 43, Welbeck-street, Cavendish-square, the wife of Watson Bradshaw, L.R.C.P. Edin., etc., of a daughter.

INGLIS.—On October 15, at Allandale, Upper Norwood, the wife of W. W. Inglis, M.D., of a daughter.

KING.—On October 8, at 3, Charlton-villas, Willesden, N.W., the wife of T. R. King, M.D., of a daughter.

THOMSON.—On October 10, at Westgate, Peterborough, the wife of W. Thomson, M.D., of a son.

MARRIAGES.

CLARKE—AMSDEN.—On October 11, at Widford, Herts, the Rev. Frederick Walker Clarke, B.A., of Frome, to Florence, third daughter of G. J. Amsden, M.D., of Widford, late of Highbury.

FRANKLIN—DENNE.—On October 17, at St. Saviour's, Eastbourne, George Cooper Franklin, F.R.C.S., of Leicester, elder son of George B. Franklin, of Stoneygate School, Leicester, to Lucy Hannah, younger daughter of William Denne, F.R.C.S., of Eastbourne.

HOPWOOD—MATTHEWS.—On October 11, at St. Andrew's Church, Plymouth, Edwin James Hopwood, Surgeon-Major, A.M.D., to Sarah Elizabeth, elder daughter of W. E. Matthews, J.P.

PATERSON—SEWELL.—On October 11, at St. Andrew's Church, Torquay, William Dalrymple Paterson, L.R.C.P., L.R.C.S. Edin., to Elizabeth Emma Sewell.

SMITH—IREDELL.—On October 12, at the parish church, Reigate, Samuel Parsons Smith, L.K.Q.C.P., L.R.C.S.I., of Addiscombe, Surrey, to Elizabeth Anne Shrubb, daughter of the late Lieut.-Col. Iredell, H.M. Bombay Army.

TAYLOR—SANGSTER.—On October 14, at Christ Church, Ealing, William Bramley Taylor, M.R.C.S., of Champion-park, Denmark-hill, second son of Charles Taylor, M.D., to Emily Susan, second surviving daughter of the late Martin Sangster, of Stockwell.

VORES—PRESTON.—On October 12, at Christ Church, Eaton, Norwich, W. Mallam Vores, M.A., M.B. Cantab., eldest son of W. Vores, M.D., of Great Yarmouth, to Harriet Tolver, eldest daughter of the late Edmund Preston, of Guist Lodge, Norfolk.

DEATHS.

EDENBOROUGH, ALFRED, M.R.C.S., at 5, Manor-road, Holloway, on October 14, aged 69.

HERING, WILLIAM, M.D., late of Gloucester-street, Portman-square, at Reigate, on October 11, in his 73rd year.

HOPKINS, EDWARD ARTHUR, infant son of Alfred Boyd Hopkins, M.R.C.S.E., at Oak Cottage, Eastbourne, on October 15.

KING, LOUISA, wife of T. King, M.D., M.R.C.S. Eng., of Rochford, Essex, at 33, Dulwich-road, Herne-hill, on October 11, aged 38.

SEALY, EMILY MAXWELL, wife of John Sealy, M.D., at The Cliff, Barbadoes, on September 23.

SLAUGHTER, EMILY, wife of Thomas George Slaughter, M.D., at Farningham, Kent, on October 15, aged 68.

WRIGHT, THOMAS STRETHILL, M.D., F.R.C.P.E., at 55, Northumberland-street, Edinburgh, on October 13.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

KENSINGTON DISPENSARY.—Resident Medical Officer. Candidates must be duly registered, and not more than thirty-five years of age. Testimonials of qualification and character to the Honorary Secretary, Dispensary House, Kensington, W., on or before October 28.

NORTH LONDON CONSUMPTION HOSPITAL, LONDON AND HAMPSTEAD.—Physician. Candidates must be Members or Fellows of the College of Physicians, and graduates in medicine of a university. Testimonials to the Secretary, 216, Tottenham-court-road, W., on or before Nov. 2.

NORTHAMPTON FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Medical Officer. Candidates must be duly qualified Members of one of the Royal Colleges of Surgeons of the United Kingdom, and registered in accordance with Act of Parliament. Testimonials to the Secretary, 22, Cromwell-street, Northampton, on or before October 23.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Candidates must be doubly qualified. Testimonials to the Secretary of the Medical Board, the Infirmary, Sunderland, on or before October 21.

TISBURY UNION.—Medical Officer and Public Vaccinator for the Donhead District. Applications, with certificates of qualification and testimonials, to T. B. Chitty, Clerk, Union House, Tisbury, on or before October 25.

TONBRIDGE UNION.—Medical Officer for the First District of the Union. Applications, with testimonials, to Frank Wm. Storr, Clerk, Tunbridge Wells, on or before November 2.

VICTORIA HOSPITAL FOR SICK CHILDREN, GOUGH HOUSE, QUEEN'S-ROAD, CHELSEA.—Assistant-Physician. Candidates must be graduates of medicine of a British university, not practising pharmacy, or members of the Royal College of Physicians of London. Testimonials, etc., to W. C. Blount, Commander R. N., Secretary, on or before October 26.

WORCESTER GENERAL INFIRMARY.—House-Surgeon. Applications, with testimonials, to the Secretary, 50, Foregate-street, Worcester, on or before November 6.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

APPOINTMENTS.

Calne Union.—Donald Campbell, M.D. and C.M. Glasg., to the First District and the Workhouse; Thomas H. King, M.R.C.S. Eng., L.S.A., to the Second District; J. Cartwright, M.R.C.S. Eng., L.S.A., to the Third District.

Knighton Union.—Henry O. Brown, M.R.C.S. Eng., L.S.A., to the Brampton Brian District.

Toxteth-park Township.—Mark A. McDonnell, M.D., M.C. Q.U.I., as Assistant Medical Officer at the Workhouse.

MRS. GRACE CALVERT has presented to Owens College, Manchester, the sum of £700 for the foundation of a scholarship in Chemistry, in memory of her late husband, Dr. Grace Calvert, F.R.S. The scholarship will be of the annual value of £25, and will be competed for by members of the evening classes.

A PROFESSIONAL LEGACY.—The late Medizinalrath Prof. Dr. Richter has left his house, with the garden belonging to it, to the Dresden Medical Society. The Society has already received this generous legacy, and is about having it adapted for the purposes of its meetings.—*Wien. Med. Zeit.*, September 26.

THE Government emigrants who sailed for New Zealand in the ship *Hurnuni* from Gravesend last week, and were detained at Plymouth in consequence of the outbreak of scarlatina and diphtheria on board, have been transferred to a hulk lent by the Admiralty, in order that the ship, clothing, and bedding may be disinfected. The old bedding is to be replaced by new.

CARBOLIC ACID AS A LOCAL ANÆSTHETIC.—Dr. Bergonzini recommends a new painless mode of opening abscesses. It consists in placing in contact with the skin for three to five minutes a mixture formed of one part of glycerine and two parts of carbolic acid. It produces neither redness nor swelling, and may be employed with advantage in autoplastic operations, and in the treatment of superficial neuralgia. —*Presse Méd. Belge*, October 8.

SUICIDES IN FRANCE IN 1874.—During the year 1874 there occurred 5617 suicides, 4435 (or 79 per cent.) in males, and 1182 (21 per cent.) in females, this being the largest annual number ever recorded. The ages of 105 individuals could not be ascertained, and those of the 5512 others are thus distributed—Under sixteen, 29; from sixteen to twenty-one, 193; from twenty-one to forty, 1477; from forty to sixty, 2214; above sixty, 1599. There were 1946 (36 per cent.) of unmarried, 2645 (48 per cent.) married, and 881 widowed individuals. Of these two last categories, 2259 (nearly two-thirds) had children. The civil condition of 145 persons could not be ascertained. More than seven-tenths of the suicides took place by hanging (2472) or drowning (1514). As is always the case, a greater number took place in the spring (31 per cent.) and summer (27 per cent.) than in the winter (23 per cent.) and autumn (19 per cent.). The 5617 suicides are thus distributed as regards occupation—Agriculturists, 33 per cent.; workmen in the various industries, 30 per cent.: merchants and shopkeepers, 4 per cent.; the liberal professions, 16 per cent.; servants, 4 per cent.; without occupation or occupation unknown, 13 per cent.—*Gazette des Hôp.*, Oct. 14.

ST. BARTHOLOMEW'S MEDICAL SCHOOL.—The large and unprecedented entry of new students at St. Bartholomew's this session has strained the resources of the School to the utmost, and some difficulty is found in providing accommodation for all the classes in the dissecting-room and theatres. The subject has been discussed by the Hospital authorities, and we understand that it has been decided to rebuild and enlarge the greater part of the school buildings early next summer.

EFFICACY OF REVACCINATION.—Dr. Cuignet made the following statement at the Société des Médecins du Département du Nord:—"With regard to the influence of revaccination as a preservative against small-pox, I will direct your attention to the quite special condition in which the soldiers of the Guard of Paris are placed in this respect. There is not a corps in the entire army in which revaccinations have been so frequently and so carefully performed; and during seventy years no case of variola has been met with among them, in spite of the epidemics which have on several occasions decimated the populous quarters of Paris. In Algeria, where vaccination is rare, and revaccination rarer still, small-pox gives rise to considerable disasters."—*Révue Scientifique*, Oct. 7.

A CITY WITHOUT WATER.—Such was practically the condition of Dublin at the close of last and the beginning of this week. The single thirty-three inch main, on which the Irish metropolis depends for its water-supply from the Vartry Reservoir at Roundwood, co. Wicklow, burst on Monday week below the bed of the Cookstown River, some three miles above Bray. Notwithstanding every exertion, the pipes could not be relaid until a week had elapsed, and in the meantime the city and suburbs had to depend on the storage reservoirs at Stillorgan, which are capable of holding only seven days' supply. On Sunday—as a *dernier ressort*, we presume—the water from the canals was turned on, but the pressure being inconsiderable, the higher parts of the houses in the city have been absolutely without water. Last Monday water-closets were rapidly becoming intolerable nuisances from want of flushing.

PERFORATING ULCER OF THE STOMACH.—Geheimrath Prof. Lebert, having recently published the results of his prolonged clinical work as regards diseases of the chest, is about to do the same for those of the digestive organs, and has commenced with a paper (*Berliner Klin. Woch.*, September 25) upon chronic perforating ulcer of the stomach. That he has ample material to work upon is seen from the statistics with which he commences. While at Zürich he met with 46 cases in the hospital of that town; and at Breslau, where he afterwards taught, he had 63 in the hospital and 143 at the dispensary, being a total of 252 cases. These as regards sex were very differently distributed, for while, taken altogether, there were 69 men to 183 women, at Zürich the sexes were nearly equal in number (22 men to 24 women), at the Breslau Hospital they were about one to three (16 men to 48 women), and at the Breslau Dispensary three-fourths of the cases were women (32 men to 111 women). Prof. Lebert points out the error that may sometimes arise by lumping together cases derived from different sources, and deducing their mean. Of cases exactly observed, however, Prof. Lebert has of course a less number than the above, and can only count 104 such derived from his private and hospital practice at Paris, Zürich, and Breslau; and autopsies were performed in 33 of these, 71 ending favourably.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Machinist.—Sir Humphry Davy thus expressed his opinion on the advantages of machinery:—"There is this immense benefit in machinery, that it carries on those operations which debase the mind and injure the faculties. A man by constantly performing the same operations becomes unfit for any other. Machinery requires attention, intellectual exertion, and bodily labour of various kinds."

A Young Doctor.—Remember the warning of Celsus—"The pulse will be altered by the approach of the physician, and the anxiety of the patient doubting what his opinion of the case may be. For this reason a skilful physician will not feel the pulse as soon as he comes, but he will first sit down with a cheerful countenance and ask how the patient is—soothing him, if he be timorous, by the kindness of his conversation, and afterwards applying his hand to the patient's arm."

Plucked Twice.—Take Sheridan's hint: how to insure success. "The surest way not to fail is to determine to succeed."

Differentiation.—The Russians adhere to the old system. The dead of all ranks in Russia are interred in coffins; these coffins are made of different woods. When at all covered with cloth, the colour of the covering is in some sort distinctive. Pink is used when the deceased is a child or young person, crimson for women, and brown for widows, but black is never in any case employed.

Discoverer.—"Men, till a matter be done, wonder that it can be done; and as soon as it is done, wonder again that it was no sooner done."—*Bacon.*

A Referee.—"Give every man thine ear, but few thy voice:
Take each man's answer, but reserve thy judgment."
—*Polonius.*

Inventus.—Dr. Bucknill's remark is—"No one brain is like any other brain. Either by the force of inheritance from parent organism, or through the influence of education or other modifying circumstances, every mind possesses such a *peculiarity and individuality* in the relative susceptibility and strength of its organs, that the same disturbing influence never produces in two brains exactly the same pathological effects."

L. P. Lewis.—The University of *Pennsylvania* (not of *Philadelphia*) is one of the oldest in America. On the first formation of the colony, at the close of the seventeenth century, in some cases the theological and medical professions were united in the same individual, many of the Puritan clergy prior to their emigration from England having studied medicine as a precautionary measure in case of ejectment from their livings. The Pennsylvania Hospital was originated by Dr. Thomas Bond, in 1751.

An Orthopædic Surgeon is thanked. We shall be glad to see the paper. The bust of Stromeyer lately presented to the Council of the College of Surgeons can be seen as you ascend to the library of that institution.

A Metropolitan Teacher.—The number of pupils registered at the College of Surgeons as pursuing their studies in this metropolis up to the end of last October amounted to 1742. In another page you will see the number registered this session.

Dr. Williams.—We were unable to comply with your request of the 28th ult., but have since been able to obtain rather more than the desired information, which, we think, will be interesting to other readers besides yourself. We are indebted to Mr. Stone, of the College of Surgeons, for permission to publish the account drawn up by Sir William Blizard of the post-mortem examination of the body of Bellingham, who was executed at the Old Bailey for the murder of the Right Hon. Spencer Perceval.' The manuscript is in the handwriting of Sir William Blizard. The following is an exact copy:—

"The execution of Bellingham was on Monday, May 18, 1812, precisely at eight in the morning.

"The body was received at a ¼ past nine;(a) it expressed a Person of about 42 years of Age, of dark hair, and in stature about 5 feet 11 inches.

"The cavities, so termed, of the Thorax, Abdomen, Pericardium, and right Tunica Vaginalis, were immediately opened; one of the Objects of enquiry previously determined upon being to ascertain the Existence or not of a Fluid in those Parts.

"There was not any Fluid in the Cavity of the Thorax, or of the Abdomen; but the Pericardium contained about a Tea Spoonful of a reddish Fluid, and the right Tunica Vaginalis nearly the like Quantity of Fluid of a yellowish Colour.

"The Gall-Bladder was large and distended with Bile.

"The Stomach was strongly corrugated, and contained a small Quantity of Fluid which seemed to be Wine.

"The Urinary Bladder was empty and contracted.

"Not any of the Viscera of the Thorax or of the Abdomen presented the least Appearance of a morbid change.

"The left Testis appeared to be reduced in Size and loose in Texture. The Veins of its spermatick cord were varicous.

"The Penis seemed to be in a state of semi-erection.

"There was no Dislocation of any Cervical Vertebra, nor did the Trachea show any Sign of Compression or Hurt.

"The Stomach and the left Testis were sent to the College Museum.

"The right Auricle of the Heart moved, at irregular Intervals, without the Application of any Stimulus, during the Period of nearly four Hours from the Time of Execution; and for about an Hour longer upon being touched with a Scalpel.

"This motion was not strictly a contractile Action, diminishing in any sensible Degree the Cavity of the Auricle; it was undulary (*sic*) and weak, sometimes beginning at the right extremity of the Auricle, and moving to the left; at other times commencing and proceeding in the contrary Direction.

"Not the least Motion was observable in the left Auricle, or in either of the Ventricles.

"On the next Day the Brain was examined. It was firm and sound throughout. The Vessels of the Piamater were distended with Air.

"Not a Drop of Fluid was found in the Ventricles.

"There was a small Hydatid on the left side of the Choroid Plexus."

A FIGHT FOR PRECEDENCE IN THE "OTHER WORLD."

Two men named Slattery and Clancy, of the farming class, residing outside Nenagh, Tipperary, were accidentally drowned by the cart in which they were seated upsetting into a small river. At their funeral a free fight between their respective friends took place, each party wishing to inter their corpse first, believing that the last buried would have to act as servitor to the other in the other world.

(a) At 32, Duke-street, West Smithfield, now forming a part of the College of St. Bartholomew's Hospital.

COMMUNICATIONS have been received from—

Dr. Lionel S. Beale, London; Mr. Henry Morris, London; Mr. W. E. Poole, London; Mr. George Gaskoin, London; Mr. B. R. Wheatley, London; Mr. David Edgar Flinn, Staffordshire; Dr. Morell Mackenzie, London; Dr. Wm. Carter, Liverpool; Mr. C. J. Cullingworth, Manchester; Mr. J. Chatto, London; Mr. George Brown, London; Dr. Druitt, London; Mr. T. M. Stone, London; Dr. J. Carmichael, London; The Secretary of the North London Medical Society; The Secretary of the Central London Throat and Ear Hospital; Messrs. Macmillan and Co., London; The Secretary of the Society of Medical Officers of Health, London; Mr. G. O. Topham, London; The Honorary Secretary of the Hunterian Society; Dr. Wolf, Glasgow; Dr. M'Kendrick, Edinburgh; Messrs. Trog and Co., London; Dr. Lawson, Wakefield; Mr. W. C. Higgens, London; Dr. J. W. Moore, Dublin; Mr. Ingpen, Putney; Dr. Thorowgood, London; The Secretary of the Clinical Society, London; The Secretary of the Obstetrical Society, London; The Registrar of the Royal College of Physicians, London; Dr. McCaaith, Smyrna; Mr. Francis M. Wright, London; Mr. F. W. Lowndes, Liverpool; The Secretary of the Yorkshire Association of Medical Officers of Health; The Secretary of the Royal College of Surgeons, Edinburgh; Mr. J. M. Crombie, London.

BOOKS AND PAMPHLETS RECEIVED—

Oscar Peschel, The Races of Man and their Geographical Distribution (from the German)—John Whitmore, M.D., Monthly Report on the Health and Meteorology of the Parish of Saint Marylebone—Le Docteur Bremond fils, Bains Térébenthinés, leur Emploi dans le Traitement des Rhumatismes—Prof. Dr. Sigfrid Ulrich, Jahresbericht des Schwedischen Heilgymnastichen Institutes in Bremen—Who's to Blame?—H. C. Wood, jun., M.D., A Treatise on Therapeutics—Professor Claude Bernard and Ch. Huette, Operative Surgery and Surgical Anatomy, part 1 — Dr. Bucknill on Drunkards—Society of Medical Officers of Health, Annual Report, 1875-76.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Dublin Journal of Medical Science—Journal of Anatomy and Physiology—Boston Journal of Chemistry—Westminster Review—Révue des Sciences Médicales—Chicago Medical Journal and Examiner—Liverpool Daily Post—The Porcupine—Western Weekly News—Western Morning News—Canada Lancet—New York Medical Journal—Canada Medical and Surgical Journal—Public Leader—The Dairyman—Iron—Chemist and Druggist.

APPOINTMENTS FOR THE WEEK.

October 21. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

23. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Sansom, "Two Cases of Croup and Diphtheria." Mr. Charles T. Maunder, "Cases which have been subjected to Subcutaneous Osteotomy." Mr. Richard Davy, "On Degenerative Cysts on Muscles."

24. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. W. Miller Ord, "On a Case of Pseudo-hypertrophic Paralysis"; and "On Surface Temperature." Sir B. C. Brodie, "On the Use of the Magnet in the detection of a Needle broken in the Leg."

25. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), 8 p.m. Mr. Stevens will exhibit an Abnormal Fœtal Heart. Mr. Barrett, "On Dental Septicæmia".

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

27. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Daly and Mr. Maunder, "Fatal Case of Gall-Stone." Dr. Cayley, "Case of Empyema in which washing out the Pleural Cavity was followed by Convulsions and Death." Dr. Gowers, "Case of Lymphatic Leucocythæmia treated by Phosphorus." Dr. Theodore Williams, "Sequel of a Case of Contracted Cavity in the Lung communicated in 1871."

Queekett Microscopical Club, 8 p.m. Ordinary Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 14, 1876.

BIRTHS.

Births of Boys, 1220; Girls, 1138; Total, 2358.
Average of 10 corresponding years 1866-75, 2181·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	657	600	1257
Average of the ten years 1866-75	670·6	656·5	1327·1
Average corrected to increased population ...	...	...	1420
Deaths of people aged 80 and upwards ...	...	...	24

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	...	4	1	2	...	5	1	6
North	751729	7	...	7	2	1	2	4	1	5
Central ...	334369	...	...	4	1	...	...	1	...	3
East	639111	...	3	19	...	4	1	7	2	6
South	967692	8	4	23	4	7	3	8	3	14
Total	3254260	16	7	57	8	14	6	25	7	34

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·447 in.
Mean temperature	37·3°
Highest point of thermometer	66·4°
Lowest point of thermometer	45·4°
Mean dew-point temperature	53·3°
General direction of wind	S.S.W., S.W., & S.E.
Whole amount of rain in the week	0·99 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 14, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Oct. 14.	Deaths Registered during the week ending Oct. 14.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2358	1257	66·4	45·4	57·3	14·06	0·99	2·51
Brighton	100632	42·7	51	31	68·0	55·0	59·6	15·34	0·59	1·50
Portsmouth ...	124867	27·8	85	50	64·3	52·6	58·4	14·66	1·15	2·92
Norwich	83430	11·2	72	36	67·0	48·8	57·2	14·00	0·40	1·02
Plymouth	72230	51·8	62	27	62·5	47·0	56·2	13·44	1·71	4·34
Bristol	199539	44·8	115	68	64·6	42·4	55·7	13·17	1·20	3·05
Wolverhampton ...	72549	21·4	51	25	62·1	43·3	54·3	12·39	1·34	3·40
Birmingham ...	371839	44·3	301	103	...	...	...	...	...	...
Leicester	113581	35·5	111	47	65·0	43·8	54·8	12·67	0·68	1·73
Nottingham ...	93627	46·9	101	41	70·9	42·2	56·6	13·67	0·82	2·08
Liverpool	521544	100·1	400	207	60·6	45·5	53·3	11·84	1·56	3·96
Manchester ...	357917	83·4	261	156	63 8	43·2	53·7	12·06	1·95	4·95
Salford	138425	26·8	128	78	63·8	41·5	53·3	11·84	2·12	5·38
Oldham	88609	19·0	77	41	...	...	...	...	...	...
Bradford	173723	24·1	131	50	64·8	46·0	54·0	12·22	2·40	6·10
Leeds	291580	13·5	236	117	68·0	45·0	55·0	12·78	1·76	4·47
Sheffield	274914	14·0	221	100	63·5	45·0	54·4	12·44	2·40	6·10
Hull	136933	37·7	97	45	63·0	44·0	54·6	12·56	1·32	3·35
Sunderland ...	108343	32·8	84	36	68·0	45·0	55·6	13·12	1·08	2·74
Newcastle-on-Tyne	139929	26·1	121	46	...	...	...	...	...	...
Edinburgh	215146	51·3	127	76	...	...	...	...	...	...
Glasgow	545144	90·4	325	192	60·7	43·5	51·9	11·06	3·70	9·40
Dublin	314666	31·3	157	113	62·2	43·0	53·3	11·84	1·55	3·94
Total of 23 Towns in United Kingdm	8028595	37·7	5675	2945	70·9	41·5	55·2	12·89	1·51	3·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·45 in. The highest reading was 29·80 in. at the beginning of the week, and the lowest 29·06 in. on Wednesday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CITIZENSHIP IN SANITARY WORK.

By GEORGE BUCHANAN, M.D., F.R.C.P., etc.,
Assistant Medical Officer, Local Government Board.

MEDICAL Officers of Health, like other members of the profession to which we have the honour of belonging, are in the habit of seeking, during the day-to-day performance of their work, how they can further the progress of their subject; thinking of it now as a science to be developed for its own sake and for the sake of its applications in the future, now as an art presently helpful to mankind and claiming to include more and more people in its benefits. In my former address it occurred to me to suggest some few directions for scientific work by Medical Officers of Health; and to-night I propose to consider some questions concerning the machinery of sanitary progress.

Every man who has any real interest in sanitary work, and who knows anything of its present position, confesses to himself that the science of hygiene, imperfectly understood as it is, is yet far in advance of practice; and admits that if the community would only act up to such knowledge as it has, or might have, of the laws of health, a vast amount of suffering and misfortune might be avoided. What can be done to make people more careful of their own health, and of the health of those dependent on them, of their children, of their workpeople, of their tenants? Again, everyone admits that our laws, such as they are, allow of incomparably more care being exercised than is now exercised over the sanitary welfare of the community by those who are appointed to administer the laws. What is to be done to make sanitary authorities more active in the exercise of the tremendously responsible duties with which they are charged? To these questions it is but too common to find but a single answer given—an answer that may be summed up in the one word "compulsion"; and then there arises with many of our more zealous sanitary workers an incessant desire for more law, and more stringent law, and for more and stronger powers of regulation and repression to be had by local governments over the people, and by the central government over local governments. This is very well, but a little consideration must show that it is not all that is wanted for sanitary progress. Compulsory laws must be capable of being enforced, or they might as well not exist. And just as the occasion for compulsion comes of ignorance and bad citizenship, so ignorance and bad citizenship will surely resent the proposed compulsion. The ignorant and careless must be reduced to a minority before they can be compelled to do the bidding of sanitary Acts; and it is certain that the rate at which measures of legislation will receive effect, and the amount of regulation and repression that, in the interests of health, can be exercised, will depend, first, on the education of the people to understand the value of sanitary measures to themselves and to the community; and secondly, on the trust which they have in those who are to devise and execute the required sanitary regulations.

To illustrate the extent of deliberation that must inevitably precede any real compulsion, let me refer to the history of vaccination in England. It was not until half a century after Parliament had recognised the "universal utility of Jenner's discovery to the human race" that the first attempt at a compulsory vaccination law was (in 1853) made, and it is only within the last six years that the machinery for compulsion has been efficiently organised. And to illustrate the indecision with which professingly compulsory measures are apt to be carried out when the public mind is careless respecting their subject, let me remind you of the provision of the Metropolis Building Act of 1844, relating to certain noxious trades. Not one or two, but thirty years was the time permitted by that Act to elapse before effect was to be given to the clauses prohibiting such trades from being carried on in the immediate neighbourhood of houses and streets.

During those thirty years little or no attention was paid to the provisions of the Act; and at the end of that time the prohibitory clauses were set aside in deference to the interests of the trades in question. Certainly, here in England the powers of compulsion and repression sought by some ardent sanitary advocates cannot, in the present state of public instruction on sanitary matters, be at once given—or, if given, cannot be at once exercised. There are many measures, the immediate adoption of which would be the saving of much disease and death, that cannot be made matter of strictly compulsory law until much sanitary education of the people has gone on. And the same education that will reduce the number of people needing compulsion, will give to the majority the power, as it clearly has the right, to dictate the action required for the sanitary good of the whole community.

In thinking over the future of sanitary progress in England, in speculating on the part that must be played in it by education, and on the extent to which, and on the time in which, hygienic principles will be put into practice by the intelligent majority, and become enforcible on the ignorant minority, one naturally turns for instruction to the experience of our brothers across the Atlantic, and meets immediately with the significant fact that the best and most rapid sanitary progress is being made by that State whose views on civil liberty are attested by Plymouth Rock in its bay, and whose opinions on taxation, it may be added, are vouched for by the tea at the bottom of Boston Harbour.

I propose, in fulfilment of the object I set myself to-night, to tell you a little of the sanitary work that has of late years been done in Massachusetts, with some indication of the means by which it has been accomplished.

A Sanitary Commission, appointed in 1849, found the health laws of the State imperfect, hard to be got at, partial in their application, and entirely inadequate to the wants of the age. It found premature deaths and preventable sickness abundantly prevalent in differing degrees in different parts of the State; and causes for such sickness and death active in towns and villages. It showed a want of measures, legislative, social and personal, for the prevention or removal of these causes. It demonstrated that the active causes of disease and death were increasing, and that the average duration of life was less than forty or fifty years before.

This Commission devised a sanitary survey of the State, recommending *inter alia* that a General Board of Health should be established, with a local board in every city or town.(a) The General Board of Health should, it was advised, consist of two physicians, one lawyer, one chemist, one civil engineer, the two persons of other professions, besides the Governor and and Secretary of the Board of Education for the time being; the seven members to be appointed for seven years, and one to go out of office each year. To this Board was to be entrusted the general execution of the laws of the State relating to the public health of the inhabitants.

The proposed Board was to have as secretary a person who, with his other duties, should be charged with that of diffusing "throughout the commonwealth information relating to the sanitary condition of the State and its inhabitants, to the end that the laws of health and life may be better understood, the causes of disease ascertained and removed, the length of human life extended, the vital force and productive power increased, and the greatest amount of physical improvement and of happiness attained and enjoyed."

To the local Boards it was proposed to give charge of the particular execution of the State laws and the municipal ordinances and regulations relating to public health. They were to have power to appoint officers and to gather information; they were to carry into execution the general sanitary laws of the State and the orders of the General Board, and "*to issue such local sanitary orders and make such regulations as are best adapted to the circumstances*" *of their localities*. Also it was to be in the province of the general and local boards to form sanitary libraries, and the local board was to make an annual report to the town (observe the different idea from the report of an officer to the board!) on the sanitary condition of the town, printing it, and exchanging publications with other boards. And so on, through fifty well-argued recommendations, did the Commission describe and detail the functions that they would regard as proper to sanitary authorities, and not to authorities only, but to heads of families and schools, and to individuals, their aim being to enlist in the service of health the intelligent interest of all classes and of all persons. Reasons in favour of the plan are advanced, and objections to it considered, in a Report, of which the greatest praise is that it may be considered a prophecy of the state of things that has now been in great measure reached in Massachusetts.

It was nowise immediately, however, that the work of this Commission bore fruit. Its Report is dated 1850, and it fell at

(a) "Town" appears to have the significance of our word "township," and not necessarily to mean an urban place.

first on careless ears. But its authors and the sanitary party in the State were men whose "whose faith was large in time," and they felt that when they once could begin work on lines thus well considered their progress was sure. Though in the next few years some additions of more or less importance to health were made to the general statutes, it was not until 1869 that the Act establishing the State Board of Health passed the Legislature, and a Board was appointed, having the constitution contemplated by the Commission of twenty years before, but charged with no functions except those of obtaining and distributing knowledge on sanitary matters. That was, however, a sufficient beginning. Let us see what intelligence and good citizenship, guided by skilled knowledge, have made of the Board in after years.

Seven annual Reports have been published of the work of this State Board, and they form a most valuable body of sanitary literature. This year a "Summary of Seven Years' Work" has been issued, and from it we are able to apprehend the idea of public health as it exists in the State. In 1869 the Board, having appointed Dr. Bowditch their chairman, and Dr. Derby their secretary, took the characteristic first step of addressing a circular letter to the mayor and board of health of every city, to the selectmen (magistrates) of every town, to every member of the Legislature, and to every clergyman and physician in Massachusetts, desiring "to establish such communication with the local boards having this important subject in charge, that all may work together for the common advantage of the people, for the prevention of disease, and for the prolongation of life." Of like nature was the appointment of medical correspondents in every township of the State, choice being made always on the recommendation of the principal inhabitants of the locality; and the State Board thus became cognisant of the diseases and local sanitary wants of the people. In a few years 115 physicians had become such regular reporters that weekly sickness returns could be published from their combined experience.

But hear now how soon this Board found itself in face of a great practical sanitary difficulty, and in what fashion it came to have important executive powers for dealing therewith:—

"One of the first subjects which attracted the attention of the Board of Health was the methods employed in preparing meat for market, and for the disposal of the fat, bones, and other animal refuse.

"In Brighton, annexed to Boston in 1874, there were in 1869 about fifty slaughter-houses in full operation, in which, during the year previous to the formation of the Board, there were slaughtered 53,000 beeves, 342,000 sheep, and 144,000 hogs. None of these establishments were of any great magnitude, but in each the business was carried on in an unsatisfactory, clumsy, and wasteful manner, without a proper regard being paid to cleanliness. Connected with each of these establishments was a pig-pen, in which the hogs wallowed in the decomposing, putrid animal matter which came from the adjacent slaughter-house. The result was the existence, within a few miles of the centre of a crowded city, of a serious nuisance, which might at any time become the source of very great danger to the inhabitants. In addition to all these slaughter-houses, there existed in Boston proper, Cambridge, Charlestown, Brighton, Roxbury, and other neighbouring towns, a number of establishments in which the fat, tallow, and bones collected from the former places were carried to be melted and boiled. It was no wonder, therefore, that the air in the immediate neighbourhood, and oftentimes for miles around, was contaminated with the foul odours and vapours escaping from the vats and improperly constructed chimneys.

"Immediately after the organisation of the Board, a careful investigation was made of the methods of slaughtering animals for food, and of bone-boiling and fat-melting, in the vicinity of Boston, by a committee consisting of the Secretary of the Board and Mr. Warren Sawyer. The result of this investigation was embodied in a special report by the Secretary, published in the first annual report of the Board, in which the urgent necessity for some immediate change, and the advantage to be derived from the erection of one or more abattoirs, were fully set forth.

"The Board urged upon the Legislature the propriety of at once undertaking the reforms proposed by the Secretary, and strongly advocated the erection of abattoirs, upon both sanitary and economical grounds.

"The plan proposed met, as was perhaps natural, with an almost unanimous opposition from the Brighton butchers, who regarded the whole scheme as visionary and impracticable. In 1870, through the efforts of the citizens of Brighton, an Act incorporating the Butchers' Slaughtering and Melting Association was passed by the Legislature. By the terms of this Act, a corporation was formed for the purpose of carrying on the business of buying and slaughtering cattle, sheep, and other animals, and of melting and rendering the refuse, fat, etc. The capital stock was to consist of two hundred thousand dollars, divided into shares of one hundred dollars. The corporation was to obtain a lot of land and erect upon it buildings suitable for the business. Each member of the corporation was to have the right to slaughter on the premises, and the corporation itself was to be allowed to manufacture and sell any of the usual products of such business; or they could lease that privilege to others. The selection of the land, the erection of the buildings, and the general methods of carrying on the business, were all placed under the supervision of the State Board of Health. All plans of the works of the Association required the approval of the Board of Health before they could be used. The Act further provided that the Board could, under certain conditions, order any person engaged in the business of slaughtering within six miles of Faneuil Hall Market, in Boston, to transfer his business to the abattoir, in case it was carried on elsewhere in a manner 'injurious to the public health.'

"The passage of this Act at once met with opposition from the butchers. The year passed, and not a dollar of the stock was subscribed for.

"The next Legislature passed, therefore, in 1871, an Act concerning slaughter-houses and noxious and offensive trades. This Act prohibited the establishment or extension of any building for slaughtering or rendering, or for any noxious or offensive trade, in any city or town containing more than four thousand inhabitants, without first obtaining leave of the mayor and aldermen, or the selectmen of such city or town. It also gave the Board authority, after a hearing, to order any person engaged in such business to 'cease and desist.'

"The Legislature of 1874 so amended the law as to make it applicable to every city or town in the commonwealth, irrespective of the number of its inhabitants.

"The Board at once made an inspection of the leading establishments of this character in the vicinity of Boston, and subsequently the leading butchers, fat-melters, and bone-boilers were invited to meet the Board for consultation. The meeting resulted in the appointment of a committee of five of the above-named gentlemen, who proceeded with the Secretary of the Board to New York. Two days were there spent in making a careful examination of everything in that city which related in any way to the business under discussion.

"The result of this visit was the reception by the Board of Health of a communication, signed by sixteen of the leading Brighton butchers, in which mention was made of numerous changes in the methods of carrying on the business which they proposed to make, if the Board would allow them to go on in the same buildings. These proposals were rejected, inasmuch as they would not wholly remedy the existing evils, and would therefore not prove in any way satisfactory to the general public.

"Meanwhile formal complaints began to be made to the Board under the provisions of the Act of April 8, 1871. Public hearings were at once ordered, the result of which was that sixteen of the slaughter-houses were closed. Additional complaints against others were being constantly received.

"The butchers now began to realise that the Board of Health was in earnest, and also that the new plan, which was proposed in the Bill, authorising the erection of an abattoir, was not so objectionable as they had at first supposed. The result was that the butchers decided to accept the charter for the Butchers' Slaughtering and Melting Association.

"A large tract of land on Charles River was secured; over a hundred thousand dollars in cash were paid to the capital stock, and twelve directors were chosen by the members of the Association. The plans for suitable buildings were at once procured, and the work of construction was pushed rapidly forward.

"The next step was to provide for the appointment of a suitable inspector of animals and meat. With a view of obtaining a salary adequate to the position, the Board applied to the Legislature for the passage of a Bill authorising the appointment of such an inspector, and providing for the payment of his salary. This request was repeated in three successive annual reports. In the session of 1876 the Legislature passed an Act giving to all cities and towns full authority to

appoint inspectors of living animals or dressed meat prepared for human food, with ample power of seizing what should be found unfit.

"The work of slaughtering in the new abattoir began June 17, 1873. A few butchers still continued the business outside, in the old and improperly constructed buildings, and with the same imperfect methods as before. Owing, however, to the limited accommodation within the abattoir, the Board deemed it advisable not to hasten the work of ordering such of them to cease and desist as were willing to join the Association, but were prevented from so doing by lack of sufficient room within the buildings. Gradually new structures were erected, and the butchers, one after another, joined the Association, either because they deemed it for their own advantage to do so, or because they were anxious to avoid the forthcoming action of the Board. A description of the abattoir is given in the fifth annual report, with a letter from Hon. Jackson S. Schultz on methods of slaughtering in Europe.

"Although the abattoir was demonstrated to be a great success, not only when viewed from a public point of view, but also as regarded by the men engaged in the business, there still remained several small establishments outside in which the business was carried on in an offensive manner.

"In May, 1875, a petition was received against the eight slaughter-houses still in active operation in Brighton. A public hearing was held. Two of the defendants agreed to go into the abattoir, the complaint against one was withdrawn, and five were ordered to cease and desist from the business after July 1, 1875. One of the offenders refused to obey the order of the Board, and an injunction from the Supreme Court was served upon him. This he neglected to heed; he was accordingly brought before the Court for contempt. The case was heard, and he was obliged to discontinue the business.

"Later he began business, in connexion with another party, using for the purpose some old abandoned slaughter-houses, whereupon the Board of Health of the city of Boston ordered them to cease and desist. But as fast as such orders were issued, the business was removed to a new place. Accordingly, the City Board of Health, November 8, 1875, passed a general order forbidding the carrying on of the business of slaughtering or rendering within the city limits, without the permission of the Board being first obtained.

"'With the passage of this order, the task which, six years before, the State Board of Health had undertaken to accomplish, was ended, and a whole town was rendered 'a salubrious and agreeable place of residence; while at the same time it had within its limits, though somewhat remote from the residences, an admirably conducted abattoir, which never need be a source of offence, and which is capable of supplying with meat all the inhabitants of the metropolitan district.'

"Mr. Tayler, President of the Butchers' Slaughtering and Melting Association, says, in his report to the Board in 1876, 'I think we may safely say that no one can be found willing to exchange the convenient and comfortable quarters at the abattoir for the inconvenient, dilapidated places left behind. . . . . We feel that we can say beyond a doubt that the Brighton abattoir is a success.'

"The success of the abattoir was fully established, and the work of the State Board of Health, as regards the town of Brighton, was accomplished. In the seventh annual report a request was accordingly made to the Legislature for the transfer of the care of the abattoir from the State to the City Board of Health. The request was complied with, and a Bill was at once passed giving that Board full power of inspection and seizure of animals or meat unsuitable for human food, and to adopt what regulations seemed to them best to attain that end."

It would be hard, I think, to find a story more instructive as to method of procedure, or testifying more clearly to the suitability of the Board's constitution and organisation to the conditions of an intelligent and jealously watchful community. Observe how the Board acquired its powers of repression. By the consistent action of an instructed Legislature that had offered opportunity of reform, but found that in twelve months (in twelve months!) the opportunity had not been taken. Observe, too, how the plan of reform was devised, so that it was the natural and ready prepared alternative when means of repression began to be employed. Notice the way in which public opinion actively supported the Board, and how nothing could have been done without it. And, observing the complete success of the Board's action, and the thorough conversion of its old opponents, note, I pray, how this constituted to the State Board the indication that its own proper work was finished, and how it left the future to the local sanitary authority. The City Board of Boston, I may say, is quite ready for its part. During the past summer they have closed every "rendering" establishment in the city. They can abate such nuisance by twenty-four hours' notice, but generally they send word a few months beforehand that at a certain fixed date they shall give twenty-four hours' notice to cease and desist. In all this sort of action, let it be further observed, the public claims its own right to wholesome conditions as something antecedent to the rights of trade. No damages are allowed in the State of Massachusetts in cases such as the above. And when a butcher appealed to the Court, from one of the Board's decisions, the case was dismissed on the ground that the Court had no jurisdiction, so that the decision of the State Board of Health is final. There can be no stronger proof of the confidence of the people in the sanitary government of the State.

Time forbids me to give much more than this one illustration of the line of work followed by the State Board of Health, and of the relations of that Board with the public. Other work—some concluded, but most in a stage of progress only—concerned with most of the problems that we consider within the province of sanitary authorities, along with some that we are in the habit of regarding rather as affairs for Royal Commissions, is to be found recorded abundantly in the volumes of the State Board. It is the method of going to work upon these subjects in Massachusetts that most concerns us at present.

Under this special aspect, however, I may ask your consideration of one other course of action taken by the State Board. It has concerned a subject-matter that yields to no other in sanitary importance—viz., the condition of the houses of the poor. You will not be surprised to learn that at the threshold of this question important difficulties were encountered. An examination of the general statutes of the commonwealth showed that the subject was one which had not escaped the careful attention of the Legislature, since there was evidently no lack of law for the proper regulation of such houses. Yet the condition of the tenement- and lodging-houses of Boston and of other towns was altogether unsatisfactory, and there was continual danger of some serious outbreak of disease from the overcrowding of such houses, the statutes relating to the subject being daily and flagrantly violated.

Now, at the time of the constitution of the State Board of Health the recommendations of the Commission of 1849 as to local boards had not been carried into effect. The law had provided, indeed, that every city and township should have a sanitary authority, which might be either an elected board of health or a single health officer, or, failing election of these, consisting of the selectmen (magistrates) of the place. In the case of Boston, the board of aldermen were the sanitary authority. Very large powers had been given to these bodies to do what, in their judgment, was necessary for the public health and safety. But these powers had been but little used, for reasons that we shall easily understand—viz., that when the sanitary authorities were elected to their office, public opinion was not ripe for the efficient enforcement of sanitary regulation, and the boards feared to give offence to voters. The State Board, beginning to deal with the question of house accommodation of the poor, found this state of things existing. Its first step was to endeavour to put the existing machinery into action, and to obtain action by the Boston aldermen for amendment of the dwellings of the poor. Scarcely any attention, however, was paid to the representations of the Board. There was found, first, an utter indifference to the subject in the public mind; and, secondly, all health matters being in the hands of politicians, there was soon seen to be no chance of their inaugurating any movement which, owing to ignorance or prejudice, would naturally meet with more or less opposition.

"The next step, therefore, was to awaken public interest in the matter, and to demonstrate that any improvements in this direction, while adding to the health and physical well-being of the poor, would also greatly contribute to the material prosperity of the rich, by furnishing a sure return for the money which might be invested in the sanitary improvements so much needed. With this end in view, the Board in January, 1871, published a letter from the chairman, who had recently visited London, giving an account of the residences of the poor in that city, and the various operations of individual philanthropists and of corporations, whose sole object was sanitary improvement in the dwellings of the poor. As an additional argument in favour of some change, a careful comparison of

the comparative values of a model lodging-house and a common tenement-building in Boston was also prepared and published."

At the same time, the State Board, recognising the fact that the first move towards any improvement in these directions must be the adoption of some change in the constitution of sanitary authorities, strongly urged the appointment of independent boards of health in the cities where the need for house improvement was shown to be most urgent.

"Public attention was at length fully aroused by the publications of the State Board just referred to, and the Legislature, to whom the annual report of the Board containing these communications had been made, granted (in 1871) a charter to the Boston Co-operative Building Company, whose object should be the building and hiring of suitable tenements for the poor. This Company at once went to work, and was able to present, before another year had passed, a most favourable and encouraging report of the work begun under their auspices."

Meanwhile, however, the public interest that had now been aroused had come to perceive the necessity for adopting some radical change in the management of sanitary affairs in Boston. Influential petitions were sent to the City Council, asking for the passage of an ordinance creating an independent Board of Health. The movement was at first unsuccessful, the City Council refusing to pass the ordinance. The petitioners at once turned from the authorities at the City Hall to the citizens, and the subject was made a test question at the next municipal election. The popular movement succeeded, and the City Council passed the ordinance establishing the City Board of Health. Now, in Boston there is an admirable Board of Health, appointed by the Mayor, doing very efficient and ummary work.

Encouraged by this result, the State Board is pressing for the establishment of independent local boards of health throughout the State; and it cannot be doubted that, in the present temper of the community on health matters, there must soon come into existence a number of such boards, endowed with full powers of sanitary action, and obliged, as the condition of their existence, to use the powers entrusted to them.(b)

Massachusetts is doubtless in advance of most, and is probably in advance of all, the States of America in its sanitary work. It is, apparently—to judge from the reports of its State Board, and taking sanitary work all round,—not yet abreast with England; but it is to be remembered that seven years ago, when we in England had already made some sanitary progress, the subject had not been regarded, even in Massachusetts, as of any great public interest. "Slowly, but surely," the Board of Health writes of itself, "the value of the Board, as a powerful agent for public good, has been recognised, and the desirability of still further extending its field of usefulness has been admitted." "Slowly"—perhaps not, if the rate of progress in like movements in our own country be taken as the standard; but "surely"—who shall doubt, who sees the care of health in the State under the headship of Bowditch and his colleagues, and who can appreciate what it is to have the sanitary ordering of the community "broad-based upon the people's will"?

I have told the story of Massachusetts' sanitary progress very badly if there is any need to point its moral for ourselves. Let us do what we can towards instructing the people as to the surest, and in the end the quickest, way of getting sanitary reform that shall be real, practical, and thorough. By all means let Parliament, as representing the better intelligence of the country, say from time to time in respect of one and another sanitary condition what is the duty of the whole community, and what particular negligence or misdoing is not to be tolerated in the country; but let the community everywhere be, at the same time, instructed as to the significance of, and necessity for, sanitary amendment. But it will certainly be asked—Has not the law provided for every place, urban or rural, a medical officer of health? and is it not his special business to keep his authority informed of what concerns health in his district? Yes, no doubt; but where, I ask in return, is the machinery for instructing the people? for making such a popular demand for efficient sanitary administration that the champions of sanitary progress shall be sent to town councils instead of the advocates of an illusory economy? for insuring that a board of guardians shall be as careful about the sanitary welfare of its district as it is about the number of loaves with which Mary Malony is relieved? There is, it must be confessed, no such machinery. For one sanitary society that exists in the kingdom there are twenty associations that have for the single object of their existence the saving of present rates, no matter at what cost in sickness and death, no matter what the ultimate extravagance of their short-sighted parsimonies. For once that a board is elected on a cry of sanitary progress, fifty times it is elected in utter carelessness of its qualifications for sanitary work, or even in the hope that it may attend to the paving and leave sanitary matters alone. How often, I wonder, has a candidate for Parliament ever been asked on the hustings a question as to his comprehension of a sanitary problem? I can believe him more ready with an answer about Bulgaria or Servia than about the right of a municipality to frame regulations for the internal sanitary government of a town.

Officers of health can do a little more than other people can do to create a demand for sanitary knowledge. Their particular concern is, indeed, in commercial phrase, with supply rather than with demand; but there is no surer way of causing and maintaining a demand than by offering a good article of the sort that people can appreciate. An officer of health who feels the need for education of the community in sanitary matters will not grudge the routine of attendance at meetings and the writing of reports. I may take leave to say that the differences between local health authorities in their care about sanitary work may be measured, to a larger extent than would be commonly supposed, by the regard that medical officers of health have to the educational aspects of their work. And outside of board-rooms, health officers have large power of forming public opinion. The press may almost everywhere be trusted to notice good sanitary observation, to endorse sound sanitary advice, and to enforce on individuals and public bodies their several sanitary duties. Then, every health officer who is conscious of having done his best, and to have said in his reports what is worth saying, should make it a point of honour, not in his own interests, but in the interests of his subject, to procure the printing and distribution of his reports. No one can tell where the seed may fall, and some will be pretty sure to fall on good ground. Of the annual reports of the State Board of Massachusetts, from which I have quoted, 10,800 copies are now printed for distribution each year, being at the rate of one copy for every twenty-eight families living in the State. Again, the health officer often does, and still more often can, assist in the organisation of local societies that have for their object the spread of sanitary knowledge and the formation of necessary public opinion on sanitary subjects. Why should not every city have in it a society like the Manchester and Salford Sanitary Association, interesting the whole community in its special work, giving popular lectures, publishing sanitary papers, distributing sanitary tracts, watching the doings of the sanitary authority, and proposing amendments in sanitary legislation? It is no answer to say that the thing has not succeeded in London. There the Metropolitan Sanitary Association was too ambitiously conceived, and depended too much on bishops and lords, and it presupposed a unity in the interests and government of London that did not, and does not now, exist. Societies of this sort need to be local, and pretty strictly local, just as ratepayers' associations are local. Local intelligence in its application to local sanitary wants is what has to be developed by them. The health officer cannot, indeed, create these societies, nor is it desirable that he should have to do with their management. He, as well as his board, ought to be the subject of the independent judgment of the local health society; and he will be, or should be, prepared for this. But he can use his influence in promoting the foundation of such a society in his district, and he can use it as a means of distributing and procuring an interest in the information and advice he has to give. He will thus gain a far wider audience than the board he officially reports to, and exercise a most valuable and legitimate influence over the action of his board. A very good instance of the usefulness of such a society is furnished by Tottenham, where for years sanitary work had been at a standstill, the local board being composed of men who took no particular interest in their sanitary business, and who learnt no lesson

(b) I cannot resist the temptation of reverting to the subject of noxious businesses for an illustration of this temper as it is now manifested in the States. At Ann Arbor, a short time ago, the City Council ordered the closure of all slaughter-houses within the city. At the time appointed, the butchers thought to gain an advantage by refusing to slaughter anywhere, and, by a dearth of meat, to compel the authorities to reverse their decision. The Council remained firm, the community sustained them, and the butchers had to submit.

from the excessive prevalence of disease in their district. A few years ago a number of the inhabitants formed themselves into a sanitary association, turned out some of the obstructives on the board, replaced them by members anxious for sanitary amendment; leavened, not the board only, but the whole population, with a care about health; succeeded in no long time in getting the more obvious sanitary faults of the place amended; and can already show, as measured by results, an amount of progress that without their exertions would not have been made. Their work was purely and simply local work; and it is by evoking the same kind of action by the local intelligence of the country that far surer progress will be made than by any compulsion applied to an unprepared and unintelligent people.

In conclusion, I wish to point out one result to be expected from a larger diffusion of sanitary information, and from a stronger interest in hygiene among local communities. It is that people will understand better their rights as well as their duties in local self-government. At present there is one general law, which is of application to the least advanced as to the most advanced community; it is in the nature of things that the law is framed to meet a kind of average of cases, and that, as it exceeds the desires of the ignorant and careless, it falls far short of the requirements of an instructed community careful for its health. It is true that the general law gives power to sanitary authorities to make by-laws; but this can only be done in regard of certain quite defined and limited subject-matters, and only after a great deal of interference and inconvenience. The direct right of a local community, while subject to general law, to make for itself what additional law it considers necessary for its sanitary welfare, is at present but imperfectly acknowledged; yet, unless such a right were admitted and acted on, the city of Hygeia itself would presently decline.

ORIGINAL COMMUNICATIONS.

STATISTICAL REPORT OF OPERATIONS IN THE ROYAL INFIRMARY, EDINBURGH, PERFORMED BY PROFESSOR JAMES SPENCE,

From April 30, 1875, *till September* 30, 1876;

WITH REMARKS.

The following statistical report of the results of the principal operations performed and treated by me in the surgical wards under my charge, from April, 1875, to September 30, 1876, consists of two parts. First, a tabulated view of all the greater operations and cases of severe compound fractures treated during the whole period, with a few observations on special cases or groups of cases. Second, a table, showing the results from August, 1875, until the present time, during which period a return to simpler methods of dressing wounds was made. This second table I have limited to amputations, resections of joints, and excision of tumours, as being the cases in which the results of different methods of dressing can be best observed and contrasted.

I have been in the habit of publishing statistics of my surgical operations at short intervals; for whilst it is only by statistics extending over many years, and including large numbers, that we can form a correct general average of the results of any operation or methods of treatment, yet I hold that unless returns be made at short intervals their correctness is much more doubtful; the results or causes of death in the cases not being so readily checked as when the results given are recent, and include only a comparatively small number of cases. Moreover, in reports including only a short period the peculiarities and details of individual cases can be brought out, thus furnishing important information scarcely obtainable in larger statistical returns. In the last edition of my "Lectures on Surgery" I have given the results of my practice up to 1875 in 503 cases of the greater amputations, and in 221 cases of excisions of joints, so that the general average can be easily obtained by adding those given in this report.

TABLE I.—*General Statistics of Cases Operated on by Professor Spence from April* 30, 1875, *to September* 30, 1876.

AMPUTATIONS:	Recovered.	Died.	Total.	Total recov.	Total died.	Grand total.
Upper Extremity—						
Primary—Upper arm	..	1	1			
At shoulder-joint for disease—Strumous disease and caries of acromion	1	..	1			
Malignant disease of head and tuberosities of humerus	..	1	1			
Upper arm—Extensive strumous disease of elbow	2	..	2			
Total amputations of upper extremity				3	2	5
Lower Extremity—						
Primary through thigh, for railway injuries	1	2	3			
At hip-joint for disease—For disease of hip-joint and shaft of femur; For necrosis of shaft and disease of epiphysis	2	..	2			
Through thigh for disease—Three, extensive strumous disease; one, malignant tumour of leg and foot	3	1	4			
Through leg—Primary, for railway injury	1	..	1			
Secondary, for compound comminuted fracture from fall, complicated with cerebral concussion	..	1	1			
For disease—One, cancerous disease of the leg; two, strumous disease of bones of leg and ankle-joint	3	..	3			
At ankle-joint—Strumous disease of tarsus, etc.	7	..	7			
Total amputations of lower extremity				17	4	21
Grand total of amputations of upper and lower extremities	..	..	..	20	6	26
Results of Primary Amputations—						
Upper arm	..	1	1			
Thigh	1	2	3			
Leg	1	..	1			
Results of Secondary Amputations—						
Leg	..	1	1			
Total amputations for injury				2	4	6
Results of Amputations for Disease—						
Shoulder-joint	1	1	2			
Upper arm	2	..	2			
Hip-joint	2	..	2			
Thigh	3	1	4			
Leg	3	..	3			
Ankle	7	..	7			
Total amputations for disease				18	2	20
Carried forward	..	..	..	20	6	26

	Recovered.	Died.	Total.	Total recov.	Total died.	Grand total.
Brought forward	..	..	..	20	6	26
Excision of Joints:						
Upper Extremity—						
Excision of head of humerus in a case of unreduced dislocation, with fracture	..	1	1			
Excision of elbow	4	1	5			
Total excisions of upper extremity				4	2	6
Lower Extremity—						
Excision of hip	1	2	3			
Excision of knee	2	..	2			
Total excisions of lower extremity				3	2	5
Excisions of Tumours:						
Excision of breast for cancer	9	1	10			
" large fibro-cystic tumour from breast	1	..	1			
" parotid tumours	3	..	3			
" deep-seated malignant tumour from neck	..	1	1			
" tumour from upper jaw	1	..	1			
" whole tongue by knife	1	..	1			
" half tongue by galvano-cautery	..	1	1			
" ovarian tumours	1	1	2			
Total tumours excised				16	4	20
Operations for Extensive Necrosis:						
Resection of entire shaft of tibia in acute necrosis, leaving periosteum	2	..	2			
Removal of extensive sequestrum from shaft of femur	2	..	2			
" " " " tibia	1	..	1			
" " " " ununited compound comminuted fracture of forearm ..	1	..	1			
Total operations for necrosis				6	..	6
Miscellaneous Operations:						
Operation for irreducible dislocation of the knee-joint	1	..	1			
Lithotomy	4	1	5			
Lithotrity	1	..	1			
Enucleation of eyeball	1	..	1			
For contraction after burn of arm	1	..	1			
Inguinal hernia (strangulated)	1	..	1			
Total miscellaneous operations				9	1	10
Cases of Compound Fracture:						
Compound comminuted fracture at upper third of left femur, complicated with fracture of both bones of leg in the same limb, fracture of left radius near wrist, and cerebral concussion—the result of a fall from the maintop of a ship	1	..	1			
Compound comminuted fracture of leg—Gangrene on second day—Amputation	..	1	1			
Compound fracture of forearm	1	..	1			
Total compound fractures				2	1	3
Grand total of cases treated from April 30, 1875, *till September* 30, 1876	..	..	..	60	16	76

Remarks.

Amputations for Injury.

In regard to the primary amputations, one of them (of the thigh) proved fatal six hours after the operation. The patient had met with the injury some little distance from the railway-station, had lost a large amount of blood before assistance could be procured, and was then brought into town, a journey of twenty miles. His condition was such that although enemata of brandy-and-water were administered during and after the operation, I had to leave him on the operation-table for about an hour before he could be removed into the ward. Some reaction occurred, and he was able to take stimulants, but he never fairly rallied from the shock.

In the fatal case of amputation of the upper arm, the injury was inflicted by the rollers of a paper-making machine, and only implicated the soft parts of the arm, there being no fracture of the bones of the forearm; therefore, in so far as the nature of the injury was concerned, the prognosis was favourable, as the patient was under middle age. However, he had suffered from rheumatic fever, and was stated to have had a "stroke of palsy."

The successful amputations of the thigh and leg occurred in one patient—a railway-guard who, in saving a drunken man who had strayed on to the line, fell in front of the train, which passed over both legs, necessitating amputation of the right thigh at the middle, and the left leg at the upper part. In this case, though the limbs were much mangled, bleeding had been at once arrested, and, as the accident occurred at the Edinburgh station, he had only a short distance to be conveyed to the Infirmary. He made a good, though rather slow recovery, owing to some renal complications which supervened.

The secondary amputation of the leg was performed for gangrene, supervening in a case of compound comminuted fracture of both bones of the leg, caused by the patient falling from a height. Considering that the indirect nature of the violence causing the fracture was favourable, I removed some portions of bone and then readily adjusted the fracture, but gangrene supervened next day, rendering amputation necessary. The patient had also suffered cerebral concussion from the fall.

Amputations for Disease.

The amputations in this class were all successful save two, one of which proved fatal two months after operation from exhaustion due to loss of blood from three successive hæmorrhages; the first bleeding occurring on the twenty-third day after amputation, and when the wound was all but healed.

One of the amputations at the shoulder-joint was performed for extreme strumous disease, abscess in the joint, and disease of the acromion and spine of the scapula. A considerable portion of the spine of the scapula and its acromion process had therefore to be removed along with the arm. The patient, a very weak, scrofulous child, made a good recovery.

The other at the shoulder-joint was for a very large malignant tumour of the head and tuberosities of the humerus. The operation was performed by lateral flaps of skin dissected from off the deltoid, so as to remove that muscle with the tumour. The great vessels were ligatured and divided before disarticulating. This amputation was much more complicated than in ordinary cases. The patient's state of health continued good, and everything progressed favourably till August 10, or, in other words, till twenty-three days after the operation, when hæmorrhage occurred three times, for which the stump was opened up and plugged with carbolised lint. The wound

was all but healed, when, on the evening of August 26, sixteen days after the first hæmorrhage, bleeding again came on. The patient was put under chloroform, the wound reopened, and the bleeding point carefully searched for but none being detected, it was again plugged as before. Again the wound was nearly healed up, when for the third time profuse bleeding came on, on September 7, or twelve days after the last attack, which, however, was promptly stopped by compression, and the wound plugged as formerly. A few hours afterwards, I had the patient put under chloroform, and cut down and ligatured the axillary artery. At the same time I opened up the stump, and secured six or eight small bleeding points. For the fourth time the stump rapidly healed; but the patient gradually sank, and died in twelve days.

Two amputations of the upper arm were both performed in cases of extreme strumous disease (gelatinous degeneration). In one, excision of the elbow-joint had been performed some months previously, and the wound had healed; but the disease again broke out in the bones and surrounding soft parts. In the other, the state of the limb, together with the general condition of the girl, contraindicated excision of the elbow; amputation was performed, and the wound healed by the first intention.

The two amputations at the hip-joint were most unpromising cases, but both made good recoveries. One, a lad aged seventeen or eighteen, had long suffered from hip-joint disease. He also had enlargement of the liver, and was much exhausted. After some improvement in his general health had been effected by treatment, I excised the remains of the head and neck of the femur, and for some weeks thereafter he did well, when, however, profuse discharge and great pain commenced. On examination, I found the trochanter and shaft of the femur to be diseased, but as his liver was much enlarged and his urine albuminous, it seemed almost a hopeless case; still I proposed amputation, though I did not urge it, as he suffered such intense pain. He consented, and from the time of the operation he gradually improved in all respects, and the wound healed rapidly. When I last saw him he had all the appearance of excellent health; the enlargement of the liver had greatly disappeared, and his urine was quite normal.

In the other, a young girl who had long suffered from necrosis of the femur, and from whom at different times I had removed large sequestra of bone, the trochanter and head of the femur became ultimately affected, and when admitted to hospital on this occasion she was so much reduced by pain and discharge that I told the parents that amputation presented the only chance of a cure. She also made an excellent recovery, and is now in better health than she has been in for many years.

Of the amputations of the thigh, one was performed for malignant disease of the foot and leg. He had been twice previously operated on, once by partial amputation of the foot, and the second time by amputation at the ankle-joint. He made a good recovery.

The other three cases were operated on for advanced strumous disease, and of these one died.

Three amputations of the leg—two from strumous disease of ankle and bones of leg, and one for a cancerous affection of foot—all made good recoveries.

All the seven cases of amputation at the ankle-joint made excellent recoveries.

Excisions of Joints.

Amongst this class are included some operations of a much more difficult and complicated nature than ordinary excisions, such as resection of the condyloid and articular portions of the humerus for an old unreduced dislocation of the elbow-joint, in which the articular ends of the bones of the forearm and the muscles attached to them were left untouched, so as to retain very perfect motion. Again, the excision of the head of the humerus was performed in a case of old dislocation of the head of the humerus into the axilla, the dislocated head having also been separated from the shaft by fracture, so that its relations to the great vessels and nerves were very complicated. The musculo-spiral nerve was tightly stretched over the dislocated head, giving rise to intense pain and distortion of the fingers. The other cases were for disease, and the operative procedure was of the ordinary character. Three of the fatal cases deserve notice.

The first was an excision of the hip-joint for recent disease, in a young girl, attended with intense pain and irritative fever, which existed on her admission into the hospital. Whilst the local pain was intense, and aggravated by the slightest motion, there was no swelling of the surrounding soft parts, nor redness, nor tension. As soon as the irritative fever was somewhat abated by rest and distraction of the articular surfaces by means of the weight and pulley extension apparatus, I performed excision. There was no suppuration external to the joint, and the soft parts were normal; the joint was distended with sanious pus, and the head of the femur presented the appearance of acute ulceration of the cartilage and exposure of a congested osseous surface. The acetabulum was not so much diseased. The operation was very easily performed: the capsular ligament being readily opened, the head and neck of the femur projected so as to allow resection through the trochanter major, and only one or two vessels required ligature. The prognosis seemed favourable, yet irritative fever recommenced immediately, instead of the expected relief, and the patient sank exhausted in ten days.

The second was also for hip-joint disease in a young woman. In her case great shortening and distortion of the limb had taken place, as the disease had existed for a long time, but there had never been suppuration or other affection of the soft parts. Shortly before coming to the hospital she began to experience extreme pain on motion or on pressure on the trochanter, and was therefore anxious to have something done to relieve her. The external appearance of the hip and limb was that of chronic hip disease, with projection of trochanter major and considerable shortening of the limb. In operating, the soft parts were found to be perfectly healthy, only presenting a large deposit of subcutaneous fat. A single—not very large—incision sufficed to expose the remains of the head and neck of the femur; the head having almost entirely disappeared, whilst the neck was not larger than that of a child of ten or twelve years of age (it was found from patient's history that it was at that age the first attack took place). Only two arteries required to be ligatured, the wound was dressed with carbolised oil, and the limb kept gently extended by weight and pulley. All seemed most favourable, but vomiting set in immediately after the operation, which resisted all remedial measures, and she sank exhausted twenty-eight hours after the operation.

In the fatal case of excision of the head of the dislocated humerus the same condition occurred; nothing had the slightest effect in allaying the vomiting, and this patient also sank within thirty hours after the operation. These two cases, occurring as they did about the same time, made me suspect some irritant cause, as impurity of the chloroform used; but it was proved, on testing, to be perfectly pure. In the case of the patient with excision of head of humerus I was not so much surprised, as she was a weakly, exhausted woman, who had long suffered from dyspepsia and chronic vomiting; but in the young woman there was no cause, local or general, to account for the vomiting and the fatal result.

The case of the young girl was one of a class described by Sir Benjamin Brodie, in which a limited ulceration of the cartilages and bones of a joint, without much external appearance of disease, leads to irritative fever and often to fatal results, whether operative interference be had recourse to or not.

Amongst the operations on articulations, that performed for irreducible dislocation of the knee-joint is deserving of attention. The patient, a man aged sixty, a miner, had met with the accident two days before admission to hospital, and reduction had been tried at the time, but without success. On examination, I found luxation of the condyles of the femur forwards, the leg being drawn upwards and backwards. When the limb was placed in the bent posture very little displacement was noticeable; but when an attempt was made to extend the limb, the leg was drawn back, and the condyloid end of the femur projected forwards. I at first tried the effect of continuous pulley-extension, in the hopes that by that means the resistance of the hamstring muscles might be overcome. It was continued for thirty-six hours, but without benefit. I then took the patient into the theatre, had him placed under chloroform, and tried reduction by pulley. This was fairly tried, until it was evident that something more than the resistance of the hamstring muscles prevented reduction. A free incision was made into the knee; replacing the semilunar cartilages, and then extending, reduction was accomplished. The operation was performed under antiseptic precautions, and the wound scrupulously treated on the same principle. For about eight days the man progressed most favourably, when the pus became more abundant and of a fetid odour, with numerous bacteria in it. The temperature rose for the first time to 101° Fahr. The dressings were then

changed for carbolised oil lint. The temperature again fell to 99° Fahr., and the patient thereafter went on, without any constitutional symptoms, to a cure.

Tumours.

Of the excisions of tumours, eleven were from the breast; and all, with one exception (a large fibrous tumour), were cancerous, requiring removal of the whole breast, some being complicated with enlarged glands in the axilla. Four of these were in excessively fat patients, a condition most unfavourable for healthy action in the wound, yet under the simple treatment with boracic lotion and free drainage, save one fatal case, they all healed kindly, the largest part of the incision healing by the first intention. The fatal case was one of a very fat woman with a weak circulation, in whom I required to remove not only the breast but a large mass of axillary glands. The nature of the case may be judged of when I say that the incision was thirteen inches and three-quarters in length and two inches in depth of fat; yet the greater part of the mammary wound healed rapidly, the axillary portion being purposely left unclosed to permit of free drainage. On the twelfth day after the operation she had an attack, resembling "meteorism," of enormous flatulent distension of the abdomen, so interfering with respiration as almost to threaten asphyxia. This supervened without any rigor or other premonitory symptom, and so suddenly that she had been reported to me as "doing well" before I entered the ward and found her in the condition mentioned. This state was relieved by turpentine enemata and doses of sulphuric ether, but had always a tendency to return. The wound assumed a weak, unhealthy action, and she ultimately sank. The post-mortem examination revealed only hypostatic congestion of both lungs, but no secondary abscesses either in the lungs or other organs, and no organic change to account for the atonic distension of the intestines. This is the only fatal case of excision of the mamma I have met with, either in my public or private practice, for some years, although several of the cases were most unfavourable.

I cannot pass without notice the fatal case of removal of deep-seated malignant tumour from the neck. In the last report of the results of my hospital practice, drawn up by Dr. Kirkwood, a similar case was recorded. Up till that time I had always refused to operate in such cases, and I had made up my mind to abide by the principle I had laid down when I published, many years ago, some cases of successful removal of very large, deep cervical growths, but I again yielded to the temptation of trying to give the patient what seemed his only chance. The tumour was thoroughly removed, but the state of the system led to unhealthy action in the wound and the death of the patient, so that in future I think I will scarcely be tempted to diverge from my rule of non-interference.

The parotid tumours, though requiring careful dissection, and though passing deeply into the styloid region, all did well.

Ovariotomy was performed in two cases of ovarian tumour—of these one recovered and one died.

The successful case was in a patient thirty-nine years of age, of a sallow complexion and worn-out appearance. When admitted she was suffering from subacute peritonitis, with its concomitant febrile disturbance, so that some time had to elapse before I could operate. The tumour had only a few long omental adhesions, and the pedicle being long and narrow easily admitted being secured with Chinese gut, so that the operation was accomplished with the least possible disturbance or exposure of parts. The patient's recovery, though slow, was uninterrupted by any serious or troublesome conditions.

In the fatal case the patient was only thirty years of age, but the tumour had been of rapid growth, having only been noticed for about fourteen months, during which period she had been tapped six times. Whilst the upper and larger portion of the cystic tumour was readily emptied, a considerable mass in the left iliac region was of a more solid consistency and not easily movable. This case was by no means a favourable one for operation, but the patient was anxious that the attempt should be made. I found the upper or cystic part attached by adhesions to the abdominal parietes throughout its whole extent, some of more recent origin and readily giving way under the finger, whilst others were broad and thick, requiring the knife for their division. On the deeper surface extensive broad omental adhesions presented themselves, and on these being separated, bands of adhesion to the small intestine and mesentery, as also deeper still on the right side to the caput cæcum, and on the left to the sigmoid flexure, were found to exist. The more solid part of the tumour, which gave me most anxiety previous to the operation, was found to be only very slightly adherent, and presented no difficulty in its removal. The pedicle was very short, thick, and broad; and, as I had none of the material I used in the former case, I employed the clamp, but when about to close the wound I noticed the pedicle slip, so I secured it beyond the clamp by means of strong silk ligatures, retaining the ends external to the incision. A large number of vessels were ligatured, the pelvis carefully cleared of all blood, and the abdominal incision, which required to be eight or nine inches long, was closed. During the afternoon and evening reaction set in, the pulse was good, and she seemed as well as could be expected; but next morning vomiting began, and she gradually sank. The autopsy revealed extensive peritonitis, but no appearance of reactionary hæmorrhage.

(To be continued.)

THE

AILANTHUS GLANDULOSA IN DYSENTERY.

By J. DUDGEON, M.D., etc., Pekin.

THE *ailanthus* is a very common tree in North China, growing readily and rapidly, and attaining a considerable height. The Chinese note two varieties, the fragrant and the fetid. Two synonyms for the latter tree are given—"Tiger's eye," from the resemblance of the facets, when the branches fall off from the main stem, to that animal's eye; and "Great eye varnish," from which circumstance the French name "Vernis du japon" may be derived. The Chinese name has no connexion with the word *ailanto*, which is supposed in Europe to be its native name in China and India, and is thought to mean "tree of the gods." It is intensely bitter and astringent, of a lukewarm taste, free from poison, and emits a disagreeable smell, from which latter circumstance its Chinese name is derived. The Chinese medical works recommend it as an antidote against sulphur, arsenic, and gold-poisoning. It is said, also, to possess anthelmintic properties, and is used in demonology against the supposed transfer of disease from a corpse. It is also useful in diarrhœa, prolapsus ani, and leucorrhœa. It is frequently prescribed alone; at other times in conjunction with other remedies, particularly *Radix hedysari* and the fruit of *Terminalia chebula*, favourite remedies in diarrhœa and dysentery, which increase its efficacy. It is strongly recommended in all cases of hæmorrhage, from whatever cause or locality. It is used, too, in gonorrhœa and spermatorrhœa, and, in short, in fluxes in general. The part used is the inner white bark of the root and stem of the non-fragrant species. Whether taken in infusion or in pill, it is invariably prescribed to be taken on an empty stomach, in congee or with milk or soft-boiled rice. In the most severe cases it is taken in conjunction with *Castus amarus* and vinegar. I refrain from adding a number of the standard prescriptions against dysentery in which the *ailanthus* plays an important part, the mode of preparation and administration and the dose being of the simplest description.

This remedy has been used in a few cases with marked success by my colleague M. Dugat, of the French Legation. It has been submitted lately to the Paris Academy for a report of its virtues. It has been brought under the attention of the French surgeons in the navy in Eastern waters, and those who have tried it have reported favourably regarding it. From its strongly astringent character, combined with rice and milk diet, and rest, which are strictly enjoined, it cannot fail, I think, to do good. The rest and regimen, although important measures, do not altogether account for the results obtained. M. Dugat has published five cases in the *Chinese Customs' Half-Yearly Report* (April to September, 1875), in which marked benefit resulted.

I have personally had no experience of the effects of this remedy. Diarrhœa and dysentery are very common in North China during the summer months, arising out of errors in diet, certain habits of the people, and sudden atmospheric changes. The Chinese consume large quantities of cucumbers and the various species of the melon tribe, and unripe, raw, or salted vegetables of all sorts. They distinguish a red and a white dysentery, according to the character of the discharge; there is almost no constitutional disturbance, tenesmus and frequent stools being the chief characteristics. In the great majority

of the cases I have found a full dose of castor oil and laudanum by the mouth, with an occasional enema of rice-water and laudanum, followed by one or two compound ipecac. powders, all that was necessary. I have come across a large number of almost intractable cases of what is known all over China, and greatly dreaded, as opium dysentery—a severe form of this affection occurring in confirmed opium-smokers, with greatly debilitated constitutions, and caused sometimes by the deprivation of the drug, and at other times without any obvious cause during the continuance of the habit. A very large mortality from deprivation occurs amongst the criminal class in Chinese prisons. In such cases opium loses its customary astringent power; and so great is this astringency at ordinary times that the confirmed smoker may not have more than two evacuations in the month, and then only by external, artificial means.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF HEMIPLEGIA—HEMIANÆSTHESIA—HEMIOPIA—UNILATERAL SWEATING.

(Under the care of Dr. RINGER.)

[For the notes of this case we are indebted to Mr. Judson Bury, House-Physician.]

J. L., a cabman, aged fifty-five, was admitted to University College Hospital, September 14, 1876.

There was no history of nervous disorder in his family. He had been rather intemperate, but had had neither syphilis nor rheumatism. He had been ailing for a fortnight. First felt "the right eye go queer; could not see sometimes; got a capital pair of spectacles, but could not see with them—not always the same." Then he had pains in his forehead, and "pins and needles" down his right leg. On September 14, whilst sitting on his box driving, he suddenly felt his right arm and leg become numb. He shouted to a friend to come to him, but he was able to keep his seat and drive to the hospital holding the reins in his left hand. When he arrived at the hospital his mental condition was a little confused, but there was no definite disorder of speech. He had right hemiplegia—face, arm, and leg—and complete right hemianæsthesia.

Next day the following notes were taken:—Fairly robust for his age; weather-stained, and small vessels of face rather varicose. Is slightly emphysematous; has tortuous and rigid arteries, but no evidence of cardiac hypertrophy; no murmur; and urine is free from albumen and sugar. Cranial nerves: Olfactory difficult to test; says he never could smell well. He is unable to smell anything when valerian is held before his nose. Optic—complains of right eye being dim. On investigating field of vision it is found that he has right hemiopia—*i.e.*, the inner half of the right retina and the outer half of the left retina are not sentient to light. The optic discs are quite natural; the right pupil is dilated, and does not contract to bright light so well as the left; movements of eyeballs and eyelids natural. Sensation of right side of face and head almost lost. The anæsthesia obviously over wider area than that supplied by the fifth. Subsequently found that masseters contracted equally on the two sides. Slight facial paralysis—muscles of right nostril and right corner of mouth. Arches of palate act perfectly. Can hear a watch tick at greater distance from left ear than from right. Taste: Can discriminate salt and sugar when allowed to draw tongue into mouth, not else. Tongue deviates very markedly towards the right; tremulous; more furred on the right side than on left. Articulation and swallowing natural. There is complete loss of sensation in the right arm and right half of the trunk. In the right leg anæsthesia not quite complete; can feel a little in the groin and also in the ankle and sole. The right leg feels to the hand of the observer distinctly colder than the left. Patient can move right leg almost as well as left. Voluntary power over right arm greatly diminished. Can close his fingers, but grasp very feeble. Bends elbow and moves shoulder very imperfectly. No rigidity, and no tonic or clonic spasm. No difference in movement of the two sides of the thorax. Sphincters normal.

In a few days it was noticed that the patient was subject to unilateral sweating. The right half of the scalp, face, neck, and chest, to a less extent the right arm, and to a still less extent the right leg, were frequently quite moist, whilst the left half of the body was dry. The right half of the face was often bathed in perspiration.

At a subsequent period it was noted that the right radial pulse was a little fuller and softer than the left, and that the skin over the fingers of the right hand desquamated a little. Another remarkable sign of nutrition-change was in the growth of the hair on the face. When the patient was admitted his upper lip was shorn; but after a few days, when the hair on the left half of the lip had grown quite vigorously, the right half of the lip was nearly bare. There were no bed-sores anywhere. The muscular sense, so far as the right hand was concerned, was found defective. When his eyes were closed he made a bad shot when trying to touch his nose with his right index-finger; with the left index-finger he could touch the nose easily.

His condition now (October 14) is as follows:—The mental state is perfectly clear. He has had no emotional disturbance; no headache. The hemiopia is quite as pronounced as at first. There is still slight facial paralysis of muscles of right nostril and right corner of mouth. Tongue is still protruded towards the right. Voluntary power over the right leg has quite returned; the right arm he can now lift over his head, but the grasp is still much feebler than on the left side. There is some wasting of the right arm, but probably none of the leg. Reaction to faradism in right arm and leg a little less than on left side; also faradic sensation less. There is return of sensation for about three inches on the right of the middle line of the trunk. There is also a little in the right forearm, and more over the right ankle. Complains now and then of aching in his hand; and after he has been slightly pinched occasionally has pain lasting for some minutes, which he compares to burning. The unilateral sweating, especially of the right half of the face, continues. There is no difference in the pupils. The moustache on the right half of the upper lip is nearly as vigorous as on the left half.

In this case the non-existence of cardiac hypertrophy or albuminuria, and the fact that the patient did not lose consciousness at the onset of his seizure, would weigh rather against clot as the cause of his paralysis. The gradual onset of the seizure, and the premonitory symptoms, the intemperate habits and tortuous arteries, would point rather to diseased cerebral vessels, thrombosis, and softening. As to the regional diagnosis, Mr. Bury was inclined to localise the lesion in or around the posterior end of the optic thalamus; and with this view Dr. Ringer coincided. There seems to be a fair amount of evidence for the old-fashioned doctrine that the optic thalami are the centres for common sensation. Dr. Broadbent, it is true, has been unable to trace the fibres of the sensory division of the crura cerebri into the optic thalami. Dr. Bastian is inclined to locate the centre for common sensibility in the upper part of the pons Varolii, but he specially draws attention to Veyssière's and Türck's experiments, showing that a lesion just outside the optic thalamus, involving the internal capsule just where it begins to expand, will induce marked hemianæsthesia in dogs. Dr. Ferrier has shown that destruction of the optic thalamus will cause anæsthesia of the opposite side in monkeys. Dr. Crichton Browne,(a) in a review of the functions of the optic thalami, especially from the clinical point of view, has drawn attention to the abolition of reflex excitability in the paralysed limbs, as well as the hemianæsthesia. In this case there was at all events no abolition of reflex excitability. Amongst other points to which he refers, it is noteworthy in this case that there was no emotional disturbance, whilst throughout there was entire absence of spasm in the limbs or neck. With respect to the temperature of the two sides of the body, it is specially noted that the right leg felt much colder to the observer than the left. Dr. Browne does not refer in his paper to one symptom of optic thalamus disease which was very important in this case—viz., the persistent hemiopia. In accordance with Dr. Hughlings-Jackson's rule, the patient could not see to his paralysed side. In the very remarkable case recorded by Dr. Jackson,(b) disease of the right optic thalamus was diagnosed in a case of left hemiplegia, left hemianæsthesia, and left hemiopia. At the post-mortem, Dr. Gowers found softening confined to the posterior and inner part of the right optic

(a) *Vide* "West Riding Reports," 1875.
(b) *Vide* Reprints, "Physician's Notes on Ophthalmology," second series.

thalamus, and from this condition was able to say that the patient must have had hemiopia. Dr. Gowers has informed the writer of this report that he has lately had a post-mortem on another case in which there had been hemiopia for several months before death, and in which also there was softening in the posterior tubercle of the optic thalamus. It is true that there was also some softening in the cerebellum, but there was no affection of the chiasma, nor indeed any other lesion which could be associated with the hemiopia, except that of the posterior tubercle of the optic thalamus. In the case here reported the absence of optic neuritis would go for something against the supposition of disease of the chiasma. Whether the lesion be in the optic thalamus or in the optic tract, it seems difficult to understand this form of hemiopia—that is, where the inner half of the right retina and the outer half of the left are non-sentient—if there is complete decussation of the optic fibres. According to modern investigations with respect to the blood-supply of the brain, it would appear that whilst the connexions of the corpus striatum are with the frontal convolutions, the connexions of the optic thalamus are with the temporo-sphenoidal and occipital. It is, at all events, worth noticing that Dr. Ferrier associates the temporo-sphenoidal lobe with the sensory functions. In Dr. Hughlings-Jackson's case, before referred to, the senses were all damaged on the paralysed side. In this case, though the taste is doubtful, it is probably impaired. The man says he never could smell well, but now this sense seems entirely gone. His power of hearing is undoubtedly less on the right side than on the left. The unilateral sweating is a feature which has not been recorded in any previous case of optic thalamus disease.

ST. BARTHOLOMEW'S HOSPITAL.

PLEURO-PNEUMONIA — PARACENTESIS — DEATH FROM EMBOLISM OF PULMONARY ARTERY.

(Under the care of Dr. ANDREW.)

[For notes of the following case we are indebted to Mr. R. Wharry, M.B., House-Physician.]

In the following case the patient was attacked with pleuro-pneumonia. The pneumonia cleared up, but left the pleuritic effusion, and this increased to such an extent as to become extreme, producing very marked hectic. Then it began gradually to recede. Active mischief was again set up, and paracentesis was resorted to with good effect. The patient from this time steadily improved, and convalesced. The exertion of walking upstairs, following upon some slight mental excitement, dislodged a large fibrinous clot that had formed either in the auricular appendix or amongst the columnæ carneæ of the ventricle. This clot, plugging the orifice of the pulmonary artery, gave rise to symptoms of most urgent dyspnœa, and produced death in about ten minutes.

T. K., aged thirty-eight years, a labourer, was admitted to St. Bartholomew's Hospital, March 30, 1875, suffering with pleuro-pneumonia on the left side, of three weeks' duration. His illness began suddenly with rigors, headache, sickness, and acute pain on the left side on drawing a deep breath.

On admission his face was dusky; his expression anxious; the tongue was coated with a brownish fur; there were sordes on the lips; the skin was bathed in sweat. He lay on his left side in bed. Temperature 102·4°; pulse 80, weak and regular; respirations 26. The left side of the chest hardly expanded at all with inspiration. The vocal vibrations were absent except at the apex. There was increased resistance on the left side. There was dulness on percussion from base to apex. The respiratory murmur was distant and tubular towards the apex; absent at the base. The vocal resonance was direct. The heart was displaced somewhat to the right, and there was marked epigastric pulsation. There was no cardiac murmur. The patient complained of inability to sleep at night, and was troubled much with cough. Urine: Specific gravity 1035; acid reaction; loaded with lithates; no albumen. His bowels were relaxed. Ordered milk diet, arrowroot, and beef-tea. Cataplasma sinapis lat. sinist. Calomel gr. j., pulv. jalapæ gr. iv., fiat pilula statim. Liq. ammon. acet. ℥ij., potass. nitratis gr. x., sp. ætheris nit. ℥ss., aq. camph. ℥iv., quartis horis. Pil. ipecac. c. scilla gr. x., omni nocte.

April 3.—The dulness had extended a little beyond the right border of the sternum. The heart was more displaced, the first sound being heard loudest to the right of the middle line. The urine had become very scanty; it contained no albumen.

10th.—There was slight hectic. The tongue was rather dry, with creamy fur; red at tip and edges. Temperature 99·2°; pulse 100; respirations 20. The cardiac impulse was perceptible two inches and a half below the right nipple; the dulness had extended somewhat to the right. The liver was considerably enlarged, and displaced downwards, extending almost to the umbilicus. There was great tenderness throughout the upper abdominal region.

14th.—Passed a restless night. When he turned on to his back he experienced palpitation beneath the right nipple. His general health has improved. The physical signs remain unchanged. There is still no cardiac murmur. Temperature 100·9°; pulse 84, small and weak. Superficial veins on right right side of abdomen and left side of neck are enlarged.

20th.—The physical signs have markedly improved. Absolute dulness has receded to one inch to the left of the sternum. The dulness on percussion is not absolute above the first rib. The heart's impulse is felt half an inch to the left of the right nipple. The superficial veins are less marked. Temperature 101·5°; pulse 96. Ordered a draught containing quin. sulph. gr. *j.* three times daily, instead of the nitrate of potash and nitric ether.

May 1.—Absolute dulness extends upwards from the base to the fourth rib anteriorly, and resonance extends to the left border of the sternum. There is tenderness on percussion at the fourth rib, and at this point the voice-resonance is ægophonoid. The heart's impulse is perceptible in the epigastrium on the left of the xiphoid cartilage. Posteriorly dulness extends upwards to the spine of the scapula. Temperature 101·1°.

8th.—During the past week he has been troubled with gastric catarrh, which has now improved. His general health has improved. Temperature 98°; pulse 92. Ordered four ounces of wine.

11th.—The patient passed a bad night. His appetite has gone; his tongue has a dry central streak. He had shivering and sweating during the night. The bowels are very much relaxed. Temperature 102·8°; pulse 108. The physical signs of fluid have markedly increased. Absolute dulness extends up to the third rib. The heart is displaced more to the right. Ordered six ounces of brandy instead of the wine; enema amyli c. tinct. opii ℥xv. statim, and paracentesis thoracis. The chest was punctured in the sixth interspace at the posterior vertical line of the axilla by means of the pneumatic aspirator. Forty-five ounces of greenish, almost clear, fluid were withdrawn. Several hours after the operation, temperature 96·7°; pulse 100, small and weak; respirations 32. There was a little sweat on the face.

13th.—Temperature 101·2°; pulse 102; respirations 32. Two eggs were added to the diet.

15th.—Temperature 98·6°; pulse 92, fair volume, soft, and unsustained; respirations 24. Anteriorly, vocal vibrations are diminished on the left side (as compared with the right); there is boxy resonance from the apex to the fourth rib; the respiratory murmur is tubular; below the fourth rib distant crepitation is heard. Posteriorly, there is flattening on the left side; the vocal vibrations are completely absent at the base, and the dulness is there absolute; the respiratory murmur is tubular and distant; there is slight crepitation in the supra-spinous fossa, but none towards the base.

20th.—Temperature 98°, pulse 80, respirations 24; the percussion is not absolutely dull even at the left base, but the breathing is there extinct, and there is ægophonic voice-resonance over a circumscribed space.

27th.—Temperature 98·4°; pulse 80. The thorax is rather more expanded on the left side. The fingers are beginning to club; his general condition is steadily improving.

June 5.—The patient's general health has improved. Temperature 98·6°; pulse 84. The physical signs have also improved; vocal vibrations extend to the base, and very faint respiratory murmur is heard at the base. Allowed to get up from bed.

19th.—The physical signs still improving. The patient is gaining strength, but complains of shortness of breath; is allowed to go down and walk in the quadrangle daily.

23rd.—The patient was convalescent, in good spirits, and feeling well; was allowed to go downstairs and walk in the quadrangle. He had his tea at 4.30 p.m., and afterwards walked in the square, became a little excited, walked up one flight of stairs into the ward, and got to an arm-chair; he was then noticed to be in distress, and beckoned for aid, and became unconscious. The House-Physician was hastily summoned, and found the patient supported in the arm-chair, his

head thrown back, his face livid, his lips blue, the superficial cervical veins intensely engorged. The pulse was about 90 and small; the respirations about six or eight per minute. Inspiration was long and deep, not noisy. Both the ordinary and the extraordinary muscles of inspiration were energetically brought into action (including the muscles attached, on the one hand, to the hyoid bone and jaw; on the other, to the hyoid bone and sternum,—these muscles were brought into action with the jaw firmly set half open). Expiration was short. The urgency of the symptoms, with the fact that the patient was fully dressed, precluded anything like a thorough examination of the chest. The left side did not expand. There was no evidence of any increase in the pleuritic effusion. The heart was beating laboriously; the impulse was heaving. Ordered enema of ether and brandy, a hot-water bottle to the heart, and immediate venesection. Two veins were opened at the left elbow, but little blood was drawn. The respirations, having become progressively slower, ceased. The heart stopped.

Post-mortem Examination, twenty-one hours after Death.—The surface of the body was very livid. There was great distension of the systemic veins generally. The pericardium contained three or four ounces of turbid serum. The right side of the heart was distended, especially the auricle. The left ventricle was contracted. The heart was pale. The orifice of the pulmonary artery was plugged with a large, ovoid, laminated, discoloured clot, bearing the impressions of musculi pectinati or columnæ carneæ. The right pleura contained traces of old inflammation. The right lung was excessively inflated, with its anterior margin extending well across the middle line. The air-vesicles were enlarged. The left pleura was firmly adherent in places one-third of an inch thick, and of fibrous, almost cartilaginous consistence. The cavity of the pleura contained about two-thirds of a pint of clear serum. The lung was situated at the upper and back part of the thorax, occupying but a small space; it was crepitant, and a small quantity of frothy fluid was squeezed out. The liver and spleen were congested. The kidneys were normal. The intestines were healthy.

A Fœtus Shot in Utero.—Dr. Staples relates the case of a woman, aged twenty-eight, pregnant at about full time, who was shot by the accidental discharge of a pistol. The ball entered the abdomen two inches above the crest of the right ilium, and a little behind the anterior superior spinous process, and took a downward and forward direction. No serious symptom followed, and in forty hours a dead child was born, the pistol-ball being found in its abdomen. Labour was quite normal, except for the occurrence of some nervous prostration, and recovery was complete.—*New York Medical Record*, September 9.

Carbolised Bran in Compound Fractures.—Dr. L. Mason, of Brooklyn, states—"The advantages possessed by bran properly mixed with carbolic acid as a dressing in compound fractures are these—1. The discharge is disinfected as it flows into the bran. 2. We have a dressing that is 'germ proof,' and one that notably limits suppuration. 3. We secure the anæsthetic properties of the acid. The method of carbolising the bran is very easy, simply adding crude carbolic acid to the quantity of bran to be carbolised, stirring it at the same time. A little experience will decide how much of the acid a given quantity of bran will require; an excess should be avoided. The bran retains the properties of the acid for some time."—*New York Journal of Medicine*, September.

Royal College of Surgeons.—In his interesting annual report on the state of the Museum of the College, Professor Flower has frequently expressed his regret that so few presentations of pathological preparations have been made to that important department of the collection. A few days since, however, at a meeting of the Museum Committee, the Conservator reported that Dr. Thomas Bevill Peacock, of Finsbury-circus, late Examiner in Medicine to the College, had presented an extremely valuable collection, consisting of 176 pathological specimens, mostly illustrating malformations and diseases of the heart—a subject in which Dr. Peacock is deservedly considered a great authority. The preparations are all in excellent condition; and what adds so much to the value of the collection is, that it is accompanied with a manuscript descriptive catalogue, containing references to the publications in which very many of them have been described.

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Medical Times and Gazette.

SATURDAY, OCTOBER 28, 1876.

DR. BUCHANAN ON "CITIZENSHIP IN SANITARY WORK."

In his Presidential Address to the Society of Medical Officers of Health, this year, Dr. Buchanan considered some questions concerning the machinery of sanitary progress, and, in fact, took for his theme "Citizenship in Sanitary Work." He observed that everyone who takes any real interest in sanitary work, and knows anything of its present position, will confess to himself that the science of hygiene, imperfectly understood as it is, is yet far in advance of practice; and will admit that if the community would only act up to the knowledge it has, or might have, of the laws of health, a vast amount of suffering and misfortune might be avoided. It must be admitted also that our laws, such as they are, allow of incomparably more care being exercised over the sanitary welfare of the community by those who are appointed to administer the laws. What, then, he asks, can be done to make people more careful of their own health, and of the health of those dependent upon them; and to make sanitary authorities more active in the performance of the tremendously responsible duties with which they are charged?

Too often, he says, the only answer given to these questions is one that may be summed up in the single word "compulsion," and an incessant desire is expressed for more law, or more astringent law; for stronger powers of regulation and repression to be exercised by local governments over the people, and by the central government over local governments. But the ignorant and careless must be reduced to a minority before they can be compelled to obey sanitary Acts; and the rate at which measures of legislation will prove fruitful, and the amount of regulation and repression that, in the interest of health, can be exercised, will depend on the education of the people to understand the value of sanitary measures to themselves and to the community, and on the trust they have in those who are to devise and execute the requisite sanitary regulations.

He illustrated the length of time that seems required in England to intervene between the attainment of knowledge and its compulsory application, by referring to the history of the vaccination laws. Half a century elapsed after Parliament had recognised the "universal utility of Jenner's discovery to the human race" before the first attempt at a compulsory vaccination was made (in 1553), "and it is only within the last six years that the machinery for compulsion has been efficiently organised." And in illustration of the indecision with which professedly compulsory measures are apt to be carried out when the public mind is careless respecting their subjects he referred to the provision of the Metropolis Building Act of 1844 relating to certain noxious trades. "Not one or two, but thirty years," he said, "was the time permitted by the Act to elapse before effect was to be given to the clauses prohibiting such trade from being carried on in the immediate neighbourhood of houses and streets. During those thirty years little or no attention was paid to the provisions of the Act; and at the end of that time the prohibitory clauses were set aside in deference to the interests of the trades in question." And he adds that certainly there are, here in England, "many measures, the immediate adoption of which would be the saving of much disease and death, that cannot be made matter of strictly compulsory law till much sanitary education of the people has gone on. And the education that will reduce the number of people needing compulsion will give to the majority the power, as it clearly has the right, to dictate the action required for the sanitary good of the whole community."

Dr. Buchanan then, in order to illustrate the part that must in the future of sanitary progress in England be played by education, and the extent to which, and the time in which, hygienic principles will be put into practice by the intelligent majority, and become enforcible on the ignorant minority, related at considerable length the story of the sanitary work that has of late years been done in Massachusetts, indicating the means by which it has been accomplished. Our readers must study for themselves in Dr. Buchanan's able address, given at length in our columns, the interesting and instructive history of the successes achieved, and the means employed; but the lesson taught is—educate! educate! educate! Dr. Buchanan in conclusion points the moral to be drawn—"Let us do what we can towards instructing the people, as the surest way, and in the end the quickest, of getting sanitary reform that shall be real, practical, and thorough. By all means let Parliament, as representing the better intelligence of the country, say from time to time, in respect of one and another sanitary condition, what is the duty of the whole community, and what particular negligence or misdoing is not to be tolerated in the country; but let the community everywhere be at the same time instructed as to the significance of, and the necessity for, sanitary amendment." At present there is a total absence of any machinery for this purpose; but why, he asked, "should not every city have in it a society like the Manchester and Salford Sanitary Association, interesting the whole community in its special work, giving popular lectures, publishing sanitary papers, distributing sanitary tracts, watching the doings of the sanitary authority, and proposing amendments in sanitary legislation?" The activity and energy of sanitary authorities will depend, very largely at least, on the intelligent interest shown in the matter by the communities they represent. If these are indifferent in sanitary matters, the local authorities will sooner or later become indifferent also. The intelligent and educated part of a community must not stand aside, thinking that all has been done when sanitary authorities have been appointed; they must take a share in the work; and this they may do by means of associations like the Manchester one. An instance of the good such societies may do had been furnished, Dr. Buchanan pointed out, by Tottenham. "There for years sanitary work had been at a standstill, the local board being composed of men who took no particular interest in their sanitary business, and who learnt no lesson from the excessive prevalence of disease in their district. A few years ago a number of the inhabitants formed themselves into a sanitary association, turned out some of the obstructives on the board, and replaced them by members anxious for sanitary amendment; leavened, not the board only, but the whole population, with a care about health; succeeded in no long time in getting the more obvious sanitary faults of the place amended; and can already show, as measured by results, an amount of progress that without their exertions would not have been made." One such example, even, ought to have a most happy effect. The work of the Tottenham Association was purely and simply local work; and "it is by evoking the same kind of action by the local intelligence of the country that far surer progress will be made than by any compulsion applied to an unprepared and unintelligent people." And further, and what Dr. Buchanan points to as of great importance, an instructed community may be entrusted with larger powers of local self-government in sanitary matters. The general sanitary law does now give power to sanitary authorities to make by-laws; "but this can only be done in regard of certain quite defined and limited subject-matters, and only after a great deal of interference and inconvenience." But an intelligent and instructed community may well and rightly be empowered, subject to the general law, to make for itself such additional local orders and regulations as its own circumstances may seem to require, and as it deems necessary for its sanitary welfare. Dr. Buchanan argues for more independent and public local self-government, but self-government by intelligent and educated communities.

"WHO'S TO BLAME?"(a)

Many of our readers will call to mind Bret Harte's parody of Victor Hugo's "Les Misérables."

"Jean Valjean, the convict, stole Bishop Myriel's candlesticks.

"'Why?' asked the benevolent prelate.

"'Because society had ill-used him.'

"'Who is society?'

"'Myself,' said the Bishop; "therefore 'twas I who stole my candlesticks, and I ought to be punished for the theft.'"

Such is the argument which a zealous, but hardly discreet, Social Reformer embodies in a tale, called "Who's to blame?" and applies to the case of habitual drunkards. A drunken ruffian beats his wife and child to death. Why? Because society has not provided means of incarceration in an inebriate asylum. Who are society? You and I, thoughtless reader; 'twas we who murdered the woman and child, because we had not built an inebriate asylum!

Considering that the writer of a tale can invent his own facts, we must say that the facts in "Who's to Blame?" are not well selected. The picture is laid before us of a man subject to paroxysmal or intermittent drunkenness. This is a well-recognised condition, and the author gives some of the features of it, but omits the practical application. A man or woman goes on well and soberly for some weeks; then symptoms of disturbed health, mental and bodily, show themselves—moodiness, surliness, ill-temper, bad appetite, bad sleep, and pale features. After a few days of such precursory symptoms, the patient begins to drink; becomes furiously, or foolishly, or sleepily drunk, and continues so for one day or more; then sleeps off his debauch, awakes to a sense of his guilt and degradation, and makes vows or takes pledges to abstain for the future; and so on. Now, is there nothing to be done by the patient or his friends when they see such a bout coming on? Of course help can be got if help is sought.

(a) Published by H. K. Lewis, Gower-street.

If a judicious practitioner were called in, he would give such a patient an old-fashioned purgative dose; follow up with beef-tea and ammonia; and then begin a course of iron and quassia. Such treatment often cuts short an impending paroxysm, and it is the duty of the patient and his friends to seek it. Tincture of steel, or, still better, the old ferrum ammoniatum, are sheet-anchors for the inebriate. Of course we only mention treatment incidentally, and cannot pretend to fully describe the prevention of attacks; but it is odd that a writer who blames "society" for not establishing drinkers' asylums should utterly omit all reference to the fact that some remedies may be had outside inebriate asylums as well as in them.

This, however, is the least objection we have to offer to this well-written, well-meaning, but scarcely well-considered, effort to treat drunkenness as a misfortune or insanity simply, and not as a vice. Of course the writer admits that drunkenness is a vice, *if people can help it*. But in the tale before us we have a friend of humanity pleading to the bench of magistrates that the drunkard before them was "not responsible for his actions." Many habitual drunkards, we are told, can no more help it than they can "alter the shape of their heads."

The doctrine that "people cannot help it," that drunkenness is a special form of insanity, and the like, is unproved and pernicious, and, if promulgated by the "Society for Promoting Legislation for the Control and Cure of Habitual Drunkards," will deter many persons from joining in this work. There is not one thing that can be said of the uncontrollable nature of intemperance, and its being a special form of insanity, that may not with equal truth be alleged of all other kinds of vice. We may instance the two master-vices of human nature, that are found in all nations, and notably among those who abstain from fermented liquors—one is gambling, the other fornication. The phenomena of both, whether habitual or paroxysmal, are just parallel with those of intemperance. "Self-control is annihilated, moral obligations and duties set at nought"; "poverty, misery, and degradation" the consequences. Are we, then, to have under the same roof with inebriate asylums gambling and unchaste asylums? "Who's to blame" when the apprentice robs the till to join a sweepstakes for the Derby? Is not somebody to blame when young girls frequent the streets, and are gathered in haunts which are nurseries of the most odious disease and vice?

It is true that we cannot build asylums and seclude all the victims of habitual vice; but that is no reason why judicious repression and curative measures should not be adopted for drunkards. A society will do good if it induce the Legislature to sanction the longer incarceration of drunkards after repeated convictions, and if it provide asylums in which such persons can be secluded with or without their own consent. But it will never do for a society with Lord Shaftesbury, the Archbishop of Canterbury, and Sir Thomas Watson at their head to proclaim the doctrine of the irresponsibility of the vicious, when vice has been allowed such sway that self-control is enfeebled or nearly abolished. Throughout the prospectus of the Society we have mentioned, which has the sanction of some highly respected names, the word *gambler* might be substituted for *drunkard*, and every word used respecting the one would be quite as applicable to the other.

SMALL-POX IN LONDON.

After the very severe epidemic of small-pox by which London was visited in 1871-72, the disease rapidly disappeared, till it had so died out that not a single death from it was recorded in the month of January of the present year. Then it began to slowly increase; in February there were 3 deaths from it, and in March, 7; and altogether during the first six months of the year 33 deaths from it were recorded. But since June the increase has been more rapid; so that between the end of that month and the end of September 110 deaths were registered as having been caused by small-pox in London. The weekly tale of deaths has not, however, varied greatly during the last six weeks, the numbers having been 16, 11, 15, 11, 16, and 22; the last being a higher number than in any previous week since July, 1872. Still, a record of this character does not seem to justisfy any grave alarm, though it undoubtedly demands the most serious and watchful attention by all the sanitary authorities. It has, however, excited public attention in a remarkable degree, and this is probably owing to the fact that not only the deaths from small-pox are now published every week, but also the number of fresh cases of it that have week by week been admitted into the hospitals of the Metropolitan Asylums Board; and consequently the public at large, besides being informed of the fatality of the disease, got also a larger idea of its progress and rate of increase from the number of cases thus reported; and from this point of view the aspect of matters is to the non-professional observer more alarming. The Metropolitan Asylums Board have only two Small-Pox Hospitals open at present—that at Homerton and that at Stockwell—having together 204 beds, of which 180 were occupied at the end of last week, against 72, 95, 101, 128, and 175 in the five preceding weeks; while the new cases admitted each week were, in the last three weeks of September, 33, 26, and 62; and in the first week of October, 48.

The cases taken into hospital constitute, however, but a small part of the cases occurring in the metropolis, and this also is shown by the Registrar-General's returns. Thus, of the 16 deaths from small-pox registered in the week ending October 14, 5 only occurred in the small-pox hospitals; but even without this consideration the steady and somewhat rapid filling-up of those hospitals gives the general public a more vivid idea of the increase of the disease than they glean from the number of deaths only.

The statistics we have given leave no room for doubting that we are in the beginning of a new epidemic of small-pox, or, in other words, of one of those cyclical increases that recur with such irregular regularity to remind us how imperfectly we still employ the known means of preventing the recurrence and the spread of the disease; which means are isolation, and vaccination and revaccination.

Isolation, though one of the surest, if not *the* surest, means of preventing the spread of the disease when it occurs, cannot, we fear, be promptly and perfectly carried out with our present machinery, nor with the most perfect machinery that could be devised, till the public are so educated up to a comprehension of its importance and value that they will themselves co-operate in enforcing and carrying it out. There is, very naturally, a great dread of small-pox hospitals, as hitherto arranged and managed. To a considerable extent the cases sent to them are cases of the worst class, and cases attacking the worst kind of patients. The mortality is consequently great; and the aggregation of patients not improbably makes it still greater than it would otherwise be. Then, again, the patients are at once cut off from their friends and relatives, as "visitors" cannot be allowed, and thus those who enter *may* never again see or be seen by those they love or care for. This, we suppose, can hardly be otherwise arranged with safety; but it is not yet forgotten that during the last epidemic some very sad errors were committed by the misreporting of deaths, and by uncertainties as to identity; and this and overcrowding ought never to be allowed to happen again. The greatest safety of the greatest number may demand that perfect isolation of patients shall be carried out, even at additional peril to a few lives, but unquestionably the greatest pains must be taken to make that additional peril as little as possible. The greatest benefit to be obtained by

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hospitals would be the immediate isolation of the first cases of small-pox occurring in any district; and this could probably be more easily secured by the establishment of small district hospitals, than by two or three large ones at long distances from some of the districts.

In vaccination and revaccination we have, however, a much more powerful, universal, and constant means of protection against small-pox,—a means by which the individual may be as efficiently protected, even during an epidemic, as by an attack of small-pox itself, and which takes all the danger out of the disease should it occur,—a means by which the whole community may be so protected that, though small-pox may perhaps never be quite stamped out, all epidemic outbreaks will be prevented,—a means, therefore, of immense preventive as well as protective power; and a means the use of which need not carry the slightest risk to the individual. These benefits are, we believe, quite within reach; but in order to secure them vaccination and revaccination must be universal, and this it never will be, no matter what the law is, till the only true and valid objection that can be raised against vaccination with humanized lymph is silenced by the free provision of animal lymph as the alternative. There is no denying that syphilis has been communicated by vaccination; and though we know that with proper care and vigilance the risk of such communication is infinitesimally small, if not absolutely *nil*, yet as it is impossible to insure that all vaccinators will at all times be perfectly vigilant and careful, we hold that the alternative of lymph from the heifer ought to be available for all who object to humanized lymph. The Government ought to undertake the necessary constant provision of cow-lymph; and that done—the only ground on which anti-vaccinationists can claim any sympathy being taken away—the nation and its Government can, without any hesitation, require and enforce universal vaccination and revaccination. From what we have said, it will be seen that we do not hold up revaccination as an *infallible* protection against small-pox. One attack of the disease itself does not *always* prevent a second. In all ordinary circumstances, however, one effective revaccination will be sufficient; though in times of epidemic, or unusual exposure to infection, it will be wise in those incurring the extra risk to resort again to the protective power of vaccination.

We do not at present know what age will be the best for the legal revaccination, but some evidence points to an age earlier than that of puberty, which has hitherto been, perhaps, most generally spoken of. In the German Empire a law was passed in 1874, requiring every pupil in a public or private institution to be revaccinated within the year in which the twelfth birthday occurs; and Mr. Wilkinson, in his excellent report on the recent outbreak of small-pox in Islington, recommends revaccination at the age of seven. It is probable that the age need not be fixed with any great nicety; but of the immense gain in protection afforded by revaccination there can be no question, and we will only add here a caution against mistaking merely local effects in the vaccinated limb for true, efficient revaccination.

We do not, as yet, see any reason for fearing that the present epidemic will be a very severe one. Since the outbreaks in Islington and Lambeth, there has not been any rapid increase in the number of fresh cases. The epidemic was due, about the average interval having elapsed since the last past one; and as that was of very exceptional severity, it probably nearly exhausted all the then susceptible material for the malady. As infant vaccination has been much more generally and vigorously enforced since 1872 than previously, we may hope that there is not now any very large accumulation of unvaccinated children in the metropolis; but a by no means inconsiderable number there undoubtedly is, and these and the young adults who have not been revaccinated will supply the chief food for the disease now. We ought, however, to have no epidemics, and it is in the power of the public to decide that there shall be none. If they can be induced to lay to heart the lessons taught by past epidemics, and to insist on regular, systematic, universal vaccination and revaccination, they will for the future do away with any such outbreaks of small-pox as will deserve to be called epidemics.

The fatal cases of the disease which were registered last week originated in fourteen different parishes; and eleven were registered in the north and eleven in the south groups of districts. The incidence of the disease is thus widely, though unequally, spread over the metropolis; and the future progress of the epidemic lies very much, probably, within the control of the metropolitan sanitary authorities, whose power of prompt action must depend on their having early information of all cases of small-pox. It is satisfactory, therefore, to know that of the thirty-nine vestries or district boards constituting those authorities, thirty-five supply their health officers weekly with the registered particulars of all the deaths recorded in their respective districts. We should think that a little gentle pressure by the ratepayers would induce the Vestries of St. George's, Hanover-square, and Clerkenwell, and the District Boards of Holborn and Whitechapel, to supply this information to their health officers also. It would, we need not say, be a vastly greater gain could the health officers be promptly informed of all cases of illness from infectious diseases,—not merely of the deaths.

THE WEEK.

TOPICS OF THE DAY.

The Corporation of London, as Sanitary Authority of the Port of London, has just issued a special notice from Guildhall, signed by the Town Clerk. The notice calls attention to the fact that small-pox is at the present time prevalent in the metropolis and elsewhere, and therefore owners and masters of vessels, and all river and dock authorities, are requested to give immediate notice to the Medical Officer of Health, at the Sanitary Office at Deptford, as to the existence, or suspected existence, of small-pox in any vessel in the port, in order that such cases, and the vessels concerned, may be promptly dealt with in accordance with the provisions of the Public Health Act. It would be well if sanitary authorities at all the outports followed the example of the City Corporation, for small-pox was imported last week into the Thames from Cadiz. The disease existed on board a schooner at Swansea some three weeks ago, and the circumstance was immediately communicated to the London authorities. There is abundant evidence to show that when this or any other contagious malady is existent in a large port, the activity of the sanitary authorities will influence, to a large extent, the spread of the disease.

The Royal Infirmary for Women and Children in Waterloo-bridge-road has of late been undergoing several alterations and improvements, and recently the new wards which have been added were inspected by many of the subscribers. The objects of the charity—one of the oldest of its kind in London, having been established in 1816—are the medical and surgical relief of poor children and women, the distribution among parents of information for the domestic management of children, and the professional study of children's diseases. The hospital now comprises six excellent wards, the inmates of which receive as many home comforts as possible; a flat roof, which serves as a playground for the convalescent children; and an out-patient department. Out of fifty-two cots, twenty-six are now, but the committee have funds to fill only seven of them, and the remainder have to remain empty. The seven new cots have been enabled to be occupied through the special subscriptions of certain benevolent

subscribers, but it is to be hoped that the committee will be enabled before long to utilise the remainder.

At Worship-street Police-station, last week, Dr. Tripe, Medical Officer of Health for Hackney Parish, appeared to support a summons against Messrs. Jordan and Paine, builders, of Hackney, for having newly erected a house at West Hackney without furnishing it with a water-supply, as required by the Metropolis Local Management Act. Dr. Tripe said that the house had been inhabited for a month, and during the time there had been no water-supply to the domestic offices as the section of the Act required. The defendants said that it was not usual until the tenant had contracted with the water company by paying the first quarter in advance. The magistrate said it was clear that the Act had not been complied with, and he fined the defendants 40s. and costs.

Last week, Dr. Septimus Gibbons, the Medical Officer of Health for St. Andrew's Parish, reported upon the condition of some houses in Baldwin's-gardens, Leather-lane. Cases of fever had taken place in them, and they were in a dirty and dilapidated state, and unfit for occupation. The Board ordered proceedings to be taken before a magistrate for the closing of the premises.

A newspaper correspondent, writing from Belgrade, in describing the English hospital established there for the wounded, states that the Servian wounded have a strange aversion to undergoing operations, and that when offered the alternative of amputation or death they almost invariably choose the latter. As the English surgeons are not permitted to operate upon a man except with his full consent, it results that patient after patient is lost who might otherwise have been restored to health and his family. So abject is the terror entertained by some of the unfortunate inmates of the hospital, that upon one occasion a man slightly wounded in the hand, being approached by the nurse with a damp sponge intended for the washing of his face, jumped out of bed before he could be prevented, and ran off to the Ministry of War, where he related that a nefarious attempt had been made to amputate his hand, and besought the protection of the military authorities. His notion was that the sponge was steeped in chloroform, and that he was about to be plunged into a state of insensibility for the purpose of undergoing an operation. The Ministry of War is stated to have addressed a solemn remonstrance on the subject to our countrymen; and it was evident, upon the occasion of Prince Milan subsequently visting the hospital, that he had been indoctrinated with the idea that the English doctors were only too anxious to have recourse to the knife. The Prince was shown a patient (a Roumanian, not a Servian) who had undergone excision of the elbow-joint, and he observed to Mr. Attwood, the surgeon in charge, "Il n'a pas très-bonne mine, cependant, pas suite de l'opération?" to which Mr. Attwood replied, "C'est vrai, Altesse; mais sans l'opération il serait déjà mort depuis cinq ou six jours." In view of such a state of things, the correctness of which we have no reason to doubt, the services of the English surgeons who have troubled themselves to travel so far must be extremely limited, and it is possible that some of them may not be averse to returning home as soon as circumstances permit.

At a recent meeting of the St. George's (Hanover-square) Vestry, a letter was read from the Board of Guardians, stating that cases of small-pox had broken out in the district, and in one instance a woman with the disease had refused to go to a small-pox hospital; the consequence was that others in the same house took the disease. The Guardians asked the Vestry, as the sanitary authority, to use their compulsory powers of removing the patient when practicable. Mr. Smith, the clerk, said the house was disinfected after the woman's illness, but small-pox again broke out, and the medical officer of health was immediately communicated with. The suggestion of compulsory removal made by the Guardians could not always be carried out legally. Mr. F. Morris stated that one of the principal objects of the Guardians was to direct the immediate attention of the medical officer to the matter, to see carried out to the fullest extent the power which the Act of Parliament placed in his hands. The family mentioned particularly in the Guardians' letter came from Islington, where small-pox was prevalent. Had the woman been removed to a hospital, perhaps the disease would not have spread. The chairman wished to state as a fact that in a small-pox hospital of which he knew there were forty nurses. The rule was that each nurse should be vaccinated or revaccinated, and not one had caught the disease from the patients.

An alarming theory has been promulgated by Professor J. D. Whitney, an American *savant*. He suggests that this globe of ours is being gradually desiccated. The Professor has been putting together a number of facts showing that over large tracts of the earth seas have been becoming dry land, and the rainfall over extensive areas has been lessening, even during the historic period. Central Asia is instanced, and there has doubtless been considerable change in the direction of aridity in that region. But our contemporary *Iron* suggests that that may be in a considerable measure due to its depopulation, and the suspension of irrigation and the change in the course of rivers that have followed in consequence. The drying-up of the shores of the Mediterranean, it is contended, is no doubt largely owing to the cutting down of the forests of Europe and Asia, thus reducing the rainfall, which may also have been the case in Central Asia. In earlier geological periods the distribution of the land, and its contour, would, as they do now, modify climate. Professor Whitney, however, holds that, setting aside all these, and other causes of lesser import, the earth is drying up; but it is more than probable that all the desiccation to which he points, and which is undeniable, may be only local, and counterbalanced by a more copious rainfall in tropical and other regions, less under the eyes of physicists.

The Royal Commission appointed to inquire into the effects of noxious vapours are examining the Tynesido District with regard to them. They held a court at Tynemouth last week, of which Lord Aberdare was chairman. The proceedings were private, but a good deal of evidence was taken of the effects of the vapours from chemical, copper, lead, and other works on the banks of the Tyne upon the public health and vegetation. The Commissioners visited several of the factories last Saturday, and held another meeting on Monday. They will next proceed to the neighbourhood of Durham for the purpose of examining the coke ovens and their effects upon vegetation. The evidence on behalf of the manufacturers, and that of the alkali inspectors, will be taken in London, probably about the beginning of next year.

At the invitation of Colonel Fox, Local Government Inspector, a conference of the several local authorities was held this week, on the subject of the Thames-valley drainage. The inspector said the object was to inform himself, so as to present a preliminary report to the Local Government Board, as to the practicability of carrying out some combination founded upon the proposal of the Hampton Wick Local Board to take the sewerage of a united district, and deal with it on the land near the Hounslow Powder Mills. Several of the authorities expressed themselves favourable to combination, though they did not pledge themselves to the scheme put forward by the Hampton Wick authorities; while others opposed it, on the ground that they had peculiar advantages for dealing with their own sewage. Colonel Fox said the Local Government Board might order an official inquiry on the application of the Hampton Wick Board, and at that inquiry everyone would have the opportunity of

stating his opinions. It was not essential that the official inquiry should be held with reference to the exact process of combination suggested by Hampton Wick, because the Local Government Board could, if they thought fit, recommend to Parliament a combination of all or any of the districts concerned. He hoped every authority that had got any scheme under its consideration would proceed with it without prejudice, because it was quite impossible to decide between two alternatives without having both in a really practical and intelligible shape before them.

THE SEPTEMBER REPORT ON THE WATER-SUPPLY OF THE METROPOLIS.

In his report to the Local Government Board on the quality of the water supplied by the metropolitan water companies during the month of September last, Major Bolton states that the water in the River Thames at Hampton, Molesey, and Sunbury (where the intakes of several of the companies are situated) was good on twenty-two days, and slightly coloured during the other days of the month. The highest flood state of the river was nine inches above the (six feet) summer level, and the lowest was four inches below summer level. The highest temperature of the water taken at Seething Wells was 62°, and the lowest 52°; while the highest temperature of the air at the same place was 68°, and the lowest 50°. The condition of the water in the river was good on twenty-seven days, and indifferent on three days, when it was slightly stained. The rainfall for the month was 2·39 inches.

The East London Company have already completed the extension of the constant system of supply in a large part of their district, the whole of which is being brought, section by section, under constant supply. The directors have decided upon making a considerable extension of their works, with a view to give an increased supply to Buckhurst-hill and adjoining districts. These works have already been commenced, and consist of a covered reservoir, new engine, and larger mains, which will be completed by the time the hot weather sets in next year. There is nothing new to record in connexion with the other companies; but attention is again called to the fact that the contamination of water from gases generated by sewage is of far more frequent occurrence than is generally understood. Waste-pipes from cisterns are frequently found to be in direct communication with the sewers. The gases thus flow back into the cisterns and become absorbed by the water. To prevent this, no overflow or waste-pipe other than a "warning-pipe" should be attached to any cistern supplied by a water company, and this should be brought outside the house, the end being left exposed to the air, instead of being carried into the drain, as is often the case. The adoption of this plan will get rid of the poisonous effluvia and gases from the drains, which would otherwise ascend through the pipe, and not only be partly absorbed by the water in the cisterns, but be mixed with the air in the houses, thereby becoming a cause of fever and disease.

THE GUARDIANS OF ISLINGTON AND THE PREVENTION OF SMALL-POX.

Now that the metropolis is threatened with an epidemic of small-pox, the public have a right to expect those who are responsible for the sanitary arrangements of the various parishes in the metropolis to adopt every precaution likely to assist in preventing its spread. But in one quarter, and that, too, the one where the epidemic is most active—viz., Islington—we regret to find that the Local Board of Guardians have resolved to endanger the health and lives of hundreds of families rather than spend a few pounds to insure protection. To show that we are justified in so speaking of their conduct, we need only refer to the decision they arrived at last week on the question of vaccinating and revaccinating the children attending some of the parochial schools. Small-pox having broken out in the neighbourhood of the parochial schools, St. Mary's, Islington, the vicar of the parish wrote to the clerk to the guardians, desiring the public vaccinator, Mr. Harston, to attend the schools for the purpose of vaccinating or revaccinating such children as were inadequately protected. Mr. Harston visited the schools and examined the whole of the children, about 600 in number, and found that among them there were twenty-five who had never been vaccinated, and seventy-one in whom the operation had been performed inefficiently. He therefore set about vaccinating those of the children whom he considered were insufficiently protected, and had performed the operation in twenty-seven cases when he was told that he could not charge for his services unless the children were vaccinated at the public vaccination-stations, or the Board of Guardians gave special permission for the medical officer to perform the vaccinations at the schools. Mr. Harston applied for such permission at the last meeting of the Islington Board of Guardians, but the application was refused, because the disease had not yet appeared in that district as an epidemic. Consequently he will not be paid for the cases already vaccinated, and the other children will probably remain inadequately protected against small-pox, to their own and the public danger. It should be stated that three of the guardians—viz., Messrs. King, Stonelake, and Edman—had sufficient sense to see that it was their duty to try and *prevent* the spread of the epidemic.

TACTICS OF THE ANTI-CONTAGIOUS DISEASES ACTS ASSOCIATION.

The charge against Inspector Anniss, of assaulting a young woman named Mary Carne Murton, at Plymouth, when in the execution of his duty under the Contagious Diseases Acts, has been patiently investigated by the Plymouth Bench of Magistrates, and shown to be baseless, Inspector Anniss being able to prove an indisputable *alibi*. In dismissing the case, the Mayor of Plymouth remarked that the defendant left the court without a stain on his character. The *Western Morning News*, the leading daily paper in the West of England, says that the accusation against Inspector Anniss was really due to the action of the Anti-Contagious Diseases Acts Association. "For the past six years," says that journal, "the efforts of this society have been largely devoted to attempts to libel, to abuse, and to crush Inspector Anniss, who superintends the working of the Contagious Diseases Acts in this district. Against him the whole force of the lying animosity of this organisation has been directed. . . . . At last an opportunity arrived. A young woman was found who said that some one, who declared that he was 'Detective Anniss, of the Water Police,' accosted her in the main thoroughfare out of Plymouth, had asked indecent questions, had threatened her with hospital examination, had pointed to two of his men in waiting if she resisted, had escorted her through the streets, where she screamed hysterically—though no one appears to have heard her,—and eventually ran away." The story is so full of improbabilities and inconsistencies that, even had Inspector Anniss not been able to make such a complete defence, no reasonable person would have given it a moment's credence.

EXCESSIVE MORTALITY FROM DIARRHŒA AMONGST INFANTS.

Dr. Alfred Hill, Medical Officer of Health for the Borough of Birmingham, in his annual report for the year 1875, appends the following remarks on the excessive mortality from diarrhœa which occurred in the district under his charge:—"From this cause 868 deaths were recorded in the year 1875, against 622 in 1874, and 728 in 1873. The majority of the cases occurred, as usual, in the third quarter of the year, and were due in a large degree to the greater heat then prevailing; this acts as a grand general predisposing cause, favouring the action of those secondary or exciting causes which are in con-

tinual operation. These common exciting causes are numerous, but none is so powerful or widespread as the improper feeding and management of infants. Out of the 868 deaths from this disease, 596 occurred in infants under one year of age, while as many as 799 occurred in children under five years of age. Thus diarrhœa is seen to be specially a disease of infant life. It is worthy of notice that it caused more deaths than any other disease of the same class, not only during the third or summer quarter, but also during the whole year. As long as so little care is taken in the rearing of infants this mortality will continue; mothers are so ignorant of the true wants of infant life that they disregard all Nature's teachings. To follow Nature, every child should be suckled by its mother, or by a wet-nurse; or, in default of both of these, it should be fed on good milk; but, instead of this, it is the commonest everyday experience to find infants fed upon milk out of dirty, sour feeding-bottles, bread-and-water, arrowroot-and-water, improper solid food only fit for adults, and other unsuitable articles of diet. To these may be added the use of contaminated water, exposure to draughts of cold air, the breathing of a foul atmosphere, improper or insufficient clothing, the indiscriminate use without medical advice of mercurial teething-powders and opiate cordials, and other insanitary influences, causing wonder, not that so many children die, but rather that so many are reared. Most of these causes are rendered more powerful by the heat of summer; and until education of mothers and nurses upon infant management becomes more general, the high diarrhœa mortality of infants must continue."

LONDON HOSPITAL MEDICAL SOCIETY.

The second annual *soirée* of the above Society took place at the College on Friday, the 20th inst. There was a large gathering of old "London men" and of students, and we were pleased also to see that ladies had been invited, and a large number had accepted the invitation. The staff of the Hospital was largely represented, as were also the lay authorities. The entire College, museum, and theatres were placed at the disposal of the Society, and the executive committee shortly transformed them into a series of drawing-rooms: so complete was the transformation that few, if any, of the lay visitors would suspect the original use to which these rooms were destined, and still less the contents of the bottles and drawers, which had been temporarily screened with scarlet and white draperies. We think that great credit is due to those gentlemen (Mr. R. D. Smith, Mr. Mears, and Mr. Fenwick) who superintended these decorations. A variety of amusements was provided, including music, vocal and instrumental, by the students and their friends; a lecture on "The Nose, its Anatomy and the Otherwise thereof," by Mr. Treves, which was very highly appreciated. Messrs. Krohne exhibited instruments and surgical appliances of all kinds. Microscopes and scientific instruments were shown by Messrs. Baker, Messrs. Stewart, Messrs. How. and Messrs. Beck. There was also a beautiful collection of objects for the microscopes, both scientific and popular, which formed one of the great attractions of the evening. Altogether the *soirée* was very enjoyable and a decided success.

DARENTH SCHOOL FOR IMBECILE CHILDREN.

An interesting ceremony took place on the 19th inst. at Darenth, near Dartford. The foundation-stone of a new Asylum and School for the Imbecile Children of the metropolitan parishes and districts was laid by Dr. Brewer. It will be remembered that a short time back it was resolved to separate the imbecile children from the imbecile adults, with a view to their better education; and because the requirements of the one class differed so much from those of the other. The managers of the temporary Asylum at Clapton have met with so much success that a suitable building is to be erected for the purpose. No doubt the experience gained at Clapton has been of the greatest service in the preparation of the plans for the building, and will serve also in the treatment of the children when they get to their new establishment. The situation is simply magnificent—high and dry; the air is bracing, and well adapted to assist in developing any intelligence which these unfortunate children may possess. The building is being erected from plans prepared by Messrs. Harston, of Leadenhall-street. It may be shortly described as consisting of a central administrative block, with right and left wings, for boys and girls respectively. The wings are built on the pavilion system, with corridors of communication between the central portion and each other. The managers and visitors dined together after the ceremony had taken place, under the presidency of Sir Edmund Currie, the chairman of the Darenth Board.

THE GLASGOW AND ABERDEEN ELECTION.

The keen contest going on for the vacant seat in Parliament will soon now come to a close. Mr. Kirkwood has been most unfortunate in his campaign, having again and again been incapacitated by illness from attending meetings of the electors. Perhaps this is hardly to be regretted by his supporters, for when he did appear at Aberdeen the result was hardly to the wishes even of the gentleman who had been selected to propose a vote of thanks to him. Moreover, he took the opportunity to twit those who were not on his side as being, as it were, mere holders of votes for the purpose of returning the Lord Advocate for the time being. If gentlemen prefer one candidate to another—let us say, Mr. Watson to Mr. Kirkwood—surely the fact of the former being Lord Advocate need not interfere with their choice. Mr. Watson comes forward as Mr. Watson, and not as Lord Advocate—a post which he did not hold when his candidature was announced. But it has been by such and such-like silly statements, and by equally foolish reticences, that Mr. Kirkwood has converted many of the electors into determined opponents.

MORPHOLOGY OF THE SKULL.

We learn from our contemporary *Nature* that Professor W. K. Parker, F.R.S., and Mr. G. T. Bettany, B.A., of Cains College, Cambridge, are preparing a work on the Morphology of the Skull, in which for the first time will be brought together for comparison descriptions of the remarkable succession of modifications through which the skull passes in development in the principal types of vertebrated animals; the forms illustrated will be the sharks and rays, the salmon, the axolotl, the frog, the snake, the fowl, and the pig. A special value will attach to the work, inasmuch as it will record many corrections of facts and important modifications of view since the publication of Professor Parker's elaborate papers, and will also include many observations yet unpublished. A simple description of each form at successive stages will be followed by a chapter dealing with theoretical questions, and summarising the results of study. The work will be illustrated by a large number of woodcuts, and will be published by Messrs. Macmillan.

KING AND QUEEN'S COLLEGE OF PHYSICIANS.

At the annual stated meeting of the College, held on St. Luke's-day, October 18, 1876, the following officers were elected for the ensuing year:—*President:* Samuel Gordon, M.B. Dub. *Censors:* Thomas Hayden (Vice-President); Wensley B. Jennings, B.A. Dub.; Thomas W. Grimshaw, M.D. Dub.; John William Moore, M.D. Dub. *Registrar:* J. Magee Finny, M.D. Dub. *Treasurer:* Aquilla Smith, M.D. Dub. *Examiners in Midwifery:* Edward B. Sinclair, M.D. Dub.; Fleetwood Churchill, jun. *Professor of Medical Jurisprudence:* Robert Travers, M.D. Dub. *Representative on the General Medical Council:* Aquilla Smith, M.D. Dub. *Agent to the Trust Estates:* Charles U. Townshend. *Law Agent:*

Charles Woodward. The following licentiates of the College were on the same occasion elected to the Fellowship:—Walter Bernard, M.R.C.S. Eng., 1852; James Cuming, M.D. Queen's Univ. Ire., 1855; Christopher John Nixon, L.R.C.S.I., 1868; John Mallet Purser, M.D. Dub., 1874; Richard Newman Townsend, B.A. Oxon.

CONVICTION UNDER THE PUBLIC HEALTH ACT.

At the Liverpool Police-court, last week, a woman who had been nursing the wife of a dairyman suffering from small-pox was convicted under the 126th section of the Public Health Act for exposing herself in the clothes worn whilst attending on the patient without having had them previously disinfected, and for serving milk to customers under similar circumstances. It was alleged that a little girl who was served with milk by defendant was taken ill with small-pox next day, and had since died; and Dr. Taylor, Medical Officer of Health, stated that he had no doubt that the child died from the infection she caught by drinking the milk purchased of the defendant. If such was the case, it tends to upset the usual theory of incubation of small-pox.

THE CHAIR OF PHYSIC IN THE UNIVERSITY OF EDINBURGH.

Almost at the last moment, Professor Gairdner, of Glasgow, has definitely come forward as a candidate for the Chair of Medicine in the University of Edinburgh. As far as we know, he has forwarded no testimonials of any kind, but he can appeal to what is worth all the testimonials in the world—good work done, and duty strictly fulfilled. Assuredly we can all here in London say that we should be heartily glad to see Professor Gairdner in the chair of Cullen, but Scotchmen who love their country would also say that they would sincerely regret the loss to Glasgow.

A NEW APPARATUS FOR DIRECT TRANSFUSION.

After the ordinary business of the evening had been disposed of, Dr. Roussel, of Geneva, demonstrated before the Medical and Chirurgical Society, on the evening of the 24th inst., his new apparatus for the direct transfusion of blood from one individual to another. It is an exceedingly ingenious contrivance, consisting essentially of an application of the modern aspiration apparatus. By a clever modification of this, almost every risk as to the introduction of air into the vein is obviated.

OBSTETRICAL SOCIETY.

The meeting of this Society on Wednesday next promises to be particularly interesting, on account of a paper which is promised by Mr. Jessop, of Leeds, on a successful case of gastrotomy for extra-uterine fœtation, both mother and child surviving. We understand that other papers of interest are expected.

THE PATHOLOGICAL SOCIETY.

At the last meeting of the Pathological Society it was announced that the second meeting in January would be devoted to a demonstration of specimens illustrative of visceral lesions in secondary syphilis.

ST. BARTHOLOMEW'S HOSPITAL: ABERNETHIAN SOCIETY.

The following is the Committee of Management for the winter session, 1876-77:—*Presidents:* Mr. Keetley; Mr. Macready. *Vice-Presidents;* Mr. Mills; Dr. Wharry. *Treasurer:* Mr. Savory. *Hon. Secretaries:* Mr. Darbishire; Mr. Pye.

Royal College of Surgeons.—At the last meeting of the Council, Mr. Edward Orange Wildman Whitehouse, of Harling, Sussex, was *admitted* a Fellow of the College, his diploma of Membership bearing date June 8, 1876; and at the same meeting Mr. William Cormick, M.D. St. Andrews, L.S.A., of Albany-street, Regent's-park, was *elected* a Fellow, his diploma of Membership bearing date July 17, 1840.

FROM ABROAD.

ACUTE PURULENT CATARRH OF THE EAR.

Dr. Spalding, in a paper on this subject—which, he observes, has been very imperfectly treated by writers on diseases of the ear—states (*Boston Med. and Surg. Jour.*, August 3) that his chief object in bringing it before the Cumberland County Medical Society is to speak of its diagnosis, especially as observed in children. In them, when there is acute purulent catarrh without any discharge from the meatus (owing to the shortness of the Eustachian tube, which lets the pus flow off more easily than in adults), the great diagnostic sign is the cry, which is distinguished from that present in diseases of the lungs, pleura, or larynx, in which the child can hardly ever cry aloud, and still less keep up a continuous cry. In catarrh of the ear it is continuous, loud, piercing, increasing with every motion and shaking of the body, and especially of the head, by every change of position, at every effort to swallow, and, above all, at all attempts at sucking. In cases occurring during the exanthemata the pain is usually less than in idiopathic cases. When by it attention is drawn to the ear, the diagnosis may be confirmed by objective examination.

The treatment is simple and should be energetic, in order to prevent deafness from thickening or perforation of the membrana tympani, or the production of chronic purulent catarrh, with its consequences. Tepid water should be frequently injected or dropped into the cavity of the ear, warm poultices laid behind the ear, and a leech or two applied in front of the tragus and below the ear. Morphia is often borne in large doses, but is simply a palliative. If in a few hours relief be not obtained, the membrana tympani may be scarified, or, if pus be detected behind it, perforated. In this way many a case can be speedily relieved, and much mischief prevented.

In no other part of the body are chronic purulent discharges allowed to persist so long as in the ear, and that notwithstanding the important nature of many of the parts which are in immediate contact with the cavity of the tympanum. Its most common cause is neglected acute purulent catarrh, usually a sequel to some exanthematous affection. The first thing to do is to thoroughly cleanse out the parts with warm water, when a perforation of the membrane, varying from an almost invisible slit to its total destruction, will usually be observed, hearing being generally better with a large than with a small perforation, providing enough of the membrane be left to hold the bones of the ear *in situ*. Beyond the perforation there is seen the red and swollen mucous membrane of the promontorium, sometimes marked with raspberry-like granulations. After cleansing out the meatus with warm water, the mucous membrane is to be dried by means of a small wad of cotton-wool rolled round a probe, great care being taken to avoid injuring the bones of the ear. A solution of nitrate of silver, varying from ten to thirty grains to the ounce (and even saturated, if there are granulations), is then to be thoroughly applied by means of the probe and wool. The discharge is often kept up by one small granulation, the rest of the mucous membrane being in a comparatively healthy condition; and to this the saturated solution must be exclusively and carefully applied. Another mode of treatment is to force warm astringent or alkaline solutions through the ear and Eustachian tube from without, by means of a syringe with a nozzle that fits air-tight into the external meatus. The patient holding his head downwards and to one side, the fluid runs out of the nostril. This plan may be useful in obstinate cases, when the seat of the discharge may be in a part of the tympanum inaccessible to the touch. During the intervals of treatment the patient should use an ear-lotion composed of ten grains to the ounce of sulpho-carbolate of zinc or sulphate of zinc, to which a few drops of a solution of carbolic acid or liquor opii have been added. All lotions should be prepared of double strength, so that when used they can be diluted with one-half warm water, which renders them more agreeable and less dangerous. The edges of the perforation may also be cautiously touched with solid nitrate of silver, applied with a fine probe; but they will usually show a tendency to heal as the mucous membrane becomes more healthy.

"Let us suppose that, as the result of such treatment, the discharge has at last been stopped, and the edges of the

perforation have reached a pretty healthy state. Considerable deafness may still be present. With the decrease of the discharge there may at first be a decrease in hearing; but this will gradually disappear. But if we wish to try to increase the hearing at once we may resort to the artificial drum or to the plug of cotton-wool; or we may try the effect of a piece of note-paper, cut out to the required shape, and gently placed over the perforation. With the first two methods the patient is usually the best operater, for he can adjust the drum or cotton-wool to best suit his hearing; while with the paper the surgeon can best succeed. Either of these methods may often bring about a marked increase of hearing, but it is well to be cautious about promising too much for the patient."

When pus makes its way from the cavity of the tympanum into the adjacent mastoid cells, it gives rise to swelling and tenderness over the mastoid region. It may make its own way outwards, producing an obstinate fistula, owing to its burrowing in all directions. When the presence of pus is suspected, a free incision should be made through the periosteum about an inch behind where the auricle joins the bone; and in very acute cases the bone itself has to be broken by a gouge or chisel, or by a special trepan. By keeping the incision open, and now and then forcing a warm alkaline or astringent solution through the meatus, a greater portion of which will make its way outwards through the broken-down cells, we may succeed after long and careful treatment in bringing about a healthy state of parts. Passing by the well-known instances of the occurrence of cerebral mischief arising from the extension of inflammatory action to the brain and its membranes, attention may be directed to the production of facial paralysis by lesion of the facial nerve as it passes through the Fallopian aqueduct, separated by a very thin plate of bone from the tympanum, in which there is a deposit of pus. Paralysis so caused is more likely to be lasting than when otherwise produced; and if the surgeon overlooks the purulent deposit in the tympanum his prognosis will be at fault. No lasting good effect can result from constitutional treatment unless the purulent discharge from the ear be attended to.

Polypus of the meatus is one of the most common accompaniments of chronic purulent discharge, and is diagnosed from inflamed mucous membrane by being movable with a probe. From the surface of the polypus there is a constant flow of purulent matter; and not only does the presence of the growth keep up this discharge, but, by preventing its exit, it may lead to dangerous results. When the polypus has a small base, is pedunculated, or is superficially seated, it may be removed bit by bit, or even *en masse*, by snares—that is, if the meatus is large. But when this is narrow, or the polypus is deep-seated or has a broad base, the slower process of cauterisation is required. Solid nitrate of silver is here useful, but other caustics may also be tried in turn. The caustic must be freely applied over all the exposed surface of the polypus, avoiding the dermoid layer of the meatus, and should be repeated every second or third day. Under its action a polypus often seems to melt away; and, if pain ensue, it may be relieved by warm water. After its removal the base must be thoroughly cauterised, as in some cases there is a tendency to recur. A majority of these cases yield to careful treatment, and the hearing is oftentimes greatly improved.

"In summing up the whole subject, it can be truly said that by energetic treatment of acute purulent catarrh we may often succeed in preventing any considerable lesion of the parts concerned in hearing, as well as the possibility of a future chronic catarrh; that the discharge due to chronic purulent catarrh can be rendered much less in amount, or even be entirely removed; that deafness due to such discharge can be much diminished; and that the stoppage of the discharge not only has not, as is almost universally supposed, a harmful effect on the system, but that, on the contrary, the general health of the patient is thereby greatly improved. I am informed that some of the more conservative life assurance companies, not only in England, but in this country, refuse to consider an applicant with a chronic purulent discharge from the ear as a safe risk."

Caution-Marks on Prescriptions.

The following judicious remarks are contained in a leading article of the *New York Medical Record* for September 9:—

"The American Pharmaceutical Association, at its last annual meeting, appointed a committee to confer with the American Medical Association, and to suggest to that body the advantage which would result from the adoption of means of greater protection to patients in prescribing. It was recommended as a measure towards this desirable end that a list should be selected of dangerously active medical preparations, and their maximum doses noted, as well as the maximum quantity that may be safely administered during the twenty-four hours, such quantity not to be exceeded in prescriptions without the addition of some caution-mark previously agreed upon by the physician. In case a prescription be presented to be compounded with articles ordered in quantities exceeding these maximum doses, and without the caution-marks annexed, the pharmaceutist must return the prescription to the physician, in order that the requisite marks be added. . . . The President of the American Medical Association appointed, as a committee of conference on its part, three gentlemen well known as teachers and authorities—Profs. Stillé, Rogers, and Biddle, who are resident on the very spot most available for consultation. Whatever recommendation the committee may make that will jointly affect the interests of the alliterative trio—physician, pharmaceutist, and patient—will doubtless be well worthy the conscientious observance of all prescribers and dispensers of patent remedies. It would seem but right that the responsibility for intentionally large doses should be placed where it really belongs. Moreover, it is in the experience of every druggist, that an inquiry on his part as to the size of a dose prescribed, or the suggestion to the practitioner that such a dose is an unusual one, may be met with a discourteous reception. Rather than risk the loss of so valuable a source of pecuniary profit as is offered in the custom and favour of a multitudinous prescriber, the druggist may be tempted to diminish the amount of the active ingredient without consultation with him, and thus at once destroy, perhaps, the effect for good which might have followed the compounding of the larger dose. It remains to be seen whether the same fear of offending a medical patron may not attend also the neglect of caution-marks, should they ever come into use. Some resistance may also be made by heroic dosers to any arbitrary table of maximum doses, beyond the limits of which they are habitual travellers. After all, even when become the order of the day, thorough education in each profession, and the exercise of a fair amount of common sense, must still control both prescriber and compounder."

Anomalous Refraction of the Eyes and Nervous Diseases.

In a paper in the *New York Medical Record* of September 2, entitled "Some Remarks upon the Relations between Anomalous Refraction of the Eyes and certain Functional Nervous Diseases," Dr. George Stevens, of Albany, pursues a subject which, under the title of "A New Theory of Chorea," we adverted to in our number for October 14. In that paper he advanced the proposition that not only was chorea the result of anomalous refraction, but that, beyond any and all other causes combined, other functional diseases are dependent on refractive lesions. In pursuance of the subject, he now points to the large class of persons who are predisposed to neuroses of various forms, and in whom comparatively trifling immediate causes give rise to intense neuralgia, headache, hysteria, or other forms of functional nervous disturbance. The condition observed in this class of persons has been called the *neuropathic predisposition*, but no one has ever shown in what it consists. In Dr. Stevens' view it is refractive lesions that almost universally constitute it, and to these, as a rule, we should refer the tendency to the development of functional nervous disease. Among a very considerable number of cases belonging to this class of disease, which he has examined with respect to their relation to the refractive condition of the eye, he has found very rare exceptions to the position laid down above. Thus, in more than 100 cases of severe recurring headache, including several clearly of the form termed migraine, refractive anomalies were found without exception; in more than seventy cases of chorea the rule held good; and of seventy cases of epilepsy "only three were free from refractive lesions, and in two of these deep physiological excavation of the optic nerve existed—a condition which often gives rise to a most troublesome form of asthenopia." Numerous cases of hysteria and of non-traumatic neuralgia all exhibited such refractive errors, as did many other less defined forms of functional nervous disturbances. In a table which he subjoins, Dr. Stevens exhibits the refractive anomalies of the eyes in fifty-four insane epileptic persons.

REVIEWS.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine at Munich. Vol. V.—Diseases of the Respiratory Organs. English Translation, edited by Albert H. Buck, M.D. New York. London: Sampson Low, Marston, Low, and Searle. 1876.

The present volume exhausts the diseases of the respiratory organs, which were commenced in Vol. IV. Professor Juergensen, of Tübingen, contributes articles on croupous pneumonia and catarrhal pneumonia, on hypostatic processes in the lungs, and on pneumonia from embolism. The articles on anæmia, hyperæmia, and œdema of the lungs, on pulmonary hæmorrhage, and on the minor subjects of atolectasis, atrophy, and hypertrophy of the lungs, are written by Professor Hertz, of Amsterdam, who has also undertaken the subjects of pulmonary emphysema, gangrene of the lungs, and new growths and parasites involving the lungs and mediastinum.

Professor Ruehle, of Bonn, takes as his theme pulmonary consumption and acute miliary tuberculosis; and Professor Rindfleisch, late of Bonn, and now of Würzburg, discusses in a kind of supplementary chapter the pathological processes involved in chronic and acute tuberculosis of the lungs. The names of the contributors, and the high position they occupy in the medical world of Germany and Holland, would lead us to expect that their essays would be excellent in kind, and examination of them confirms our *à priori* view.

The first article, on croupous pneumonia, arrests one's attention at the outset by the admirable account of the etiology of this disease which Professor Juergensen gives. He clearly points out the relation of the frequency of pneumonia to season, age, sex, and a variety of other conditions, and he exposes in a decided manner the fallacy of certain generally accepted aphorisms with regard to pneumonia—*e.g.*, "the belief that men of *strong constitution* are especially liable to be attacked by it," a belief familiar to us in this country by the title "acute *sthenic* pneumonia." The fact is, as Professor Juergensen points out, a strong constitution protects from the disease. Again, he shows that "a chill is by no means a frequent cause of croupous pneumonia," the *conditio sine quâ non* of the old physicians. The general tenor of this article will be best understood when we quote the sentence in which the author sums up his views as to the nature of pneumonia, and on which he bases his treatment. He says (page 144):—"Croupous pneumonia is a constitutional disease, and is not dependent on a local cause. The pulmonary inflammation is merely the chief symptom, and the morbid phenomena are not due to the local affection. The hypothesis of a morbific cause is indispensable. Croupous pneumonia belongs to the group of infectious diseases." Of course we do not pretend that this is a new way of looking at pneumonia, but it is not a common one in this country, and therefore much interest attaches to Professor Juergensen's advocacy of it. Apart from the description of the phenomena of the disease there are a number of passages scattered through the article which are of extreme value for their suggestiveness, and we may instance his warning (page 33) to the practitioner not to let pneumonia pass undiagnosed as "worms" or "convulsions" in children, and "senile debility" in adults; his remarks on the use of the thermometer in private practice; and those on the examination of children, and on the urine. As a happy example of "putting" a fact, a sentence at page 94 deserves notice. Juergensen is speaking of the influence of occupation, mental and physical, on the length of convalescence after pneumonia, and he expresses himself thus—"I do not think that Goethe, four weeks after a pneumonia, would have been able to write a scene of 'Faust'; a woodcutter by this time could resume his occupation."

The treatment of pneumonia resolves itself, according to our author, chiefly into (1) prophylaxis against exhaustion of the heart through the increased work laid on it by the impeded circulation in the lungs and the fever, and (2) control of existing exhaustion. Observation of the pulse, he insists, is as important a guide to the physician in pneumonia as the thermometer is in typhoid fever. Professor Juergensen relies mainly on two remedies to control fever—cold baths when the temperature rises above 104° Fahr., and quinine. Of venesection he says, "the physician who bleeds in pneumonia on account of the fever resembles the philosopher who cuts down the fruit-tree in order to get the fruit," and he defends his position by powerful arguments. To those in this country and America who have not followed the progress of the modern revival in Germany of Currie's hydropathic treatment of fever, Dr. Juergensen's remarks will be doubly valuable, and even those who have may be thankful for a hint like the following (page 163):—"One precaution, however, I must positively insist upon: a patient with pneumonia must never be bathed without the administration of stimulants before and afterwards, and the amount of stimulant must be increased when water of a lower temperature is used, or the duration of the bath lengthened." The doses of quinine which the author uses will startle many practitioners in this country—*e.g.*, thirty grains "in moderately severe pneumonia in an adult, and for children a grain and a half for every year up to five years of age, and after that period from seven to fifteen grains, according to circumstances." But such doses are advocated by numbers of continental physicians, and the few grains which English practitioners generally order are as good as useless for lowering temperature. The objections to so much quinine are all met by Professor Juergensen. His further remarks on stimulants and food are worthy of all attention. Among Professor Hertz's contributions we naturally turn to those on pulmonary hæmorrhage and emphysema as standards for our judgment. The former article is perhaps a little disappointing from a clinical point of view, and contrasts unfavourably with a very valuable essay on the same subject in a recent number of the *Deutsches Archiv f. Klin. Medizin.*, by Dr. Dührssen, of Mentone, but it is interesting for a good account of modern views as to the pathology of hæmorrhagic infarction and pulmonary apoplexy; for the author's denial, reiterated later on by Ruehle and Rindfleisch, of Niemeyer's doctrine that bronchial bleeding may give rise to pulmonary phthisis; and for the section on diagnosis. The remarks on treatment are good and judicious. The article on emphysema is a thoroughly good one. We would especially notice the section on the mode of development of this condition, in which Professor Hertz points out the importance of some disturbance of nutrition or textural disease of the lungs as a predisposing cause of emphysema. Treatment is dealt with at some length, and a capital account of the use of compressed and rarified air, and of Waldenburg's apparatus for employing the same, will be read with interest by those unacquainted with German. For the dropsy which supervenes on advanced emphysema Professor Hertz recommends a drug—the borotartrate of potash—which we believe is new to this country. He gives it in twenty-grain doses every second hour. From the universality of the disease of which it treats, Professor Ruehle's article on phthisis is perhaps the one which will attract most attention to the articles in Vol. V. We are the less sorry that our space will only allow us to dismiss it with a few words of friendly approval, rather than of adverse criticism, because we could give so poor an idea by two or three random extracts of the thoughtful and exhaustive manner in which the author has handled his subject. We must content ourselves with calling particular notice to the remarks on etiology, on the analysis of individual symptoms, to those on disturbances in the digestive organs, and on diagnosis. The section on treatment is not intended, as the author remarks, "to gratify the desires of those who are eager for new remedies." It certainly does not encourage the belief that there are any specific drugs which can influence the course of phthisis. Although he is evidently not a nihilist, yet he is more so than many physicians in this country are—perhaps, if Dr. Austin Flint's recent statistics are to be trusted, not without reason. He attaches no specific influence to cod-liver oil, we hear nothing of arsenic or the hypophosphites, nor of koumiss and pancreatic emulsion. He doubts whether inhalations of saline solutions really reach the lungs in appreciable amount, and carbolic acid inhalations have proved in his experience "entirely useless." We scarcely agree with Professor Ruehle that inhalations do not reach the lungs; for a few drops of oil of turpentine inhaled from the surface of hot water will rapidly impart to the urine an odour of violets. There are some very judicious remarks on the treatment of the fever of phthisis, in which *restricted* diet and rest of body are advocated. Those medical men who endeavour to stuff pyrexial consumptives with quantities of food which they cannot digest, should ponder well what Professor Ruehle says. On the question "whether alcohol should be employed in suitable doses to check the destructive processes in true phthisis," the author reserves his opinion. We should have been glad to have known whether he approves of "whisky by the pint"—a mode of treatment specially in

vogue among some of our American brethren. We have strong reasons for doubting the universal application in phthisis of his aphorism that, "at all events, alcohol does not raise the temperature." Professor Rindfleisch's pathological articles on chronic and acute tuberculosis, which are illustrated with wood engravings, we must leave to professed pathologists for criticism, some of whom, we fancy, will be inclined to find fault with his views. The main position which he takes up is that "tuberculosis in man depends in general on scrofula," and that "the resorption of the individual's own scrofulous inflammatory products gives rise to tubercular new growths." Thus he holds that in phthisis "the bronchitis is the primary, and the tubercles the secondary lesion"; and that "in the catarrhal secretions of a scrofulous person is contained the tubercular poison which becomes inoculated in the edges and corners of the narrowed portions of the bronchi." Truly the diorama of views as to the true nature of phthisis is not yet fully unrolled!

Taking leave of this capital volume, we may say that the table of contents and index are both full enough to be useful, and that the translators have done their work well. There are a few sentences and words which we should like to see altered —*e.g.*, "The sensorium is *obtunded*, and the patient lies *motioning* [*i.e.*, making movements] with his hands." And again, "the *ingeniousness* [*sic*] of such patients is frequently marvellous." And what is to be understood by "coughing and *gagging*" (page 95), or by "*rare* finely scraped meat" (page 167)? We should add that the translators are Dr. G. F. Yeo (of London), Drs. Brayton Ball, Francis Delafield, Frank P. Foster, Edward Frankel, and John Jay, jun. (of New York), and Dr. Edward W. Schauffler (of Kansas City).

Science Papers, chiefly Pharmacological and Botanical. By Daniel Hanbury, F.R.S. Edited, with Memoir, by Joseph Ince, F.L.S., F.C.S. London: Macmillan and Co. 1876. Pp. 543.

These papers and the memoir of the author may be read with interest by a wider circle than that of the immediate friends and acquaintances of the late Daniel Hanbury. Although the subjects of many of the papers are not perhaps such as would be deemed very important by medical practitioners, yet the patient research, the extensive learning, and the practical experience which they invariably exhibit, are most characteristic, and fully justify the eulogistic terms in which they are mentioned by the author's biographers.

Daniel Hanbury was a member of the well-known pharmaceutical firm long established in Plough-court, Lombard-street, and still carrying on business in that locality. The house was founded by William Allen, well known for his scientific researches, in combination with W. H. Pepys, on carbonic acid, mercury, and platinum, as well as for his co-operation with Sir Humphry Davy in some of his most important electrochemical investigations. William Allen, like his present successor in business, Daniel Bell Hanbury, belonged to the Society of Friends; and Daniel Hanbury, who leaves his father to lament his too early decease, was born and died in the same communion. He passed away only last year, apparently from an attack of typhoid fever, at the age of forty-nine.

The memoir of this gentleman by Mr. Ince, and an obituary notice (also published in this volume) by Professor Flückiger, of Strasburg, give a very pleasing picture of a life spent in the pursuit and the communication of knowledge, in reverence to God, and in benevolence to man. Inheriting an ample share of worldly possessions, Daniel Hanbury had no pressing motive either for the display of extraordinary industry in business, or for laborious devotion to science, and it is the more to his credit that he was not only remarkable for his assiduous attention to his duties in Plough-court, but also for his eager and enthusiastic desire to store his mind with all available information, both literary and scientific. Dividing his time between his house of business in town and his paternal home at Clapham, he managed, after only an ordinary school education, terminated at the age of sixteen, to make himself an accomplished and accurate botanist, a good practical chemist, and a pharmaceutist of the highest rank, while, in order to carry out his researches with the more success, he so far developed and expanded his early education as not only to become an accurate Latin scholar, and a fluent writer and speaker of the French language, but also to acquire a fair knowledge of German, Greek, Italian, and Spanish. His zeal for acquiring languages, indeed, was so great, that in pursuing his pharmacological researches he made himself acquainted with the Chinese, Turkish, and Arabic tongues; and one of his works, comprised in the papers before us, entitled "Notes on Chinese Materia Medica," shows both his acquaintance with the Chinese language, and the extensive knowledge of chemistry, botany, natural history, and philology which he was enabled to bring to bear upon an apparently thankless and unprofitable theme. The investigation of this difficult subject was suggested by the examination of a number of medicinal substances sent to Hanbury by his friends in China.

He further cultivated the knowledge of his favourite subjects by rather extensive travelling in various parts of Europe, and on one occasion he accompanied the present distinguished botanist, Dr. Hooker, on a journey to the Holy Land. He appears to have been actuated in his travels almost exclusively by a desire to acquire knowledge, for he had little or no taste for mere amusement; and, whatever may have been the cause, he never married. His amiable disposition and his extensive learning gained for him the friendship of many distinguished fellow-workers in science, with whom, both in this country and on the Continent—and, indeed, all over the world—he kept up a constant correspondence. The object of this literary intercourse between himself and his friends was, again, chiefly to procure information on some doubtful or unsettled question in pharmacology or botany—as, for instance, to determine the origin and native country of some medicinal substance, and to refer it to its true genus or species in the vegetable kingdom.

A very striking feature in these papers is the great accuracy which they exhibit in the minutest details, every subject, however apparently trivial, being treated with the most scrupulous attention, and the etymology and spelling of every word being fully investigated. We need hardly state, therefore, that the whole book is entirely free from grammatical or any other technical errors, except the very, very few which may have escaped the notice of the typographer.

In the proceedings of the Pharmaceutical Society of Great Britain Daniel Hanbury took a warm interest, and was a frequent contributor to the journal emanating from that body; he was twelve years on its Board of Examiners, was a prominent member of the British Pharmaceutical Conference, of which he was twice President, and was a member of the juries of the International Exhibitions of 1862 and 1867.

The papers of which the bulk of the book consists are of a very miscellaneous nature, and, as we have before remarked, are frequently devoted to matters of an exclusively pharmacological nature, possessing but little interest except to pharmaceutists. But many of them have considerable medical value inasmuch as they relate to the sources from which some of our most powerful therapeutical agents are derived, and we believe that the compilers of the present British Pharmacopœia were under some obligations to Daniel Hanbury in determining the true genus and species of some of the vegetable products used in medicine. Among the more important papers on drugs are those on Scammony, Jalap, Gamboge, and Pareira Brava, which last, by the way, the author seems to prove very satisfactorily to be the root of the *Chondodendron Tomentosum*, instead of *Cissampelos Pareira*, as is generally supposed. The investigation of this question by Hanbury, illustrated as it is by some excellent plates, affords a very good instance of his accurate style of writing and reasoning; and the preference of the word *Chondodendron* for *Chondrodendron* is justified and explained by him in arguments which seem quite satisfactory.

We have only to add that the book is handsomely got up, and that the numerous illustrations, without being very ornate, are accurate and well executed. The work will appeal perhaps only to a comparatively limited class of readers, but those who consult its pages, and possess tastes congenial with those of the author, will derive from the perusal both pleasure and instruction.

Breves Apontamentos Para o Estudo do ensino Medico em Paris, etc., etc. Pelo Dr. Motta Maia.

A Brief Notice on Medical Teaching in the French Metropolis. By Dr. Motta Maia. Paris, 1876. Pp. 164 octavo.

These pages are a first instalment of what has yet to follow as the result of a mission on the part of the Brazilian Government with a view to ascertaining the comparative merits and demerits of the present European schools of medicine, with the ultimate intention of amending or remodelling those of Brazil. In the present sheets only Paris is considered. The decadence of the Paris Faculty is scarce a matter of discussion. We look in vain for such a galaxy of bright names as distinguished the

Bourbon Restoration and times more immediately succeeding. The muster-roll is altogether defective. In presence of the facts here quoted it cannot but suggest itself that a dread of intellectual development or some *arrière pensée* had overtaken the governing power. Any way, under the Second Empire a certain antagonism was felt, and was even notorious between the schools and Government. In all of intercourse a studied neglect, a contempt of expostulation; in all of needful disbursement a niggardliness distinguished the epoch, and this the professors themselves were at small pains to conceal; between them and the ministerial department no cord of sympathy remained. A single exception to this neglect might be urged in the countenance given by M. Simon to histological studies as pursued under M. Ranvier in the Collége du France; but this, it is painful to relate, was due to the chance laudation of M. Ranvier by the mouth of some foreign visitor in the hearing of the Minister; it was not due primarily to his intelligent inspiration, the very high merit of M. Robin remaining equally unknown to him subsequent to this event as before. A virtual and instant reform seems to be projected under the present *régime*, the first fruits of which should come into view somewhere about the present date. A considerable sum of money has been voted for that purpose.

We may briefly say that Señhor Maia regards the schools of Paris as offering valuable opportunities to such as have terminated their ordinary curriculum, and to many even yet further advanced in experience, but he is much inclined to lament that the present system fails to give more guidance and direction to the youthful student, that it does not lift him onward without much exertion of choice, without anxiety, and without contrivance or selection of his own. The student is left, he thinks, far too much to his own resources and devices. Up to the period of the examination he may never once have come under the ken of any one of those specially employed in the higher branches of teaching. Something, too, of the nature of reproof is said of the indulgence of the examiners. It is evident that our author leans to a stricter and more elaborate system; not more solicitous of what should be done *for* the student and in his behalf than with what may be done *with* him. With such subject, national peculiarity, previous training, individual temperament, all modify the field of conclusions. It may be even worthy of consideration from what stratum of society the students come. This, at least, may be said: the French man is generous in action, but not highly susceptible of drill.

The *matériel* of the Paris schools is not, perchance, that of South America. We can only say that by some Parisian students the present system is considered to be inconveniently narrow and rigid. It is apparent, however, that Dr. Motta Maia brings a conscience to his task. He has hit on many defects and shortcomings in the Paris medical schools. With all drawbacks allowed for, we have not observed as yet that the Paris degree is fallen into disesteem. Such is the resiliency of the French character, and such its natural bent towards the Faculty, that we may rest firmly persuaded every disadvantage will be overcome when not contrived by a disdainful and malevolent policy or dictated by a minute and overtasking preciseness.

Cases in Surgery illustrative of a New Method of applying the Wire Ligature in Compound Fractures of the Lower Jaw. By H. O. Thomas. Second edition. Liverpool.

Mr. H. O. Thomas, of Liverpool, some time ago published a second edition of his tract upon the treatment of compound fractures of the lower jaw by the wire ligature. Every surgeon is aware of the difficulty sometimes to be met with in fixing and maintaining in good position the fragments of a broken lower jaw, especially in cases, not very uncommon, of fracture on both sides of the symphysis. The wire ligature has often been used for such; but to Mr. Thomas is due the credit of having devised an ingenious method of applying and securing it. The chief merits of this are, that by a process of coiling the wire the ligature can be easily tightened when necessary, and that the mode of applying it is easy and effectual. Holes are drilled through the fragments at appropriate positions, and having passed the wire through one of these, it is guided through the hole in the other fragment by means of a tubular needle, which acts as a director; the two ends of the wire are then coiled by means of a key, by which also the ligature can be tightened subsequently. It is no doubt often convenient to be thus able to tighten the ligature, which is very apt, after a few days, to become somewhat relaxed. In some cases Mr. Thomas passes a loop of wire round adjacent teeth, and brings both ends of the wire through a single hole in the bone; in other cases he drills through a tooth when it seems more convenient than the bone for securing the wire. We think there can be few cases where drilling a tooth can be necessary or desirable, and we should prefer, in all instances in which it is possible, to apply the wire to the bone rather than to a tooth, the latter being so much more liable to be permanently injured by such application. Mr. Thomas justly lays stress upon the advantage, in many compound fractures of the jaw, of removing teeth which interfere with a nice adaptation of the fragments. The book contains some well-executed illustrations.

Report of the Health of Bolton during the Year 1875, *and on the Proceedings taken for the Prevention of Adulteration of Articles of Food and Drink.* By Edward Sergeant, M.R.C.S. Eng., L.R.C.P. Lond., Medical Officer of Health and Analyst to the Borough.

Report of the Health of the Township of Garston during the Year 1875. By J. V. Worthington, L.R.C.P., L.R.C.S. Edin., etc., Medical Officer of Health for the District.

First Annual Report on the Sanitary Condition and Health of the Goole Urban Sanitary District during 1875. By H. Franklin Parsons, M.D., Medical Officer of Health to the Goole and Selby Urban and Sanitary Authorities.

Second Annual Sanitary Report upon the Rural and Urban Districts forming the West Kent Sanitary District, for the Year 1875. By C. O. Baylis, M.D., M.R.S.L., etc., the Medical Officer of Health.

Report on the Sanitary Condition of the Whitechapel District for the Quarter ending April 1, 1876. By John Liddle, M.R.C.S. Eng., Medical Officer of Health.

The preceding reports upon the several districts alluded to have been forwarded for our inspection. The various details and statistics, which exhibit a large amount of care and labour in their compilation, though locally interesting and instructive, are not of sufficient general importance to justify us in placing them before our readers, even if we were in a position to afford the necessary space. In each case it will be seen, however, by those interested in the different localities that the public health, which has so long been too much neglected, is now under careful supervision, and the death-rate of the kingdom should, by this timely act of legislation, be eventually much reduced.

Annual Report of the Royal Edinburgh Asylum for the Insane for the Year 1875.

Newcastle-upon-Tyne Borough Lunatic Asylum. Eleventh Annual Report 1875.

Report of the County Lunatic Asylum at Prestwich, presented to the Court of Adjourned Annual Session, holden at Preston December 30, 1875.

Pressure upon our columns has necessitated our giving only a brief notice of the above reports, which have been forwarded for inspection, and which have been prepared in accordance with the provisions of the Lunatic Asylum Act of 1853. In each report the Committee of Visitors express their entire satisfaction with the manner in which the duties of the medical staff are carried out, and the testimony of the Commissioners in Lunacy corroborates their statements. The details and statistics given show how earnest are the labours, and how minute is the supervision brought to bear upon the proper working of these institutions; and the law which orders the publication of each year's results is a wise enactment which tends to show how ably and carefully this unfortunate class of patients is dealt with by those to whose charge they are committed.

The Treatment of Simple Fracture of the Shaft of the Clavicle. By Francis Vacher.

Mr. Vacher aims at preventing the troublesome displacement which results from this fracture by the application of well-padded metal caps, which take a firm hold of each shoulder, and are connected together by an anterior and posterior strap with buckle. The shoulders are braced back by means of the posterior strap, and the forearm of the injured side is supported in a sling. The method seems a good one, and, we should think, is more likely to be successful, and is certainly less uncomfortable, than any of the modes of treatment hitherto used, excepting that of keeping the patient on his back.

A Guide to the Examination of the Urine. By J. Wickham Legg, M.D. Fourth edition. London: Lewis. Pp. 102.

We have great pleasure in once more welcoming a new edition of this "Guide." This fourth edition has been carefully revised, and an account of Dr. Russell and Dr. West's method of estimating urea has been added to the Appendix. The addition is a most important one, and will tend to increase the great popularity which Dr. Legg's practical little book has already obtained.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

October 25.

The Removal of the Royal Infirmary—New Entries at Owens College—Meeting of the Manchester Medical Society—Curious Case of Cerebeal Disease.

The question as to the removal of the Royal Infirmary has advanced another stage. Mr. Netten Radcliffe's report has been received, and discloses a state of things considerably worse than even the most enthusiastic advocates of removal had ventured to suggest. The sanitary condition of the Hospital is shown to be irretrievably bad, from whatever point of view it is regarded. The original plan and construction of the building are extremely faulty; the wards, especially those on the surgical side, are continually overcrowded; the nurses and servants occupy bedrooms in the basement and garret, which are utterly unfit to be inhabited, and near some of which runs a drain of exceptional foulness; and, in spite of the preventive measures which have been from time to time adopted, serious outbreaks of erysipelas, hospital gangrene, and pyæmia have continued to be of frequent occurrence from the earliest available records (1838) to the present time. In a supplementary report upon the drainage, prepared by Mr. Rogers Field, civil engineer, the existing arrangements are shown to be contrary to all sound principles of sanitary engineering;(a) and the defects are such that nothing short of entire reconstruction would suffice to obviate them. The General Site Committee met on Monday, the 23rd, when the reports of the Sanitary and Finance Sub-committees were presented. The Sanitary Sub-committee call attention to the leading features in Mr. Radcliffe's report, and express their opinion that it is desirable to build a new hospital, or hospitals, with accommodation for at least 400 in-patients, and space for at least 200 more; that a receiving-house, to contain not fewer than fifty beds, should be provided in a central position, either upon or near the present site, for cases of accident or emergency, and that it is not advisable to retain or alter the existing buildings, or to erect the main buildings of the new hospital on the present site. The sub-committee appointed to consider whether it is desirable, on financial grounds, to remove the Infirmary from its present site, report, as the result of their inquiries, that the amount of accommodation for in-patients is insufficient; that, taking the sum of £500,000 as the least that would be realised by the sale of the present site—an amount which would enable the trustees to build and equip hospitals of sufficient extent to amply supply the wants of the district, and leave a sum of probably £300,000 for the benefit of the charity,—it is, in their opinion, desirable upon financial grounds to dispose of the Infirmary site. Notwithstanding some opposition, the reports of the two sub-committees were adopted, and the recommendations embodied in them were passed in the form of resolutions. Five gentlemen were then appointed to draw up the report of the Site Committee(b) to the general body of trustees, to be presented to them after having been submitted to an adjourned meeting of the Committee.

Manchester again takes the lead amongst provincial medical schools in the number of new students admitted, forty-eight having been registered this month at the Owens College School of Medicine.

At the October meeting of the Manchester Medical Society, Dr. Dreschfeld brought forward a case of unusual interest, affording remarkable clinical confirmation of the accuracy and practical value of Dr. Ferrier's researches as to the effect of electrical stimulation of the various cerebral convolutions. On September 8, 1874, a man aged twenty-eight, with a syphilitic history, presented himself at the out-patient room of the Royal Infirmary to be treated for epilepsy. The case was one of a series which Dr. Dreschfeld reported in the *Practitioner* for May, 1875, in a paper entitled "On some Cases of Syphilitic Nervous Disease." Potassic iodide was administered, and the convulsions ceased. The patient returned to the hospital at intervals on account of a recurrence of the fits, and on each occasion was benefited by the same treatment. When there were no longer any actual fits, the man continued to suffer from occasional and sudden attacks of numbness in the left hand, similar in character to the aura which preceded his epileptic seizures. This numbness was accompanied with clenching of the fist, flexion of the wrist, pronation of the forearm, and retraction of the angle of the mouth on the same side. Now, these were precisely the movements repeatedly obtained by Dr. Ferrier when he applied an electrical stimulus to the ascending parietal convolution and angular gyrus in the brain of the monkey (*Proceedings of the Royal Society*, vol. xxiii., page 410). Dr. Dreschfeld, therefore, diagnosed syphilitic disease in that region, of a chronic inflammatory nature. Two years afterwards the patient died of phthisis, under Dr. Dreschfeld's care, and on October 2, 1876, Dr. James Ross made a post-mortem examination. He found the dura mater firmly adherent to the subjacent tissues at a distinctly localised spot over the region indicated, with softening of the superficial layers of the convolution. The rest of the brain was healthy. Dr. Dreschfeld pointed out in his remarks that the case was also a fresh confirmation of the truth of Dr. Hughlings-Jackson's view, that epilepsy is due to an explosion of nerve-force in the cortical portion of the brain.

(a) The following may be given as an illustration:—A leaden water-pipe in direct communication with the general supply of the house was found passing directly through a drain, just at a point where a soil-pipe from closets on the upper floor discharged into it.

(b) The Site Committee consists of forty-two members, selected from the general body of trustees, and appointed by them to decide whether it is desirable to remove the Royal Infirmary from its present site. The medical profession, curiously enough, has not a single representative on this Committee.

We learn from India that the Government of India has resolved to grant the full pay of their rank to those Surgeons-Major of the British Service who have recently been promoted under the new regulation of twelve years' service.

Utilisation of the Paris Sewage.—Since 1868 the Paris sewage has been employed to irrigate the large plain of Gennevilliers, which is enclosed by the windings of the Seine. This irrigation has converted the arid soil of this plain into a market garden of extraordinary fertility. No one disputes this, but it has been alleged that the sewage has acted injuriously upon the population of the district. An investigation, instituted by Dr. Bergeron, has proved the groundlessness of this statement, for with an increased population the longevity has also augmented, and the mortality declined. The water from the wells which has filtered through the soil is found quite void of organic matters.—*Révue Méd.*, October 9.

Hotel Physicians.—"Nearly every hotel in Europe has its regular corps of doctors, who not unfrequently pay for the privilege by dividing receipts with landlords, concierges, and garçons. As a part of the general system of spoliation to which travellers are everywhere subjected, no effort is spared by the interested parties to *force* these individuals upon every unfortunate guest who happens to be an invalid, or even to look like one. But few of these *médecins titulaires*—as these *arachnidæ* style themselves—have any merit as physicians, whilst their fees are enormous, and their professed ability to speak English is limited to the phrase in which they make the assertion. Unless a traveller is weary of existence, and has an endless amount of money to distribute gratuitously, he should make it an invariable rule never to consult a hotel proprietor or *employé* in regard to the choice of a physician, nor to submit to a prescription from any medical man introduced by such people. By applying at his Legation or Consulate he can always obtain the addresses of really reliable physicians, both native and foreign, and learn into whose hands he can most safely entrust his life and his letter of credit. The better plan, however, is for him to obtain in advance from his family physician a list of such medical men in the principal cities of Europe as he can consult with the greatest advantage."—Paris Correspondent of *New York Med. Record*, September 2.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 13.

THOMAS BRYANT, F.R.C.S., Vice-President, in the Chair.

(*Concluded from page 476.*)

TRAUMATIC STRICTURE OF THE URETHRA AND NUMEROUS PENILE FISTULÆ CURED BY INTERNAL URETHROTOMY.

MR. TEEVAN related particulars of this case. The patient was a sailor, who had injured his scrotum and penis by a fall twenty-one years previously. Numerous abscesses formed, and sixteen fistulæ resulted, through which all the urine was passed. In the course of a few years the fistulæ in the scrotum (eleven in number) closed, but those in the penile urethra remained open. For a period of more than three months Mr. Teevan tried three separate plans of treatment, with but partial success—1. Retaining a catheter in the bladder; 2. The patient drawing off all his urine through a catheter for two months; 3. The application of heated wires and probes tipped with nitrate of silver. On January 6, Mr. Teevan performed Dr. Otis's operation, and nine days afterwards all the fistulæ were closed, and remained so permanently. The points of interest in the case were—1. The stricture being a traumatic one of the worst description; 2. The fistulæ being in the penile urethra, where they were always most difficult to cure; 3. The fistulæ having been open for the long period of twenty-one years; 4. The failure of three different methods of treatment; 5. The permanent closure of the fistulæ nine days after the stricture of portion of the canal had been enlarged by Dr. Otis's urethrotome to its natural calibre, which was 31·6. Subsequent to the operation, no catheter was left in the bladder, nor was the urine drawn off.

MR. HEATH thought there was nothing remarkable either in the case or in the treatment, which was the same as directed in any ordinary hospital school. Nitrate of silver probes were, however, he thought, quite exploded. Nor was it so common as Mr. Teevan would have us believe to introduce instruments into the bladder after urethral operation. There was not in the paper a single point not recognised by modern surgeons at general hospitals.

MR. MAUNDER said that although Mr. Teevan's case was an extreme one, yet general principles of practice would apply to it. The only novelty connected with it was the greater amount of dilatation employed, after the manner of Otis. Personally, whether after internal or external urethrotomy or splitting, he only kept a catheter in the bladder when hæmorrhage was deemed to be probable.

MR. TEEVAN thought a case where there had been fifteen fistulæ, and five open at one time, was far from common. Dilatation had been fully carried out here, and had failed. He would like to know what Mr. Heath would have done under the circumstances.

MR. HEATH said there was nothing more simple. He would have passed a Holt's dilator, and split the stricture. He had said nothing as to the practice recommended in books, but spoke only of general hospital practice.

HYDATID IN THE ORBIT.

MR. HIGGENS furnished a report of this case. The patient, a girl aged fourteen, who had always been delicate, came to Guy's Hospital, having for a month had pain in the right eyeball, which had then begun to protrude. It was pushed downwards and forwards, but the lids could be easily closed. Movement of the eyeball upwards was impossible, but other movements were perfect. There was diplopia when vision was directed upwards; the eye read Snellen 10. The optic disc was red, greatly swollen, and bulging into the vitreous; the retinal veins were large and tortuous, and their visible number was greatly increased. The arteries were of about the normal calibre. There was no pulsation in or about the orbit, and no bruit could be detected; but there was some fulness deep in the orbit beneath its roof. It was thought there was a growth situated between the globe and the superior rectus muscle, passing backwards and involving the optic nerve. Twelve days after being first seen, the eye became inflamed and painful; there was swelling of the upper lid, œdema of the conjunctiva, and increased impairment of mobility of the globe. There were no rigors and no constitutional disturbance. An abscess of the orbit being suspected, an incision was made through the conjunctiva beneath upper lid, and a director passed backwards came against a firm substance at the back of the orbit, which was incised and blood only escaped. A fortnight subsequently the protrusion was increasing. An incision was then made through the soft parts in a line parallel with the upper border of the orbit. The lachrymal gland was found pushed forward, and was removed. Behind it was a firm growth, which was torn away with fingers and the handle of the scalpel. The growth collapsed, and was then found to extend to the apex of the orbit, and to be closely connected with the optic nerve, whence it was scraped away. It was an extremely thick-walled cyst, composed of inflammatory tissue, inside which was a thin pellucid cyst, which separated easily, and which the microscope demonstrated to be made up of a delicate membrane presenting an appearance of serrated fibres. The contents of the cyst had escaped; no hooklets nor daughter-cyst were found. The whole tumour was nearly as large as the eyeball, but its central cavity was very small. After the operation, the wound was stitched up and the edges of the lids were pared and united so as to prevent subsequent damage to the eyeball from exposure. Some suppuration occurred at the site of the wound; but the patient made a good recovery. A month after the operation the eye was found to deviate downwards; there was no mobility upwards; the lid could be raised to a very limited extent. The patient read Snellen 2½ easily; she had double vision when attempting to look upwards. There was a plentiful secretion of moisture, notwithstanding the absence of the lachrymal gland. The swelling of the optic disc had quite subsided, but there was some haziness of its inner border. The retinal vessels were quite normal.

THE PATHOLOGICAL SOCIETY.

TUESDAY, OCTOBER 17.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

DISCUSSION ON VISCERAL SYPHILIS.

THE PRESIDENT announced that the evening of January 16 had been set apart for a discussion on visceral syphilis, and the exhibition of specimens.

NEW VOLUME OF "TRANSACTIONS."

The PRESIDENT also stated that the new volume of the *Transactions* would shortly be ready.

MEDULLARY SARCOMA OF THE LUNG AND BRONCHIAL GLANDS.

Dr. PEACOCK exhibited this specimen. A dock labourer, of thirty-eight, was admitted into the Victoria-park Hospital at the end of July, with dyspnœa, and œdema of the chest-wall, arm, neck, and face; the lower half of the chest, anteriorly and posteriorly, was dull. During his two months in hospital the œdema partly subsided; but it recurred later, and dropsy of the lower limbs at last made its appearance. Post-mortem a tumour was found in the mediastinum, embracing the descendiog, and partly the ascending cava; the heart, which was large, being displaced to the left. The lower lobe of the right lung was involved in the growth, and broken down. The bronchial glands were enlarged, but not infiltrated; a gland above the clavicle, however, presented new growth, probably medullary sarcoma. The descending cava appeared to be completely obliterated. The expectoration during life had been of a "currant-jelly" character.

Dr. GREEN asked whether Dr. Peacock considered this expectoration peculiar to medullary sarcoma of the lung; and

Dr. PEACOCK said that he thought it was; but he was not certain whether it occurred in lymphadenoma. He also said, in reply to Dr. Greenfield, that in several cases of ulcerating cancer of the lung which he had seen, this kind of expectoration was not present.

Dr. DOUGLAS POWELL said that he had never seen such sputa in lymphadenoma, but in one instance great hæmoptysis. In another case the expectoration was so like currant-jelly that he suspected malignant disease; but, although this had occurred four or five years ago, the patient was still alive.

Mr. HULKE said that he had seen many cases of secondary cancer, sarcoma, and lymphadenoma of the lung, but never this peculiar expectoration.

Mr. WARRINGTON HAWARD confirmed Mr. Hulke's statement

with regard to several cases of lymphadenoma, and one of secondary pulmonary sarcoma.

Absence of One Kidney.

Dr. Greenfield showed two examples of solitary kidney of the left side. The first was from a female of nineteen. The left kidney weighed seven ounces and a half, and was normal in position and relations, but possessed two ureters, one arising higher than the other; the hilus was in front of the organ. The upper ureter opened into the left side of the bladder, while the lower crossed the middle line below the brim of the pelvis to end in the right side of the bladder. The renal artery was single, with a branch to each hilus. There was no vestige of a vessel on the right side. The bladder was normal. The left ovarian artery alone was present, and supplied both ovaries by dividing into a right and a left branch. The supra-renal capsules were normal in position. The second specimen was from a male of fifty-nine, with urinary fistula. There was no trace of a right kidney; the left kidney was large and lobulated. The ureter was single; there was neither ureter, vesicula seminalis, nor vas deferens on the right side. The supra-renal capsules were natural. Five cases of solitary kidney were recorded in the *Transactions;* others being instances of atrophy in which the ureter persisted. The anterior position of the hilus in solitary kidney was mentioned by Rokitansky. The supra-renal body did not appear to follow the kidney in these cases. Reference was also made by the exhibitor to the associated absence of vesicula seminalis, kidney, and ureter in the second case. A specimen had been shown at the Anatomical Society of Paris, presenting absence of the left kidney, ovary, and Fallopian tube, with the left half of the uterus undeveloped. The first specimen just shown was allied to the horse-shoe kidney, and probably was connected with abnormal development of the vessel.

Dr. Coupland also showed an example of solitary kidney, which appeared to connect Dr. Greenfield's first specimen with the horse-shoe form of kidney. It occupied the left side, and presented an appearance as if the right kidney were fixed to the lower part of the left. The ureters were in front of the organ, and the right crossed the spine at the brim of the pelvis. The right supra-renal capsule was natural.

Aortic Aneurism.

Dr. Pearson Irvine exhibited this specimen. A female of forty-two, under the care of Dr. Silver, at Charing-cross Hospital, had begun to suffer three years before her admission from paroxysmal pain behind the sternum, dysphagia, cough, and dyspnœa. Two years ago she noticed a swelling as large as a marble in front of the chest; but one year before admission all the symptoms abated, and the patient enjoyed fair health for a time. Another tumour then appeared, as large as a walnut; and the woman died suddenly after a month's stay in hospital. A systolic murmur was heard over the front of the chest, and the second sound was loud. The breath-sounds were very weak and harsh over the left back, and the corresponding base was dull. Post-mortem an aneurism was found involving the greater part of the thoracic aorta. It consisted of two portions; the larger globular, occupying the entire arch, and compressing the trachea, œsophagus, right vagus (which was stretched over it), and the descending cava (which remained pervious); the œsophagus and trachea were displaced to the left. This portion of the aneurism had eroded the sternum and formed the tumour visible during life; it was nearly filled with laminated clot. Immediately below this, and separated from it by a constriction, was the smaller portion of the aneurism. It involved the upper part of the descending aorta, compressed the bronchus almost to occlusion, and had led to perforation of that tube, while its own walls remained intact. The left lung was riddled with abscesses. Dr. Irvine referred to a somewhat similar case recorded by Dr. Yeo in the last volume of the *Transactions;* and pointed out certain difficulties in the diagnosis of aneurism of the thoracic aorta when aneurism of the arch and pulmonary disease are present. He referred the disorganisation of the lung to pressure on the bronchus.

Cancer of the Bladder.

Mr. Butlin showed this specimen from the body of a man of forty-five, who, for the last few weeks of his life, could neither retain nor pass much urine. The disease began with hæmaturia. The bladder was hard and small, all the walls were uniformly infiltrated, and the mucous surface was inflamed and sloughing. The pubes was invaded; and there was suppurative nephritis of the left side. The microscopical structure of the diseased bladder was that of typical scirrhus. The disease was exceedingly rare; in the present case it was primary, with secondary invasion of the lymphatic glands, peritoneum, and liver.

Pulmonary Tuberculosis.

Mr. Robinson exhibited a fresh specimen of phthisis from a soldier of twenty-nine, who died of hæmoptysis. Both lungs were tuberculous; two apical vomicæ contained blood-clot. The man had had syphilis, but there were no traces of visceral disease.

Dr. Douglas Powell suggested that the specimen should be examined in connexion with the question of "syphilitic phthisis."

Dr. Murchison remarked that in the present instance there was no evidence of the disease being syphilitic.

Tumour of the Lip containing Cartilage.

Dr. Goodhart exhibited two specimens of tumour from the lip—the one containing cartilage, fibro-cellular tissue, and bone; and the other myxomatous and yellow elastic tissue and cartilage. Allied tumours had been described by Paget as "Labio-glandular"; they arose in the neighbourhood of glands, and frequently contained both the glandular and connective elements.

Mr. Hulke remarked that such tumours were not uncommon towards the mucous surface of the lip. He was inclined to accept Paget's nomenclature. In their several stages they presented in parts, according to Mr. Hulke, the structure of myxoma, cartilage, and bone.

Mr. Butlin contended that these tumours were glandular in origin; the actual gland tissue suffering as the connective element increased. There was a close analogy between those tumours and growths connected with the mammary and parotid glands.

Dr. Goodhart replied that these tumours might be developed in glands, but not, he believed, from the glandular elements.

Mr. Hulke spoke to the same effect; believing that the connective tissue of the gland was probably the starting-point of the new growth.

Dr. Greenfield stated that in the neighbourhood of glands there appeared to be a tendency to myxomatous and cartilaginous formation, and referred to two cases occurring beside the parotid and testis respectively.

Popliteal Aneurism.

Mr. Barker brought forward this case, and exhibited the aorta and great vessels. The aorta was healthy, but from the common iliacs downwards to the tibials the vessels presented patches of endarteritis, corresponding remarkably in situation with the relation of the artery to the bones. Thus, the lesions occupied the posterior wall of the vessel above, but the anterior wall in the popliteal space. The left popliteal vessel presented a small aneurism filled with coagula. Mr. Barker was disposed to consider contact or friction of the artery against hard structures as a factor in the production of inflammation and atheroma, and adduced the present specimen and others in support of his view.

Mr. Morris pointed out that in this very instance the aorta, in contact with the spine in its whole length, was unaffected. Strain was a more probable cause of the disease.

Dr. Crisp could not agree with Mr. Barker.

Mr. Hulke pointed out that the points of contact with bone and of strain in an artery—for example, near joints—are identical.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, October 20.

Dr. Buchanan, President, in the Chair.

The minutes of the final meeting of last session having been read and confirmed,

The Secretary (Dr. Vinen) proceeded to read some communications received during the recess. Dr. Burge, who had been a member of the Society from its commencement, had been compelled to tender his resignation, he having removed to another sphere of work in the North of England. A communication had been received from an Association of Medical

Officers of Health for the Northern Counties, appealing to the Local Government Board for co-operation to enable officers of health to discharge their duties without the constant fear of arbitrary dismissal or reduction of salary in cases where it was found absolutely essential to act in opposition to the views of the local authority.

Dr. TRIPE said that the Local Government Board refuse now to confirm any appointment for longer periods than twelve months, so that virtually all appointments may terminate next year.

It was resolved to request the Council to draw up a report upon the subject, and to decide as to the course to pursue, with a view to making application to Parliament for fresh powers.

A letter was read from Dr. Cross, of Norwich, offering to bring before the Society a paper upon the advisability of concerted action with a view to check the spread of infectious diseases, especially in schools. The offer was accepted.

Dr. Brabazon and Mr. G. Cockburn Smith were balloted for and elected as extra-metropolitan members.

Mr. LIDDLE thought it most desirable to have an understanding as to the best method of preventing the spread of small-pox, etc. The Registrar-General had recorded 108 deaths from small-pox in the metropolitan districts during the past few months, though none had occurred in the Whitechapel district. A few concise rules and suggestions for the guidance of guardians and the public, emanating from the Society, would come with more weight, perhaps, than if drawn up by individual officers of health. It was most important to decide as to the necessary amount of cubic space to be allotted to each child in our public schools. The School Board had decided to allow nine square feet.

The PRESIDENT remarked that the original standard of the School Board was eighty feet for each child; but now 110 cubic feet were allowed.

Dr. TRIPE hoped that the subject would be carefully debated at the next meeting, and, if possible, that the paper on this subject be read that evening. He did not apprehend that the present epidemic would prove so fatal as that of 1871, when 2200 per 1,000,000 of the population died. More probably 200 per 1,000,000 of the population would be the extent of fatality. Dr. Tripe suggested that the Council be requested to consider the desirability of publishing the *Transactions* of the Society quarterly or at other more convenient periods.

Mr. HUGH REEVES, of the Carnarvonshire Combined Districts, was nominated as an extra-metropolitan member.

The PRESIDENT's address, entitled "Citizenship in Sanitary Work," a *verbatim* report of which appears in another column, was well received.

Dr. WHITMORE proposed, and Mr. LIDDLE seconded, a vote of thanks to the President for his instructive address.

Dr. TRIPE agreed that it was more important to diffuse as widely as possible, among the people, the knowledge already acquired in sanitary matters than to be framing more laws. Efforts at unification of the law, so that all might clearly understand how it should be administered, were most desirable. The State of Massachusetts is far ahead of us in many things appertaining to sanitary progress. No persons can pass out of the State boundaries if they have been in contact with cases of infectious disease, but are instantly placed in quarantine. It is also the custom to give immediate information to the authorities of the existence of fever in private houses, as well as in those of public resort.

Mr. LIDDLE alluded to the establishment some years ago of certain local associations for the purpose of diffusing knowledge on sanitary and other matters of local interest. We must not forget that every sanitary improvement costs money, and therefore it is most difficult to convey the necessary information through the pockets of the ratepayers.

Mr. ROBINSON, of Dover, considered that it is most important to educate the people and interest them in sanitary matters before taking active steps to ameliorate their condition. Medical men should be induced to become members of local boards. It would be a great advantage if the reports of the Privy Council could be republished, and distributed through the country.

Mr. NETTEN RADCLIFFE desired to know if the President could certify the correctness of his figures when referring to the number of copies of the annual report published by the State of Massachusetts—viz., 10,000. If the Local Government Board published a corresponding number of these reports the issue would be over 200,000. It seemed to him unlikely that one copy for every twenty-six families should be issued.

Dr. TRIPE stated that any ratepayer may purchase the sanitary report of his district by paying twopence to the vestry clerk.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 19:—

Gosling, Charles Edward, Richmond.
Lee, Roger, Lullington, Burton-on-Trent.
Sutton, Thomas Seagrave, Thame, Oxon.

The following gentlemen also on the same day passed their primary professional examination:—

Potts, James Ashford, Queen's College, Birmingham.
Thorn, William H. Perceval, St. Mary's Hospital.
Poynder, John Leopold, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

SMITH, ROBERT, M.A., M.B. Aber.—Assistant Resident Medical Officer, Leeds Public Dispensary, *vice* S. Chadwick, M.R.C.S., resigned.

SNELL, SIMEON, L.R.C.P. Lond., M.R.C.S. Eng.—Lecturer on Diseases of the Eye, Sheffield School of Medicine.

WEIR, ALEXANDER MCCOOK, M.D., L.R.C.S. Edin.—Assistant-Surgeon, Leicester United Friendly Societies' Medical Association.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Fleet-Surgeon John Tom Gabriel has this day been placed on the retired list of his rank.

BIRTHS.

FARQUHARSON.—On October 12, at Coatbridge, N.B., the wife of J. Farquharson, M.D., of a son.

MOORE.—On October 23, at 40, Fitzwilliam-square West, Dublin, the wife of John William Moore, M.D., of a daughter.

MURRAY.—On October 21, at 66, Great Cumberland-place, Hyde-park, the wife of Gustavus C. P. Murray, M.D., of a son.

RANKING.—On September 19, at Bareilly, N.W. Provinces, India, the wife of Surgeon G. S. A. Ranking, B.A., M.B. Cantab., 37th Native Infantry, of a son.

RATTON.—On September 21, at Madras, the wife of Jas. J. L. Ratton, M.D., Madras Army, of a daughter.

SMITH.—On October 19, at Portland House, Cheltenham, the wife of F. A. A. Smith, M.D., of Walton-on-the-Naze, of a son.

MARRIAGES.

BOYS—WRIGHT.—On October 19, at All Saints' Church, Clapham, Arthur Henry Boys, M.R.C.S. Eng., of Bristol, to Ada Mary, third daughter of W. V. Wright, Esq., of Alde House, Thornton-road, Clapham-park.

CARTER—JONES.—On October 18, at Trinity Church, Hampstead, George Roe Carter, L.K.Q.C.P. Ire., Colonial Surgeon, of St. Lucia, West Indies, to Margaret Alice, fourth daughter of the late Thomas Jones, of Greville-place, Kilburn.

HARRISON—HARRIS.—On October 18, at the parish church, Leeds, Richard Harrison, L.R.C.P., M.R.C.S., of Dartmoor, Devonshire, to Marian, eldest daughter of John Harris, Esq., Lake House, Soaresbrook, Essex.

HIDES—CLARKSON.—On October 18, at the parish church, Putney, John Howard, eldest son of Henry Hides, M.R.C.S., of Waldersea, Feltham, to Edith Rose, second daughter of Frederick Clarkson, Esq., of Lancaster Lodge, Putney.

HULL—MADDEN.—On October 19, at St. Paul's, Edinburgh, Rev. Joseph Arthur Hull, eldest son of the late Lieut.-Col. Hull, to Alice Jane, fourth daughter of Henry Madden, M.D.

MELVILL—DUKE.—On October 24, at Christ Church, Folkestone, Philip Lawrence Melvill, 97th Regiment, to Helen Octavia, youngest daughter of Allen Duke, M.D., of Folkestone.

WARREN—KNIGHT.—On October 14, at St. George's Church, Bloomsbury, John Monteith Warren, M.D. and M.Ch., of Ennis, co. Clare, to Lizzie, second daughter of John George Knight, F.R.I.B.A. and C.E., of Melbourne, Victoria.

DEATHS.

BECK, HENRY, F.R.C.S., at Herne Bay, on October 11, aged 75.

BENNETT, T. MARSHALL, M.D., at Mille Crux House, York, on October 18, aged 33 years.

MAUL, HARMAN, M.D., at Southampton, on October 21, aged 63.

PICKERING, HENRY JOYCE, infant son of T. Henry Pickering, M.D., English physician, at Arcachon, France, on October 20, aged 3 months.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bury Union, County of Lancaster.—Workhouse Medical Officer. Applications and testimonials, together with qualifications and evidence of registry, to W. P. Woodcock, Union Clerk, at the Union Offices, Parson's-lane, Bury, on or before October 31.

Kensington Dispensary.—Resident Medical Officer. Candidates must be duly registered, and not more than thirty-five years of age. Testimonials of qualification and character to the Honorary Secretary, Dispensary House, Kensington, W., on or before October 28.

Middlesex Third County Lunatic Asylum, Banstead Downs, near Sutton.—Medical Superintendent. Candidates must be married, not over forty-five years of age, and Fellows, Members, or Licentiates of one of the Royal Colleges of England, Scotland, or Ireland, and duly registered in medicine and surgery under the Medical Act, 21st and 22nd Vict., cap. 90. Printed forms, on which applications must be made, may be obtained on written application to the Clerk to the Committee, at the Asylum. Applications, with testimonials, must be sent in on or before November 8.

North London Consumption Hospital, London and Hamestrad.—Physician. Candidates must be Members or Fellows of the College of Physicians, and graduates in medicine of a university. Testimonials to the Secretary, 216, Tottenham-court-road, W., on or before Nov. 2.

Sheffield Public Hospital and Dispensary.—Assistant House-Surgeon. Candidates must possess a medical and surgical qualification obtained in the United Kingdom and be duly registered. Applications to Dr. J. C. Hall on or before October 31.

St. Peter's Hospital, Berners-street, W.—House-Surgeon. Applications, with testimonials, to the Secretary, before October 30.

Tonbridge Union.—Medical Officer for the First District of the Union. Applications, with testimonials, to Frank Wm. Storr, Clerk, Tunbridge Wells, on or before November 2.

Western Dispensary, Broadway, Westminster.—Medical Officer. Applications, with testimonials, to the Secretary before November 6.

Worcester General Infirmary.—House-Surgeon. Applications, with testimonials, to the Secretary, 50, Foregate-street, Worcester, on or before November 6.

Mr. James Albert Bright, M.R.C.S., has been selected to fill the office of Mayor of Glastonbury for the ensuing year.

St. Mary's Hospital Medical School.—Mr. W. A. Smith, B.A. Oxon., has obtained the Scholarship in Natural Science; and Mr. E. G. Cuffe, formerly of Epsom College, the Extra Scholarship in the same. Mr. A. Benson, B.A. Oxon., and Mr. L. Roche were declared equal for the Classical and Mathematical Scholarship; the School Committee therefore increased its value, and divided it between the two.

The Stevens Triennial Prize.—This, which is $200 in value, is open to universal competition, and will be next adjudged in 1879, all essays, with their mottoes, having to be sent by January 1 of that year to the President of the College of Physicians and Surgeons, New York. The questions for 1879 are—1. "Bacteria and Kindred Organisms in relation to Disease." 2. "Human Excreta as a Cause of Disease: the Diseases produced therefrom, and their Prevention by Hygienic Means." The essays on either of the above subjects are expected to give an account of our present knowledge, and also the results of personal investigation.—*New York Medical Record*, September 16.

Russian Aid to Servia, etc.—The medical *personnel* which has left Russia for the various battle-fields up to September 12 is as follows:—To Servia there have repaired 102 medical practitioners, 114 army surgeons, 77 sisters, and 5 *Provisoren*, and to Montenegro 14 practitioners, 13 army surgeons, 12 sisters, and 1 *Provisor*. Prof. Bogdanowsky, who returned from Servia a short time since, after visiting the hospitals of the Red Cross Society and those established by individuals, reports that there is no occasion to forward any more "sanitary trains." Sanitary arrangements are now so well regulated in Servia that little now remains to be wished for beyond improved transport for the wounded, who are carried in carts, often not having even hay or straw to lay down upon.—*St. Petersburg Med. Woch.*, October 14.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A. P. F.—We do not know any such place where patients can be received for that sum.

Mr. Smith.—In the patient of the late Mr. Jones, of Jersey, the scapula only was removed, leaving a useful arm. The preparation is in the Museum of the Royal College of Surgeons.

M.D.—The scurvy is said to have first appeared in Denmark in 1530.

Valerius.—It was Dr. James Currie who said, in a letter to his friend Dr. Bell, of Manchester, "I get practice, but my patients seem to die out of spite."

Tyranny of Fashion.—The practices of savages have sometimes a parallel in those of civilisation. Half a century ago—at most a century—it was the custom of nurses to bind infants so tightly round the body with swaddling clothes that the natural form of the chest was altered. Too many young ladies still do the same with stays, etc.

What is Genius?—"Talent," says Coleridge, "lying in the understanding, is often inherited: genius, being the union of reason and imagination, rarely or never."

Thames Embankment.—If the mighty mind of Coleridge had made itself more familiar with what human beings actually did, rather than how they thought, he would have hit on this historical passage, as a thorough instance of practical egotism far more real, and nearly as concise, as the clever satire he has improved from the German. In his delineation of an egotist he declares of his hero "A pronoun, verb-imperative, he shone!" and describes him thus holding forth:—

> "Here, on this market cross [hospital] aloud *I* cry
> *I, I, I!* itself *I!*
> The form, the substance, the what and the why,
> The when and the where, and the low and the high,
> The inside, the outside, the earth and the sky,
> *I* yours and hers, and he you and *I;*
> All souls and all bodies are *I* itself *I,*
> All *I* itself *I!*

Psychologist.—Some years since, Dr. Diamond, of Twickenham, published some admirable photographic physiognomic portraits, illustrating the various forms of insanity.

Good Templar.—*Apropos* of a suggestion by a speaker at a recent temperance meeting as to habitual drunkards, we make the following extract from a treatise on naval discipline:—"Separate for one month every man who is found drunk from the rest of the crew, mark his clothes 'Drunkard'; give him six-water grog, or, if beer, mixed one-half water, let him dine when the crew has finished, employ him in every dirty and disgraceful work." In a case where this was tried the effects were so salutary, that in less than six months not a drunken man was to be found in the ship. The same system was introduced by the writer into every ship on board which he subsequently served. The culprits were heard to say that they would rather receive six dozen lashes at the gangway, and have done with it, than be put into the drunken mess—for so it was termed—for a month.

Scientific.—Dugald Stewart's distinction between invention and discovery may be quoted thus:—"The object of the former is to produce something which had no existence before; that of the latter to bring to light something which did exist, but which was concealed from common observation. Thus we say, Otto Guericke invented the air-pump; Sanctorius invented the thermometer; Newton and Gregory invented the reflecting telescope; Galileo discovered the solar spots; and Harvey discovered the circulation of the blood. It appears, therefore, that improvements in the arts are properly called *inventions;* and that facts brought to light by means of observation are properly called *discoveries.*"

Students.—"Practical knowledge" is a term difficult to define, but which, from the way in which it is very often used, would appear to be synonymous with intuitive knowledge.

New Public Institution.

A correspondent sends the following, which has been circulated in the handbill form in the East-end of London. It reads thus:—

"Arbour-street East Dispensary, 519, Commercial-road, E.—Mr. Aubin, Surgeon.—Dispensary patients' hours of attendance: morning, from 9 till 11, 6d.; evening, from 6 till 9, 6d.; Sundays—morning, 9 to 11 only.—Rules:—1st. The sum of 6d. and a bottle to be brought. 2nd. Patients who have been on the Dispensary, and are unable to leave their homes, can be visited for 1s. 6d. the radius of a mile, the message to be sent by 11 in the morning, and the money paid at the time.—Midwifery from 15s.—Vaccination."

We find that the Mr. Aubin mentioned is a Member of the Royal College of Surgeons of England; and that he is also a prominent member of the East-end Branch of the Medical Defence Association.

A Gentle Hint.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have experienced so much difficulty in finding the right sort of persons to aid me in carrying out the onerous duties of superintendent to a Temperance Sanatorium, and there is such a dearth of information as to the whereabouts to apply for them, that I have induced my son, Mr. Charles Julian Holthouse, to establish an agency for the purpose. The great spread of temperance principles among all classes of society, especially in the clerical and medical professions, and the demand which has hence arisen for the employment of abstaining servants, nurses, attendants, assistants, etc., leads me to hope that this effort to supply the want may not be unsuccessful. On Monday, 16th inst., my son opened his offices at 18, Adam-street, Adelphi, where, assisted by a lady manager, he will be ready to receive applications from all abstainers who need employment, and from all who wish to give it. Letters of inquiry, addressed as above, to the Secretary of the Temperance Agency Office, and enclosing stamped directed envelopes, will receive prompt attention. Hours of attendance at the office, half-past ten till five; Saturdays till two. I am, &c., Carsten Holthouse.

October 20.

A New Disease in Calcutta.

The *Times* correspondent in India reports that a panic prevails among the natives inhabiting the suburbs of Calcutta, on account of the rumoured appearance of a new disease of a virulent type, and to which the name "Kotkotia" has been given. The disease is said to commence with a tingling sensation in the fingers and toes, and if not checked at the outset speedily proceeds to a fatal termination. The treatment adopted is cauterisation, and the application of a tight ligature round the affected limb on the first appearance of the symptoms. It is, however, reassuring to hear that Dr. French, civil surgeon, has, after careful investigation, declared the so-called disease to be a purely imaginary affection, and that those said to be sick of it were only suffering from the severe remedies they had adopted.

COMMUNICATIONS have been received from—

Mr. Richard Davy, London; Professor Seance, Edinburgh; Mr. John Chatto, London; Dr. Edis, London; Mr. G. Anderson Imlay, Bristol; Dr. J. Pearson Irvine, London; Mr. S. Messenger Bradley, Manchester; Mr. Vincent Harris, London; Mr. C. J. Cullingworth, Manchester; Dr. Bauce, London; Mr. B. R. Wheatley, London; Dr. J. Dudgeon; Mr. George Brown, London; Mr. Maunder, London; Dr. H. Lawson, London; Mr. C. Holthouse, London; Dr. D. Hemming, Notting-hill; The Local Government Board of London; Mr. John Napier, London; The Registrar of the Apothecaries' Hall, London; Dr. R. Lawson, Wakefield; Dr. Sparks, Crewkerne; Mr. Pearce Gould, London; Dr. R. H. Semple, London; Mr. Mears, London; Professor Gairdner, Glasgow; Mr. W. Reeves, London; Mr. J. A. Bright, Glastonbury; Mr. J. M. Stone, London; Mrs. Baines, London; Dr. J. W. Moore, Dublin; Dr. Carter, Liverpool; Dr. Alex. Fiddian, Cardiff; Dr. Wiltshire, London; Dr. Willoughby Aading, Wallingford; The Dean of St. Mary's Hospital Medical School; Dr. F. Churchill, London.

BOOKS AND PAMPHLETS RECEIVED—

Thirty-seventh Annual Report of the Registrar-General of Births, Deaths, and Marriages in England—George Lawson, F.R.C.S., Diseases and Injuries of the Eye—John Tyndall, D.C.L., LL.D., F.R.S., Lessons in Electricity—F. W. Farrar, D.D., The Life of Christ, part 1—Charles A. Leale, M.D., Degeuerations of the Placenta as a Cause of the Death of the Child—G. Overend Drewry, M.D., Consumption and Wasting Diseases successfully treated by "Hydrated Oil"—D. Ainley, M.R.C.S., L.R.C.P., Third Annual Report on the Sanitary Condition of the Borough of Halifax—Dr. V. Magnan, On Alcoholism, the Various Forms of Alcoholic Delirium, and their Treatment—Francis Vacher, Public Baths.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Morningside Mirror—Home Chronicler—Students' Journal—Richmond and Louisville Medical Journal.

APPOINTMENTS FOR THE WEEK.

October 28. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

30. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Adjourned Discussion on Croup and Diphtheria. Mr. Richard Davy, "Degenerative Cysts in Muscle." Dr. John Brunton, "Pelvic Hæmatoma."

31. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

November 1. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Mr. Jessop, "Case of Gastrotomy for Extra-Uterine Fœtation (mother and child saved)." Dr. Budin (of Paris), "On a Diagnostic Sign of Vaginal Hæmorrhage during Parturition." Dr. Redmond, "On Secondary Puerperal Hæmorrhage." Dr. Elkington, "On Inversion of the Uterus." Mr. Hickman, "On Inversion of the Uterus." And other Communications.

Royal Microscopical Society, 8 p.m. Meeting.

2. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. Clinical Evening. Dr. Symes Thompson, "Case of Cardiac Disease and Embolism." Mr. Edmund Owen, "Cases of Psoas Abscess: a New Method of Treatment." Dr. Wiltshire, "Post-partum Pelvic Cellulitis."

3. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 21, 1876.

BIRTHS.

Births of Boys, 1363; Girls, 1278; Total, 2641.
Average of 10 corresponding years 1866-75, 2197·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	634	590	1224
Average of the ten years 1866-75	719·0	661·0	1380·0
Average corrected to increased population ...	...	...	1477
Deaths of people aged 80 and upwards ...	...	...	31

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	581359	...	2	3	...	2	...	4	...	1
North	751729	11	2	15	1	4	1	10	...	6
Central ...	334369	...	1	...	1	...	...	2	...	3
East	639111	...	3	13	...	3	...	3	...	2
South	967892	11	10	29	2	6	1	6	1	4
Total	3254260	22	18	60	4	15	2	25	1	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·670 in.
Mean temperature	53·7°
Highest point of thermometer	69·0°
Lowest point of thermometer	41·5°
Mean dew-point temperature	49·0°
General direction of wind	S.E. & N.E
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 21, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Oct. 21.	Deaths Registered during the week ending Oct. 21.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2641	1224	69·0	41·5	53·7	12·06	0·00	0·00
Brighton	100632	42·7	70	29	65·0	42·4	54·3	12·39	0·00	0·00
Portsmouth ...	124867	27·8	78	53	63·2	44·3	55·7	13·17	0·00	0·00
Norwich	83430	11·2	58	33	66·5	42·0	53·3	11·81	0·01	0·03
Plymouth	72230	51·8	35	25	62·0	47·5	51·5	12·50	1·54	3·91
Bristol	199539	44·8	151	72	64·8	44·7	54·3	12·39	1·00	2·54
Wolverhampton ...	72549	21·4	60	21	67·0	44·6	53·5	11·95	0·04	0·10
Birmingham ...	371839	44·3	308	145	63·0	45·2	53·9	12·17	0·09	0·23
Leicester	113581	35·5	95	65	63·0	42·5	53·7	12·06	0·01	0·03
Nottingham ...	93627	46·9	82	30	64·7	42·3	54·0	12·22	0·04	0·10
Liverpool	521544	100·1	381	202	63·8	45·0	52·5	11·39	0·48	1·17
Manchester ...	357917	83·4	232	148	72·0	45·0	56·0	13·33	0·02	0·05
Salford	138425	26·8	119	89	73·5	43·0	54·8	12·67	0·00	0·00
Oldham	88609	19·0	61	51	...	...	...	...	...	...
Bradford	173723	24·1	199	58	59·4	45·6	52·5	11·39	0·05	0·13
Leeds	291580	13·5	239	126	61·0	45·0	53·0	11·67	0·05	0·13
Sheffield	274914	14·0	217	114	63·0	44·0	52·4	11·33	0·08	0·20
Hull	136933	37·7	107	42	60·0	43·0	52·8	11·56	0·10	0·25
Sunderland ...	108343	32·8	79	39	...	...	...	...	...	...
Newcastle-on-Tyne	139929	28·1	98	33	...	...	...	...	...	...
Edinburgh	215148	51·3	146	48	...	...	...	...	...	...
Glasgow	545144	90·4	371	223	60·5	35·8	51·9	11·06	1·34	3·40
Dublin	314666	31·3	137	97	62·4	45·7	52·7	11·50	1·43	3·63
Total of 23 Towns in United Kingdm	8028595	37·7	5957	2947	73·0	35·8	53·7	12·06	0·33	0·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·67 in. The lowest reading was 29·48 in. on Tuesday, and the highest 29·94 in. on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XI.

DEATH BY HANGING.

Death by Hanging is a subject of very considerable importance to the medical jurist, and one the study of which is attended, at times, with difficulties of no ordinary kind. Both in its mode of production, and in the effects to which it gives rise, it has much in common with death by strangulation, the differences being—that in the one the constriction of the neck is due to the weight of the body itself; and the constricting force in the other is foreign to the body (Taylor's "Manual," page 649); while the amount of violence required to strangle is greater than that required to cause death by hanging.

As in the form of asphyxia last considered (Death by Drowning), the points to be determined are—First, *the cause of death* in hanging; secondly, *the proof of the suspension having taken place during life;* and thirdly, the determination of the question *whether the hanging had been the consequence of accident, suicide,* or *homicide.*

And first as to *the cause of death.* The mode in which the fatal event occurs after the suspension of the body has been variously set forth by different writers. Thus some have attributed it exclusively to *cerebral congestion* or *apoplexy;* others purely to *asphyxia;* others to a combination of *coma and asphyxia;* and others still to *syncope,* or *neuro-paralysis* (*the nervous or simple apoplexy* of Remer), either as the effects of severe mechanical injury or shock to the brain or spinal cord, or of mere fear.

Now, while there can be no doubt that, after suspension, the body has been known to present appearances characteristic of these four forms of sudden death—coma, asphyxia, comato-asphyxia, and syncope,—we may, by following the course we adopted under drowning, simplify our subject, by transferring one at least *of these forms of death* to a position different from the mere effects of the suspension.

In those rare and exceptional instances, for example, in which the amount of *mental shock* has been sufficiently powerful to induce death by *syncope,* and which consequently have left no positive traces of its operation in the dead body, it would be better, as in the analogous case of a person perishing by syncope in the water, to refer the cause of death to *the shock,* and *not to the suspension.*

For all practical purposes, indeed, we may restrict the remaining causes of death in hanging to two factors—*coma* or *asphyxia.* For one or other of these must be the direct cause of death, either singly or in combination, as in *the mixed form of coma and asphyxia.* We might have gone further in simplifying the subject by insisting on the truth that ultimately *asphyxia* is the *immediate* cause of death—death by *coma,* as we saw in a former lecture, resolving itself in every instance into death by *apnœa.* On this, however, we need not insist, particularly as the statement, now generally received, does not admit of dispute—namely, that in the large majority of instances of hanging the appearances presented by the body after death partake largely of both conditions, and that it is but comparatively seldom that *coma alone,* or *asphyxia alone,* is indicated by the autopsy. That this should be the case it is not difficult to perceive, when we consider that when a ligature is applied round the neck, and the body has been suspended by it, it can but rarely happen that there will not be, to some extent, both interruption to the return of the blood from the head, inducing *cerebral congestion,* and compression of the air-tube, interfering with respiration, and favouring the occurrence of *asphyxia.* It must be equally evident, nevertheless, that circumstances may favour *the predominance* of either the one or the other of these occurrences. Death, for instance, may be slow, and originate in coma, where the ligature is not very tight and rests in front on the larynx, especially when the larynx is ossified. Again, where the ligature is tight, and firmly compresses the trachea, the death may be almost instantaneous, from sudden asphyxia, with little time afforded for the occurrence of cerebral congestion. It is generally understood that the effect of a loose ligature crossing the neck above the os hyoides at once arrests the respiration, inducing rapid asphyxia. Further, it is agreed that where there is a running noose gliding easily upon the ligature, or where the cord or ligature makes more than one turn around the neck, embracing it at every point of its circumference, the stagnation of the blood in the cerebral veins promptly occurs, and the stoppage of the respiration only subsequently,—unless at the same time the neck is compressed tightly and forcibly, when death takes place by asphyxia, with or without cerebral congestion.

Once more. Whether the ligature has compressed the neck partially or completely, if in addition to this a strong downward or lateral impulse has been communicated to the body, so as to compress or rupture the spinal cord, the death will be instantaneous, from the injury of the cord, either by syncope or asphyxia, with little or no cerebral congestion. We are thus in a position to perceive why the *appearances* in the dead body *indicative of the mode of death* should *present marked differences* after suspension, though we are persuaded that these differences have been much exaggerated. Still more is this the case, however, as regards the *distinctions* laid down so prominently by the earlier writers on this subject *between the appearances* respectively *of the bodies of suicides* and *the subjects of violent or forcible suspension.* It may be the case, for instance, that the death may be calm and sudden, as where a person, in a fit of melancholy, has suspended himself with his feet resting on the ground, or on a chair or table, and that the appearances will be those of death by aphyxia; while in another instance the death has been slower, painful, and distressing, and rather the result of coma than asphyxia,—as where a person has suspended himself from a height, or been forcibly suspended by others, perhaps after a violent resistance. Still, beyond the more marked local effects of the ligature and the greater amount of cerebral congestion in the latter cases, we may look in vain for other points of difference long believed to characterise cases of this sort—such as the livid and anxious countenance, the distorted features, the starting eyeballs, the protruded tongue, and the clenched jaws. Pictures of this sort have, we believe, been drawn rather from the observation of *the vital struggles of animals* than from the study of the appearances in the human body after death, with which assuredly they are not found to correspond.

It is mostly in the cases of criminals publicly executed that *marked instances of local violence* have been encountered, such as *displacement* or *fracture of the odontoid process of the second cervical vertebra; separation of the vertebræ, from rupture of the intervertebral substance; fracture of the bones of the neck,* and *effusion of blood on the spinal cord.* Similar injuries, it is obvious, might likewise occur in a forcible hanging, where the fall had been great, or much violence employed.

Injury to the nerves of the neck by the compression of the ligature has only been encountered in experiments on animals.

Of *the phenomena attending death by suspension* little is known, and much is necessarily left to conjecture. Foderé relates a singular incident of one of his fellow-students. After an argument respecting the cause of death in hanging, this young man resolved personally to gratify his curiosity. He passed a ligature round his neck and attached it to a hook behind the door. To accomplish this he raised himself on tiptoe and gradually brought his heels to the ground. He soon lost all consciousness, but was rescued by a fellow-student in time to be resuscitated by prompt treatment.

A similar incident is related by Bacon in his "Historia Vitæ et Mortis." A boy in England, who had witnessed a public execution, and who was believed in consequence to have tried what hanging was, was less fortunate, as he was not observed till after the body was cold.—(Taylor's "Manual," page 718.)

In Dr. Taylor's "Manual" you will find an account of two persons—one in England, and the other in America—who, to gratify public curiosity, repeatedly submitted to be hanged for a few minutes. On the last of these occasions the American lost his life by being allowed to hang too long.—("Manual," page 717.)

Fleischmann tried some experiments on himself to elucidate this subject. When he placed the cord between the lower jaw and the os hyoides, and tightened it moderately, the effect was to disturb in some degree the breathing, which, however, still went on. But then the face reddened, the eyes became somewhat prominent, the heat of the head increased, and he began to experience a sense of weight, a degree of stupefac-

tion, a feeling of distress, and, lastly, a hissing and noise in his ears, which warned him that he had carried his experiment to the verge of safety, and which he did not venture again to carry so far.

In another trial, Fleichman placed the ligature over the larynx, when the same effects followed, but in even less time. The first experiment lasted two minutes. In the second only a minute and a half had passed, when the noise in his ears, and a sensation which he states that he found it impossible to describe, warned him that it was time to desist.

In a third experiment, the ligature was placed over the cricoid cartilage, when, almost instantly, the breathing became so enfeebled that he could not support the attempt for almost the very shortest period.

These experiments, so far as they go, bear out the usually received opinion, based upon the very limited number of facts derived from the statements of the parties who had recovered from the effects of temporary, or rather momentary, suspensions, as to the differences experienced from the respective positions of the ligature in different cases; while, on the other hand, they give no countenance to the distinctive character of the effects already adverted to as resulting from suicidal and homicidal suspension.

The smallness of the number of cases in which resuscitation was accomplished after suspension of the body is not to be wondered at, owing to the shortness of the period during which life is preserved in every instance, and the rarity of the successful attempts made with this object. A curious instance of this last sort is given by Dr. Gordon Smith in his "Forensic Medicine," from which perhaps it was that Sir Walter Scott borrowed the incident in his novel, "The Fair Maid of Perth."

Dr. Smith relates that his surgeon attempted to save a criminal in London from the effects of the gallows, by making an opening in the trachea through which he could breathe freely on the closure of the mouth and nostrils. After hanging for three-quarters of an hour, he showed signs of life, repeatedly opened his mouth and groaned, and blood flowed freely on opening a vein in his arm. But the man could not be further resuscitated. This want of success, Dr. Smith thinks, "was probably to be attributed to the great weight of the criminal, by which the compression of the vessels of the neck must have become more effectual than in ordinary cases; and perhaps at the same time the opening into the trachea was not sufficiently free." This, however, does not allow sufficiently for the disturbance of the cerebro-spinal system, which would be even more unfavourable to recovery than those he has condescended on.

However brief the duration of life in any one case of suspension, that period will obviously be affected by such modifying circumstances, in individual instances, as the degree of constriction of the ligature, the length of the fall, the weight of the individual, and the concomitant injury done to the parts about the neck.

(To be continued.)

CLINICAL LECTURE
ON PEMPHIGUS FOLIACEUS.

DELIVERED AT UNIVERSITY COLLEGE HOSPITAL.

By TILBURY FOX, M.D., F.R.C.P.,
Physician to the Department for Skin Diseases.

GENTLEMEN,—There is a case of a very rare form of pemphigus, to which the term *foliaceus* is applied, in the hospital at the present time under my care, to which I may with advantage direct your attention to-day.

General Description of Pemphigus.—Pemphigus you know was classed by Willan and Bateman in their order "Bullæ," but modern dermatologists regard it in the light of a "neurotic" malady, and as a modification or ally of herpes. The characteristic naked-eye feature of pemphigus is the bullæ or blebs, varying in size and number in any given case—as regards size, from that of a split-pea to that of an orange; and as regards number, from one to an innumerable quantity widely scattered over the body. The formation of the bullæ is preceded by a red spot, accompanied perhaps by itching, and a red edge frequently surrounds the bullæ at their base. The contents of the bullæ are at first clear and alkaline; they soon, however, become turbid and puriform, when their reaction may be acid. The contents become quickly reabsorbed, the bullæ becoming flaccid, and finally shrivelling away, leaving scaliness behind; or the bullæ may, with or without bursting, dry up and become replaced by a thinnish scab. When scabs fall a red surface is left behind, which disappears in a week or ten days or more. In cachectic subjects the contents of bullæ may be sanguinolent, and ulceration may occur in the seat of the bullæ, whilst a "discharge" oozes from the reddened surface of the original base of the bulla, and successive crusts may form. The bullæ may be distributed in a solitary fashion or in groups, and where there is extensive eruption, bullæ in all stages of development are to be observed. The eruption of pemphigus consists of successive crops or outbursts as the rule. All parts of the body may be attacked, and even the internal mucous surfaces. There are no constitutional symptoms proper to the disease.

Varieties of Pemphigus.—Cases of pemphigus may be divided into two groups, *acute* and *chronic*. The existence of true acute pemphigus has been emphatically denied by good authorities, as Hebra. He says that instances of so-called acute pemphigus consist in that condition in which bullæ are developed in the course of acute febrile diseases, *e.g.*, variola, puerperal fever, of cases of herpes, especially herpes iris, or slight outbreaks of chronic pemphigus, the progress of which has not been carefully watched; or of urticaria bullosa; or of erysipelas, or rupia escharotica. Hebra, however, is mistaken. True acute pemphigus—at least, an eruption which answers to that description only—does occur, but only rarely. There may be a general acute outbreak of large and small bullæ over the body, varying in size from a small nut to a large egg, and answering in all respects to those of pemphigus. But this is very rare indeed. Mostly acute pemphigus occurs in young children. Pemphigus of the newly born, attacking the hands and feet, is mostly syphilitic, and the diagnosis is made easy by the presence in these cases of ample evidence of the syphilitic cachexia. *Chronic* pemphigus is not uncommon. When the bullæ are many, the term *vulgaris* is applied to the disease; if there be a solitary bulla only, as occasionally is the case, one bulla being succeeded by another and another, the disease is termed *solitarius;* and if gangrene occurs, *gangrænosus*—a form observed in cachectic children. There are two other forms—the one pemphigus *pruriginosus*, in which the disease is complicated with prurige, as sometimes happens; and the other *foliaceus*, of which I shall now speak particularly, and of which I have only seen a few cases in my life.

I will just observe, *en passant*, that the cause of pemphigus is unknown. It is stated that there is a great deficiency of albumen in the blood of pemphigus patients; that amyloid degenerations are common in the bodies of the same; but really nothing definite has been made out, save that the disease occurs in those who suffer from nervous debility. Now, pemphigus *foliaceus* is so named from the flaky-like incrustations which cover the body, the flakes being formed by the rapid drying up of the bullæ, which may be pretty distinct at first, but soon present an abortive phase of development. The disease is said generally to commence by the development of bullæ about the front part of the chest, and the formation of bullæ rapidly spreads from thence all over the body, accompanied by intense burning and itching. The bullæ are at first distinct enough, but are soon found not to be well formed; they also speedily shrivel, and hence they easily escape notice; and as the bullæ crowd together and rapidly dry up, and as there is a certain amount of discharge, which adds to the incrustation, the disease looks at first sight like a general eczema. The whole body becomes affected—head, trunk, limbs, and hands and feet. Large quantities of scales are thrown off from the patient's skin. The disease is generally fatal, it is said, and runs a lingering course. The patients attacked by it waste away by degrees from inanition, and the sleeplessness and worry consequent upon the extreme irritation set up. The following are the notes of the case now under observation:—

History.—Ann A., aged sixty-one, was admitted on Wednesday, September 23, 1874. Has been a lodging-house-keeper without interruption for twelve years. She is a widow, and has had nine children, and three miscarriages before the birth of the last four, at about the end of the second month. She has been very hard-worked, and has had a great deal of trouble, one of her children having been accidentally poisoned, and a second drowned. She has also had to nurse an invalid husband. She has lived very indifferently, seldom eating meat, and taking only a very small amount of food, although she states she could have had plenty if she had liked. Her principal drink appears to have been buttermilk, of which she is extremely fond.

She is of a very anxious and melancholic turn of mind, and fancies that everyone loathes her. Her parents are dead. Father died of apoplexy, aged fifty-one. Mother was healthy. Children healthy, but one died of inflammation of the lungs. Patient had scarlet fever when about seven years old, and measles at nineteen; three months after this she had typhus fever, and at twenty-one small-pox, and in the same year a slight attack of pleurisy on the left side. In 1863, her age then being fifty, she had an enlarged spleen, inflammation of the liver, and what she calls "mucous irritation of the stomach and bowels, with prolapse of the stomach." About the same time she had an attack of ague which lasted two months, and them came the climacteric epoch. Has been weak and ailing ever since.

Present Illness.—Last July twelvemonth (1873) she first noticed great irritation and redness over the right scapula, which was worse at night; this she scratched till she rubbed a piece of the cuticle off. This sore she could not get to heal, but it got larger. Soon after she got another sore in the same manner in the middle of her back over the spine. Then she had a boil between her shoulders, and a third sore on her left shoulder, followed by a boil of large size on the lower part of the abdomen. The sores spread slowly till December, 1873; after that period more rapidly, the vesicles varying in size, some being as large as a bean, some as large as a pea, and others much smaller; of these the larger ones were solitary, others were in clusters, and looked as if the part had been thrashed with nettles. At first they contained a clear fluid, they burst and ran together, leaving a weeping surface with scales of dry cuticle on them in places. As the disease advanced the fluid became more purulent. One large bulla about two inches in diameter formed at the back of the left foot above the heel. At the beginning of March, 1874, she consulted her son-in-law, a chemist: he gave her a hot-air bath, some pills, and strengthening medicine; soon after this treatment the vesicles and bullæ broke out all over her body, and she was forced to take to her bed, which she has not left since.

You will not fail to have observed that the circumstances of the life of our patient must have greatly reduced her powers during some considerable time before the outset of the disease. She lived badly; she worked very hard, and was greatly harassed by deficient rest and tried by anxious nursing. No wonder that she is the subject of a "neurotic" disease.

The first symptoms of disease of the skin were those of pruritus and furunculi; and soon distinct bullæ made their appearance, and gradually developed over the body. The disease began on the shoulder and about the back, and so far offered an exception to the asserted rule. The disease in other respects ran the usual course of pemphigus foliaceus.

Her present condition is as follows: — The whole body, from head to foot, is affected, and looks as though there had been marked eczematous discharge from the whole surface, and this had dried up into a thinnish crusty layer, which had again split up into large flakes the size of a postage-stamp or less, the pieces being in most cases attached by their central portions, and free at most of the edges. The skin is very irritable, and the seat of burning and itching of violent character that disturbs the rest. The skin feels moist, and from it exudes a very small amount of thinnish ichor. It also exhales a faint odour. In some places, especially about the ankles and the forearm, ill-formed or abortive bullæ may be observed; and where the skin is freest from the cuticular flakes are round red marks, indicative of the seat of the bullæ. The irritation and discharge are greatly increased by the scratching which the patient feels compelled to indulge in. Unfortunately, the poor woman has serious cardiac mischief, which distresses her a great deal.

I do not intend to trouble you with the notes of the progress of the case, but will just say, as regards this matter, that I kept the patient packed in oil, gave her an occasional bath, and put her upon a very liberal diet, and kept her quiet; and the result has been, so far as her skin is concerned, very satisfactory. The bullæ have practically ceased to form; the skin is freed from any but slight incrustation, and it has ceased to discharge; it is non-hyperæmic, and looking more like natural skin, only covered here and there by thin and large adherent flakes; but the patient is very weak still. Oil, I doubt not, has been absorbed by her skin, and has nourished her and protected the skin, preventing it being irritated. I really hope, by pursuing this plan of treatment, and pushing quinine, that, unless her heart troubles her much, we shall cure our patient. I should have mentioned that she has exhibited signs of irritation of the intestinal tract—I fully believe from the development of bullæ in that locality.

Diagnosis.—I want particularly to speak of the diagnosis of the case. Some of you may remember my saying at the bedside that the disease might be taken to be acute general eczema, pityriasis rubra, or pemphigus foliaceus. The case was sent to me as one of eczema. The discharge and crusting pointed very naturally to eczema; but with so large an extent of surface involved by an eczema, the disease would have been accompanied by much redness and infiltration, more serous exudation, and more purulency in the crusts. There were scarcely crusts present, but rather scales. Then, again, the history of the case showed that the disease began by the formation of bullæ, and abortive bullæ were detectable about the body. As to pityriasis rubra, there were, on careful examination, manifest differences between it and the disease present. There was not the well-marked general hyperæmia; neither was there the peculiar hyperplasic growth of cuticle disposed in white, silvery, imbricated scales. The scaliness was due to dried discharge and serum; it was not to be explained as the result of an hyperæmia simply. In other words, the nature of the disease present was different from that of pityriasis rubra; and the history of the case, and the abortive bullæ, pointed to pemphigus foliaceus. If it were not general eczema, nor pityriasis rubra, it was probably pemphigus foliaceus, for the reason that these three are the only diseases which rapidly affect the whole surface of the skin, without leaving any part unaffected. The positive evidence of the bullæ in the history of the case, and of their actual presence at the time of observation, and the course of the disease, proved it to be what was suspected.

Prognosis.—The general belief is that pemphigus foliaceus is fatal. I believe that inour patient, if her heart does not give trouble, the disease will improve, and for the reason that it has made steady progress hitherto towards decided amelioration.

Treatment.—There is no specific for pemphigus. Arsenic is declared to be one, but it often signally fails to cure the disease; and I have seen quinine in full doses do much more good. In the present case there were clear indications for rest of body and mind, for good nursing and good feeding, with the view of restoring tone to the nervous system, and replenishing the exhausted bodily powers; for you will remember that her history disclosed the fact that the patient had been living badly, working hardly, and fretting greatly from worry. So we kept her quiet in bed—and, indeed, she could not get up; ordered her an ample and nourishing diet, into the composition of which entered eggs, oysters, and other—under ordinary circumstances, superfluous—appetite-coaxers, port wine, and subsequently porter and brandy with milk, as much meat, milk, and beef-tea as the woman could take at fair intervals; and gave her internally occasional chalk mixture to check repeated attacks of diarrhœa, and in the intervals quinine (which was badly borne), cod-liver oil, and tincture of steel in fair doses. The surface of the body was wrapped up in almond oil or the linimentum calcis, with the view of sheathing the excoriated skin. Occasionally an astringent lotion was applied, but it did not agree sufficiently well to be continued. With good nursing and careful feeding, and now and then a little digitalis for the irregular heart's action, and the above-named medications, the patient is steadily improving.

I did not attempt to treat the case by specifics, but essayed to undermine the hold the disease had upon the system by attempting to remove the excessive nervous and general debility which existed.

N.B.—The case at the end of three months was making steady progress towards recovery. Few bullæ formed, the skin had become quite natural over large tracts of the surface, the excoriations had disappeared, and scales, rather than crusts, remained behind in the worst parts, and the case promises to do well.

Provision for Pauper Lunatics of Paris for 1877.—According to the Municipal Budget, there are 7074 lunatics to be provided for. The asylums of St. Anne and Vaucluse will together receive 1400 (650 males and 750 females) and that of Ville-Evrard 640. Bicêtre is calculated to receive 540, and Salpétrière 662, and the asylums in the provinces will receive 4125. Calculating the expenses at a mean of one franc and a half per diem per lunatic, the sum required to be appropriated in the Budget to this end will amount to 4,017,774 francs.—*Union Méd.*, October 24.

ORIGINAL COMMUNICATIONS.

STATISTICAL REPORT OF OPERATIONS IN THE ROYAL INFIRMARY, EDINBURGH,

PERFORMED BY

PROFESSOR JAMES SPENCE,

From April 30, 1875, *till September* 30, 1876;

WITH REMARKS.

(*Concluded from page* 488.)

Excisions of the Tongue.

In one case the removal of the whole tongue was performed by section of the jaw, and extirpation of the diseased organ with the knife by Mr. Syme's method. A large drainage-tube was put in to prevent any collection of fetid discharge in the mouth. The patient made a good recovery.

In the second case, excision of half of the tongue was performed by the galvano-cautery. The fatal result could not be attributed to the operation, for in so far as the tongue was concerned he did not lose a drop of blood, and the cure by cicatrisation was complete. But the patient was a man of dissipated habits and utterly broken constitution—a case I would not have touched with a knife. Previously to coming to Edinburgh he had been treated in another hospital, where he broadly stated that the surgeon had advised him to have nothing done, but to take as much rum and whisky as he could procure!—a regimen which he had strictly followed, until intense pain forced him to apply for some relief. After the operation he improved wonderfully on milk diet and very little stimulant, and his death was more a gradual decay and breaking up, with symptoms of cerebral softening, rather than from any traumatic cause.

Operations for Necrosis.

In this class are comprised two cases of acute necrosis in young patients—a boy and a girl,—in each of which I resected and removed the shaft of the tibia from immediately below its tuberosity to a few lines above the malleolus, after separating the periosteum. In both the result was most gratifying, the entire shaft of the bone being reproduced. In the girl's case the fibula became affected after the operation, and sequestra—including the complete upper articular head of that bone, amounting to full three-quarters of its length—were removed at different times. After all the limb is firm and useful; but as these cases have been published, I need not further allude to them here.

In the case of necrosis of the femur there was enormous irregular deposition of new bone surrounding a long and thick sequestrum of the shaft. The disease had existed for two or three years, and at the time of admission the patient, a girl, aged fifteen, was much exhausted by pain and discharge. The operation was a severe and prolonged one, owing to the dense character of the substitute bone, which required to be cut through in order to get at and remove the sequestrum, but was much facilitated by the use of Esmarch's method of compression rendering it perfectly bloodless.

The case of necrosis with non-union and distortion, following a severe compound comminuted fracture of the forearm, was sent to me from the country nearly a year after the injury was received. It also required a tedious and troublesome operation. In this instance I did not use Esmarch's bloodless method, as, owing to the radial artery being displaced from its natural position, I required to be able to feel its pulsations, so as to avoid injuring it during the resection. The result was very satisfactory, though deformity was not completely obviated.

The cases of compound fracture, though few, were severe and complicated; that of ——, a young Norwegian sailor, was more than usually so. He had fallen from the topgallant mast on to the deck, and sustained a compound comminuted fracture above the middle of the left femur, a comminuted fracture of both bones of the leg on the same side, besides a fracture of the left radius and a cerebral concussion. The thigh and leg were much swollen and distorted, and the femur was projecting. The limb having been adjusted, I enlarged and washed out the wound with carbolic solution, and felt with my finger for any loose detached fragments, but finding none, the wound was simply covered with a pledget of lint soaked in carbolised oil and covered with guttapercha. The fracture of the thigh was treated by the pully extension apparatus, while that of the leg was kept in position by means of a long bracketed splint externally, and a short splint on the inner side, which supports also served to steady the thigh. The fracture of the radius was then put up in the ordinary manner. The case proceeded most favourably, though somewhat slowly, as might be expected, yet without any constitutional disturbance worthy of notice. The fractures of the thigh and leg were perfectly straight, only moderate thickening marking the union of the femur, and there was no shortening of the limb. He was after a time taught to use crutches, and sent to the Convalescent House. The day after his arrival there he tripped, fell, and refractured his femur at the site of the original injury. When brought back to hospital he was suffering intense pain, and the thigh was much swollen and distorted. The fracture was readjusted, the extension pulley again applied, and sand-pillows placed at the side of the limb to prevent lateral motion. For the first few days he had no untoward symptoms, when, however, his pulse and temperature rose, and ultimately an abscess formed, which I opened through the cicatrix of the original wound. I washed out the cavity and examined, lest any fragment of comminuted bone might have necrosed; finding none, a drainage-tube was inserted, and the wound dressed with tepid boracic lotion at first, and subsequently with carbolised oil. After this he convalesced rapidly, the fracture reunited, and he was again sent to the Convalescent House, from whence he was ultimately dismissed with a perfectly straight limb of equal length with the opposite one. When this patient was first brought into the Infirmary he could neither speak nor understand one word of English; but before he left, after a residence of about seven months in hospital and Convalescent House, he could speak it tolerably fluently, and understand it perfectly when spoken. His only means of instruction was hearing the language spoken.

The case of compound fracture of the leg was very severe, and attended with great comminution of the tibia and tearing of muscular substance, but the great vessels and nerves were uninjured. As the patient was suffering from cerebral concussion when brought into hospital, having fallen from a height of nearly sixty feet, I considered it better to wash out the wound with carbolic solution, and adjust the fracture, after sawing off a projecting portion of the tibia and removing some loose comminuted fragments, than to amputate. Gangrene, however, shortly supervened, necessitating subsequent amputation.

The compound fracture of the bones of the forearm occurred in a boy, and was caused by direct violence—viz., from crushing in machinery. Some sloughing of muscular substance took place, which was treated by the application of charcoal paste. The fracture was kept in position by means of a single splint to allow of the wound to be dressed, in this case also, with carbolised oil. He did well, and no deformity resulted.

The only operations on the urinary organs tabulated in this report are those of lithotomy and lithotrity. Of the latter there was only one case, in which a phosphatic calculus about the size of an ordinary filbert was readily disposed of in three sittings with complete relief.

The lithotomy cases were five in number; of these three were completely successful in their results.

In one a child of twenty months old, and of very weakly constitution, made a good recovery from the operation in about four weeks. The mother was summoned to attend another of her children who was very ill with measles, and I advised her not to take the other child (my patient) home, for fear of infection. Unfortunately, however, it caught cold and died of pneumonia. This, I consider, should not rank as a death from lithotomy.

An old man, above seventy-six years of age, was operated upon, and for three weeks thereafter progressed most favourably, when, however, an attack of diarrhœa came on; the urine then became scanty, and he sank rather rapidly,—I have no doubt owing to uræmia, although without any marked symptoms.

A short notice must be made of the three successful cases. From one man, aged sixty-eight, I extracted a very large ovoid calculus, which weighed three ounces and a half, and from which he had suffered for more than thirteen years. From another patient, aged sixty-seven, I extracted twenty-four calculi, most of them about the size of small olives, and three of them the size of large filberts, which, taken together, weighed two ounces and three-quarters. This man had an

enlarged prostate and a very deep perineum. He made a rapid recovery, and was discharged at the end of a month. In the third successful case, a lad of seventeen years, who suffered intense pain from stone, I extracted a large rough uric acid calculus, studded with masses of oxalate of lime. The relief from pain was very marked, and he improved from the moment of the operation, before which he had rigors, with symptoms of acute cystitis and a large amount of pus in the urine.

During the period included in this report many cases of urethral stricture presented themselves, but as they were treated either by gradual vital dilatation or by Holt's method, they cannot be included under the head of operations, and I need scarcely mention that there were no deaths. No cases suitable for Syme's method of perineal section were met with. In passing, I may remark that I think it would be well to term that operation "external urethrotomy," to obviate confusion between it and incisions in the perineum for urinary infiltration, urinary abscess, etc.,—in statistical returns a confusion which has served to injure materially and most undeservedly, an operation of great value in suitable cases.

The second division of the report consists of cases of amputations, resections of joints, excisions of tumours, and compound fractures treated by me, in the Royal Infirmary, between August 10, 1875, and the present date, during which period I have returned to a still more simple method of dressing than that detailed in Dr. Kirkwood's report.

In my Address on Surgery before the British Medical Association, when speaking of the dressing of wounds, I alluded to the successful statistics of the three consecutive years, 1860-61-62, at which time the dressings employed were exceedingly simple. On going round my wards a day or two afterwards with Mr. Furneaux Jordan, of Birmingham, he asked what led me to change the system which had proved so successful. I do not recollect what answer I gave, but it could not have been very satisfactory, as on thinking the question over I could not satisfy myself with any reason. But the matter pressed upon me, and I determined to revert to the light dressing, merely moistening the lint with the boracic solution instead of water. I tried it first in a most unfavourable case of amputation of the upper arm; a single layer of lint moistened in the lotion was laid over the stump, and maintained in position by another strip encircling the limb, the whole being kept damp by means of a covering of wax-paper. This was left untouched for two days, when I found the wound united; the sutures were removed, strips of plaster applied, and the whole stump healed by first intention. The same method was followed in an excision of the mamma, only with the addition of a drainage-tube introduced to prevent collection of serous and sanguineous matters, and it also healed by primary union. Since then, until the present time, I have dressed all my operation cases, whether amputations or excisions, in the same way (lint soaked in boracic solution, not with prepared boracic lint), or with lint soaked in carbolised oil (1-20), with the exception of the operation for irreducible luxation of the knee, in which case I operated under carbolic spray, and subsequently dressed on the antiseptic method until putridity in the discharge occurred, after which it was dressed simply with carbolised oil lint. In using this boracic solution dressing, say in an excision of the breast, the method is, after the wound has been thoroughly cleansed by pouring a stream of tepid carbolic lotion over the surface, and closed by sutures, two separate layers of lint which have been soaked in the solution, and wrung nearly dry, are laid over the line of incision and contiguous surface. At first the upper layer is occasionally removed, wetted, and reapplied, without removing the under layer next the wound, merely to keep that layer moist. Drainage-tubing is used to favour the escape of any blood or serous discharge, and to give an easy means of occasionally washing the wound gently out by means of a syringe. Unless there be bleeding there is no need to disturb the deep dressing for twenty-four or even thirty-six hours. After the second day only a single bit of lint is used, covered with wax-paper. The sutures are generally removed about the fourth day, but, before doing so, strips of strong adhesive-plaster are applied between the stitches so as to maintain the edges of the wound in apposition, and these straps should not be removed unless they become loosened or dirty. In most cases I leave the sutures long, merely twisting them so as, if bleeding occur, to allow the wound to be reopened and all clots washed out. The surface is then cleansed, the edges of the incision closed by the sutures, which are then cut short, and the dressing applied; thus reactionary oozing and its effects are guarded against, and primary union generally obtained. In regard to the comparative advantages of the boracic lotion or of the carbolised oil dressing, I can scarcely speak, for both have answered well. I certainly prefer the former in cases of excision of tumours and joints, and in amputations when the soft tissues are healthy; but in cases of amputation or excisions of joints, in which there are old sinuses and a diseased state of the skin, the oil dressings seem to meet the requirements of the case better, and are more easily applied and removed without causing pain. In using oil dressing, I apply a narrow strip of waxed paper over the line of incision as a protection from the irritating quality of the carbolised oil.

The following table will show the results afforded by these simple methods of dressing combined with careful general treatment:—

TABLE II.—*Under Boracic Lotion and Carbolised Oil, from August*, 1875, *to September* 30, 1876.

	Recovered.	Died.	Total.	Total recov.	Total died.	Grand total.
AMPUTATIONS:						
Upper Extremity—						
At shoulder-joint for disease	1	1	2			
Upper arm—Primary	..	1	1			
For disease	1	..	1			
				2	2	4
Lower Extremity—						
Thigh—Primary, for railway accidents	1	2	3			
For disease	3	..	3			
Leg—Primary	1	..	1			
For disease	3	..	3			
Ankle-joint, for disease	4	..	4			
				12	2	14
Total amputations of upper and lower extremities	..	..	..	14	4	18
EXCISIONS:						
Upper Extremity—						
Head of humerus, for old dislocation	..	1	1			
Elbow, for disease	4	..	4			
Resection of condyles of humerus for old luxation	1	..	1			
				5	1	6
Lower Extremity—						
Excision of hip-joint	1	1	2			
„ knee-joint	1	..	1			
				2	1	3
Total excisions of upper and lower extremities	..	..	..	7	2	9
Excision of mammæ	..	..	..	8	1	9
Excision of large fibro-cystic tumour from mamma	1	..	1			
Excision of parotid tumours	3	..	3			
Total excisions of tumours				4	..	4
Grand total of operations during the period included in this table	..	..	..	33	7	40

Of the fatal cases, one primary amputation died seven hours after operation, from shock; two of the excisions died within thirty hours after operation, from persistent vomiting, causing collapse; so that three out of the seven fatal cases could not have been affected by any method of dressing. The fatal case of amputation at shoulder is altogether exceptional. So far as the matter of dressing was concerned, the greater part of the wound united by first intention, and the patient was allowed to sit up in bed about the twenty-fourth day (see report of case).

These statistics scarcely give a fair view of the success of the simple methods of dressing, for it must be observed that the mortality in four of the fatal cases was due to causes not likely to be influenced by any treatment.

During the same period I have successfully used the simple treatment, in an amputation at the upper third of the thigh for traumatic tetanus, in a boy in the Royal Hospital for Sick Children, and in private practice in many cases of excision of tumours and in amputation, without losing any case; whilst in a very large proportion of these cases primary union was obtained.

What has impressed me most forcibly in favour of the simple dressing is the primary union of large incisions, and the small amount, if any, of local irritation, in those cases of excisions of tumours, and in cases of amputation in which the state of the soft parts was favourable to the use of the boracic lotion dressings. In the case of acute strangulated inguinal hernia, the nature of the structures implicated, the previous attempts at reduction by taxis, and the necessity for opening the sac were not favourable to immediate union, yet the whole incision healed without a drop of pus, even at the points of suture. The dressing consisted of a flat layer of sponge, wrung out of boracic wash, enclosed in a fold of lint wetted in the same solution, applied over the wound, and supported by the ordinary spica bandage, and left undisturbed for three days, when the wound was found healed, and the sutures were removed. I never use the prepared "borie lint," because the undissolved crystals often excite great local irritation. As the salt is very sparingly soluble in water, there is no risk of the solution being too strong or irritating. The lint, when soaked in it, is wrung out nearly dry before being applied.

These statistical tables contain only those cases in my wards in which I myself operated. Besides these, during the period included in the second table, the following cases were operated on during my absence:—Two cases of strangulated hernia, one operated on by Dr. Duncan and one by Dr. Chiene, both of which recovered. A primary amputation through upper arm for railway injury, by Dr. Chiene; and an amputation at the ankle (a very unfavourable case), by Dr. Duncan; in both of these carbolised oil dressings were used; both cases did well. A case of excision of the knee-joint operated on under carbolic spray, and treated on the "antiseptic method," proved fatal after some weeks. The suppuration became copious and putrid. Amputation was had recourse to, but the patient sank a day or two after its performance.

THE LOCAL APPLICATION OF CARBOLIC ACID AND CREASOTE TO THE BRONCHIAL MUCOUS MEMBRANE.

By G. ANDERSON IMLAY, M.B., C.M.,
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Carbolic acid, creasote, and tar have long been known and valued for their stimulant and antiseptic properties, when applied as topical applications to foul ulcers, skin diseases, etc. Tar-water is an old and popular internal remedy in catarrhal affections, and, according to Ringer, it is a very efficacious remedy in winter-cough. But it seems to me that the profession have greatly undervalued their beneficial effects when applied as local agents to the bronchial mucous membrane; and as the method I adopt has been singularly successful, and is somewhat different from that in general use, I hope I may be excused for writing on a somewhat antique subject. In cases of long-standing chronic bronchitis, with profuse yellow purulent expectoration, I have never known these remedies fail to diminish expectoration and allay the troublesome cough in a remarkable degree. When we carefully examine the local action of carbolic acid, creasote, and tar on external inflammations, ulcerations, etc., we can easily conceive the beneficial results to be derived from their local application in the form of spray to the mucous membrane of the bronchi. Carbolic acid is well known to prevent decomposition; and nowhere is this action better verified than in cases of bronchitis with offensive-smelling sputa, for after a few applications it will invariably remove the fetid odour from the expectoration. I think, in this particular, carbolic acid is certainly superior to creasote. But, in my opinion, their beneficent action is mainly due to their astringent effect on the mucous membrane; and creasote has here a great superiority over carbolic acid, for it will frequently diminish the expectoration to one-half its former quantity in the course of three or four days. Their sedative properties are greatly inferior to those aforementioned, for I have frequently employed them in cases where a constant irritating cough, with slight mucoid expectoration, were the only symptoms complained of; but I cannot say that I have ever seen any benefit derived from their use. With regard to the manner of their application, the instrument I prefer is Siegle's inhaler, as I believe it possesses special properties when you aim at applying local medication to the bronchi. It consists essentially of a boiler containing water, a glass containing the solution of carbolic acid, creasote, or tar, as the case may be, and two glass tubes drawn to a fine point like an ordinary spray-producer. The steam from the tube in connexion with the boiler draws, by capillary attraction, the medicated solution up the second tube, and by this means a very fine spray is produced, capable of permeating to the most minute ramifications of the bronchial tubes; and, moreover, when it reaches the lungs it approaches as nearly as possible the temperature of the body. I generally commence with a weak solution of creasote—two minims to the ounce of water,—and gradually increase it to twice that strength. A sufficient quantity of spirit should be added to dissolve the creasote. I direct the patient to take one deep inspiration, so as to entice the spray well into the lungs, and again to renew it in the course of a few seconds. After one or two applications it gives rise to no irritation or cough, and it is extremely agreeable to the patient. Whether the benefit derived is partly due to its absorption by the mucous membrane I cannot say; but, as I have never seen any change in the colour of the urine or any other constitutional symptom whatever, even after its use for some weeks, I am inclined to attribute its value entirely to its local application. I subjoin notes of two cases where the results were most marked.

E. H., aged forty-five, had been confined to bed for three months with a severe attack of chronic bronchitis. During this period the usual remedies had been tried, but with no abatement of symptoms. When I first saw him, his face was dark and dusky from venous congestion, and sonorous and bubbling rhonchi could be heard all over both lungs. He expectorated about two pints daily—very yellow, purulent, and fetid; had lost a good deal of flesh, and suffered from night-sweats. No dulness could be detected on either side of chest. After using the inhalation of creasote for three days (thrice daily), the expectoration had diminished to one-half, the fetor had entirely gone, and the cough had greatly abated. Ten days after, the expectoration had diminished to a scarcely perceptible mucoid secretion.

G. H., aged forty, a labourer, had been suffering, for a fortnight previous to my seeing him, from an attack of acute bronchitis, with profuse frothy expectoration, fever, and dyspnœa. Since then the disease had assumed a chronic aspect; the expectoration had changed to a yellow, purulent character; the fever had in great part left him, though the dyspnœa still remained. Sonorous and bubbling rhonchi could be heard all over the chest. After using the creasote-spray for a week, the expectoration had diminished to less than one-fourth its former amount, and the dyspnœa had almost left him. At the end of a fortnight the profuse secretion had quite disappeared, though he still remained weak, and did not resume his usual employment for some weeks.

ON YAWS AND SOME ALLIED DISEASES.

By GAVIN MILROY, M.D., F.R.C.P.

There is no member of Cullen's class of Cachexiæ ("those diseases which consist in a depraved state of the whole, or of a considerable part, of the habit of the body, without any primary pyrexia or neurosis combined with that state") respecting which the profession is more ignorant than the malady of "yaws"—the "pian" of French writers, the "frambœsia" of nosologists. Only four or five years ago the Colonial Office sought the opinion of the College of Physicians on the subject, and the College frankly confessed its inability to answer the appeal.

Unhappily, amid the dearth of real knowledge, some late writers of repute have not hesitated to speak with unwise confidence as to the nature as well as the geographical history of the disease, and by hasty, ill-advised statements have only served to mislead us further from the truth. No one has more erred in this respect than Dr. Copland in his great work, "The Dictionary of Practical Medicine." Assuming, on most insufficient grounds, that yaws is a variety or modification of venereal disease, he designates it "African syphilis"; and he even goes so far as to surmise that the syphilis of Europe "is derived from, and hence identical with, the indigenous yaws of native Africans." To what mischievous practical results the belief in the syphilitic or syphiloid nature of yaws and some allied affections has given rise, will be pointed out in the sequel.

With respect to the hitherto widely received opinion of the

disease being confined to the West African coast and to the West Indies (the latter country having had it, according to general belief, introduced from the former), it will be seen how extremely doubtful and how misleading this view really is when the actual geography of the malady is duly investigated.

The distinctive characteristic of yaws is the eruption of raised or tuberculate pustules of a round or ovoid form, which become covered with a yellow or brownish scab or crust, and from which, on the detachment of this crust, there extrudes a raw-flesh fungus, resembling somewhat, by its reddish colour and granulated surface, the appearance of a raspberry (*framboise*). Hence the term "framboesia," and also that of "yaws," said to be an African word having the same meaning. The fungous excrescence, usually moist on the surface, with a viscid discharge, may vary much in size, colour, and form in different instances, according to its situation, the chronicity of the case, the age of the patient, and the cachexia of the constitution. Sometimes, on the falling off of the crust, the rounded raw-flesh surface is quite smooth and flat, or but little raised above the adjacent skin; or more rarely it becomes somewhat hollowed out, the edges being considerably above the level of the centre of the sore. Very generally the raw surfaces, whether protuberant or otherwise, are but little sensitive to the touch, and cause but slight pain or uneasiness on pressure. This feature often serves to assist in distinguishing a yaw sore from other forms of ulceration. The discharge is usually scanty and of an unhealthy character.

The eruption of yaws occurs most frequently on the face, neck, shoulders, front of the chest, and the extremities; often also about the pudenda and in the neighbourhood of the anus. The tubereulate pustules are usually single or discrete, but sometimes are clustered together, and occasionally they assume a crescentic or annular arrangement, enclosing in the centre a portion of unaffected skin—the "ringworm yaws" of the West Indies (Bowerbank). In children more especially the eruption often appears as a ring around the mouth, also too around the anus, where "the tubercules sometimes coalesce and form one projecting circular (red) band, an inch or more in breadth."—Imray. The throat and inside of the mouth are rarely affected, and only after the disease has long existed.

In many cases of yaws, and specially when the disease has been long neglected, and the constitution has become much deteriorated, there will frequently be found, besides the pathognomonic eruption now described, other forms of cutaneous disease, varying in character, but all serving to indicate the cachexia and depravement of the whole system. More or less of scaliness and desquamation of the skin is almost invariably present; and besides this, patches of vesiculo-pustular eczema are of not uncommon occurrence, and tend to aggravate greatly the distress of the patient.

In addition to these maladies of the surface, there is very generally in neglected cases a marked tendency to the occurrence of serpiginous ulceration in the seats of yaw eruption, after the early marks of this eruption have ceased to exist. And then these ulcerations become the most conspicuous features or manifestations of the distemper. Among the earliest cases pointed out to me in the West Indies were several of this sort, the real nature of which I did not at first understand. The following extracts from my Report(a) will probably best convey to the reader some of the various external characters of this somewhat multiform malady as it came under my observation:—

"I had been some time in Demerara before an opportunity occurred of my meeting with a case of a distemper which I had often desired to see for myself. The first was in an adult coolie, a patient in one of the ulcer wards of the Colonial Hospital, and was of a mild character. There were several scattered dark spots over the front of the chest, and a few on the neck and face, which indicated, I was told, where the yaw eruption had been; and there still remained the slightly protuberant raw surfaces of two or three small yaw-sores on the left cheek, temple, and ear. The next instances were in a poor negro woman, and her two young children, who had been brought by the police to the hospital in a destitute condition, and were all found to have more or less of decided yaw marks on them. In the mother the most conspicuous symptom was the existence of several red fungoid excrescences on the ankles. On the forearms were numerous large, dark, and raised papules or tubercules, which looked quite dry, and without any appearance of crust or discharge upon their surfaces. The elder child had, besides some large dark stains over the body where yaw spots had been, an ulcerated surface about the angles of the mouth. In the same outhouse was a creole woman in whom the disease, as pointed out to me, consisted in numerous superficial—at least not deep-seated,—irregularly ovoid, unhealthy ulcerations, from one inch and a half to two inches in length, over the front of the chest.

"At Berbice I saw a severe chronic case in an old man in the Almshouse: it was characterised by irregularly circular ulcerations on the lower extremities. The patient was in the same small ward with two cases of leprosy, and two or three other cases of ordinary ulcer.

"There were two cases in the outhouse ward of the Colonial Hospital of Trinidad—both in coolies; one had been of long standing. He had numerous prominent scabby spots over the trunk and extremities, of the size and appearance of small or largish limpet-shells, and covered with dry, darkish crusts, the removal of which (with a probe) exposed a raw surface, sometimes bleeding a little, and having a red, granulated, or slightly fungoid appearance, but with little, if any, purulent discharge on their surface. The case had been many months in the hospital, at times considerably improving, and then relapsing. In the other patient, the malady consisted in a large, pale, ulcerated surface over the front of the ankle and the dorsum of the foot, composed of three irregularly circular superficial ulcers, with raised margins, and showing no tendency to cicatrisation."

Of two cases which I saw in a village a few miles distant from Port of Spain, "one was in a young child, who had yaws ulceration around the angles of the mouth, and on the nates near the anus. The second was in a middle-aged woman, who had numerous rounded or horseshoe-shaped superficial ulcers on the front of the chest, arms, and legs, having raised margins and large granulations in the centre; some were covered with a yellowish crust or scab." In Jamaica I saw one case, in the Kingston Public Hospital. "The patient, a woman, had been admitted with syphilis; there were two or three well-marked yaw fungous ulcers on the thighs.(b) In the Coolie Depôt I saw three Hindoos who had been treated for the disease in the Lepers' Home, and had been recently discharged. In one of them several yaw tubercules, which looked like small limpet-shells adhering to the skin, were still to be seen on the body and limbs. In the Lunatic Asylum an inmate was pointed out to me who was dying from the effects of gangrene of the foot, induced, I was told, by a yaw ulcer. The patient had repeatedly suffered from yaw disease at different times before the present attack."

When the sick are left destitute, and the treatment of the disease is either utterly neglected or has been unsuitable and improper, the cachectic ulceration commits sad ravages, and the condition of the sufferers becomes deplorable indeed, as I found to be the case with the numerous patients that had been gathered together from different districts into the hospitals in Dominica. It was in respect of the effects of the disease in that island that the Colonial Office had found it needful in the latter part of 1871 to apply for advice from the College of Physicians. From the following passage in my Report the reader will best judge of the sequelæ of neglect and mismanagement of the malady:—

"It was not till I reached Dominica that I fully understood the gravity of the disease of yaws in its advanced and aggravated forms. When, on my first visit to the hospital at Morne Bruce, near Roseau, I witnessed in many of the patients extensive ulceration of the legs and feet, which had led to the loss of several of the toes, or to stiffened wrist and elbow-joints, with other disabling marks of long suffering, the sight was most distressing. Some of the younger children were in a deplorable condition, the victims evidently of starvation and neglect; emaciated to the bone, the limbs scamed with old scars and fresh sores; unable to turn themselves in bed, and requiring to be lifted up to be fed or dressed. As almost all the cases were of long standing, the primary pustulo-tubercular cutaneous eruption was to be seen in comparatively few of the patients; the dry white scurfiness of the surface (*pian dartre*

(a) "On Leprosy and Yaws in the West Indies." Presented to Parliament, March, 1873.

(b) Dr. Ross, one of the surgeons of the Hospital, says:—"A case occurred in a little child, about six months after admission for fracture of the femur. It was a well-marked case. Another case of a woman, admitted with syphilis (primary), who afterwards developed characteristic yaws on the inner side of the thigh. In this case the syphilis disappeared rapidly under the usual treatment, but the yaws took a much longer time. The disease did not spread from these cases." Report, page 60.

of French writers) was much more common. On admission the skin was always begrimed with dirt." In the case of a poor Hindoo youth I saw in the Almshouse in George Town, Demerara, besides the surface of the cheeks and extremities being occupied with yaw scabs, or with the dark marks left by former eruptions, and extreme emaciation, "the fingers of both hands were contracted. The left knee also was contracted, and the right one partially so, and the right foot had become everted, the results of scars from old ulcerations."

And now concerning "some allied diseases" alluded to in the title of the present paper.

Soon after writing my Report, my attention was incidentally drawn to the "Parangi disease" of Ceylon; its very name had previously been unknown to me. From the perusal of a most interesting and instructive official report, printed by Dr. Loos, colonial surgeon, entitled, "Depopulation of the Vanni District," and dated Jaffna, August 26, 1868, for which I was indebted to the Colonial Office, I was much struck with the resemblance in many respects of the history of the disease with what I had seen of bad chronic cases of yaws. Dr. Loos' narrative stands thus, and cannot fail to be read with much interest by the profession in this country, to whom it must be, I presume, quite unknown:—

"Setting aside the cases which may be easily resolved into well-known forms of skin disease met with everywhere, there is an obscure class of skin diseases, intimately allied, and probably having a common origin, prevalent in the interior of Ceylon generally, and more especially in the Vanni (a district in the north of the island). To this class I would restrict the term 'parangi.' The disease is met with in the maritime parts of the island, but I am satisfied it is there in a mild and modified form, probably from the aggravating causes not being so fully in operation as they are in the interior. It is met with in both sexes and at all ages; the one sex is not more liable to it than the other, and it is equally common at all periods of life. The eruptions are either pustular or tubercular; less frequently scaly. The pustules are small, round, and scattered, with an elevated scab, as in rupia. The tubercles are at first hard, but afterwards softer, and give exit to pus; and the ulcers formed are apt to be sinuous. These frequently run together, and larger ulcers are formed, which are liable to spread. The sores are irregular in shape, in some parts deeper than at other parts, covered more or less with yellowish and dark-coloured crusts; the discharge ichorous, but not copious. Sometimes the ulcers were found healed in the centre, or were healing in one direction, while they were spreading in another, so that extensive portions of the surface were found cicatrised, while other portions were ulcerated. In children ulceration was sometimes observed around the lips, and there were many cases of excoriations at the angles of the mouth, sometimes with white discoloration. One child had a large ulcer on the right nates, excavated, with yellow sloughs; another was in a wretched state of emaciation, with several ulcers on the body, and ulceration of the nostrils. The eruptions on the children were pustules or tubercules, the summits of which appeared to have a thin mucous lining from which serum exuded, and some had decidedly mucous tubercules (condylomata) near the anus. In older children and adults, nodes and affections of the bones were common, and obviously connected with the progress of the disease. I met with several young people who had become crippled from this cause, and from contraction of the cicatrices of ulcers about the joints. Many also complained of pains in the joints, and it was stated that such pains are often the precursors of the eruptions. Pustular eruptions were found in all parts of the body, including the face. The most common seats of ulceration were the hips, knees, and elbow-joints; but the dorsum of the foot, the back of the wrist and fingers, forearms and legs, were also in many cases ulcerated."

In a valuable report by Dr. Danforth, Assistant Colonial Surgeon, dated January 6, 1873, further particulars are given respecting the outward features of the disease, as he saw it in the Vanni district during a six months' visit to the locality in the previous year:—"It is characterised in its early stages by cutaneous eruptions; psoriasis is by far the most frequent of these eruptions. It is often associated with fissures of the skin, affecting chiefly the palms of the hands and the soles of the feet. The next in frequency are the tubercules; some of these are small, rounded, hard, and elevated above the level of the skin, developing in small circular groups with healthy skin intervening, and forming a small centre to each patch; while others are large, soft, isolated, and little elevated above the surface. These are generally scattered over the whole surface of the body. The vesicular and pustular varieties are not of very common occurrence, and are chiefly found in children of a broken constitution.

"As the disease advances, ulceration sets in, the ulcers commencing in the cracks and fissures of psoriasis, or in the tubercules, pustules, and vesicles. Not unfrequently the ulcers originate in boils of a chronic character. The ulcers are often found in all parts of the body, chiefly on the forearms and legs; they are circular, with elevated edges, and spread in every direction, destroying deeply the affected parts. The secretion is an unhealthy pus, or a mere watery ichor. Not unfrequently the ulcers are irregular and foul, spreading on one side and healing on the other."

The reader will doubtless have noticed the absence, in the descriptive accounts of the parangi by Drs. Loos and Danforth, of any distinct mention of the fungous excrescence from the ulcerated surface which constitutes the pathognomonic character of yaw ulcers in the early stage of that disease. But, curiously enough, this feature is specified in the description given in Mr. Marshall's very interesting work, "Medical Topography of Ceylon," published above forty years ago. He says:—"Obviously the term *parangi* is used in an extremely vague sense to denominate all sorts of troublesome or unmanageable cutaneous affections, varying from chronic, squamous, or papulo-pustular eruptions attended with great itchiness and irritation, and with or without a thickened elephantine or tuberculated state of the integuments, to the existence of numerous superficial ulcerations, which are often covered with thick crusts or scabs, or remain open and occasionally *become the seat of a large excrescence*, and which are usually accompanied with severe pains in the joints, and frequently also with the formation of tumours or abscesses in different parts of the body." The characteristic fungus protruding from the yaw tubercules is a marked feature of the "ceko" disease of Fiji, to which I shall invite the attention of the reader in my next paper.

Richmond, S.W.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MIDDLESEX HOSPITAL.

CASE OF LEFT HEMIOPIA—PAIN IN LEFT SUPRA-ORBITAL AND TEMPORAL REGIONS — TWO EPILEPTIFORM ATTACKS—DOUBTFUL HISTORY OF SYPHILIS, BUT IMPROVEMENT UNDER ANTI-SYPHILITIC TREATMENT.

(Under the care of Dr. CAYLEY.)

[For the following notes we are indebted to H. Humphreys, M.D., M.A., Medical Registrar.]

Charles H., aged thirty-three, a carter, was admitted into Hertford ward under Dr. Cayley, September 11, 1876.

No family history of disease. Fourteen years ago patient had a sore on the penis; it was not followed by secondary symptoms so far as can be ascertained. Has had "rheumatic pains" in left ankle for eleven years. Two years ago had a sore throat lasting two months. Since then has had occasional discharges from left ear. Lithotrity was performed on him two years ago. Patient's wife has not miscarried. His children are healthy; the youngest, a baby aged three months, was brought to the hospital in confirmation of this. No evidence of congenital syphilis.

Present Illness of Patient.—Three weeks ago his sight began to fail for objects on his left hand. This rapidly got worse, so that a fortnight ago he became totally blind in that direction, whilst he saw perfectly well everything to the right of him. A fortnight ago he began to suffer from pains in his head. He points to the left supra-orbital and temporal regions. Pain comes on in the evening, and lasts for several hours. One week ago had returned home from a short walk, and whilst sitting in his chair suddenly became insensible and fell. He was caught before he reached the ground. His left hand was clenched; he did not foam at the mouth. He remained insensible two minutes, then quite recovered himself. The fit was repeated the following day.

State on Admission.—The patient has complete left hemiopia;

there is no ocular palsy, and there is nothing abnormal to be seen in the fundus of either eye. There is no paralysis of any cranial nerve. He complains of pain over an area corresponding with the distribution of the left supra-orbital nerve. He is quite deaf on the left side. There is a hole through the left membrana tympani, which is probably old. No evidence of ulceration of pharynx; no nodes anywhere. In all other ways the man seems healthy and well nourished. His urine is acid 1010, and free from albumen. ℞. Pot. iod. gr. x., liq. hydrarg. perchlor. ʒj., inf. cinchonæ ad ℥j.; ter die.

September 15.—Much less pain in left supra-orbital and temporal regions.

16th.—Complains of pain over left shin-bone, especially at night; nothing wrong to be seen.

18th.—Supra-orbital pain less; hemiopia as on admission.

20th.—Severe pain in lower part of shin and ankle last night.

21st.—Severe frontal headache.

23rd.—Sight much improved; he has recovered the left half of his field of vision, with the exception of a small wedge-shaped area in the upper part of the field. This holds with regard to both eyes.

29th.—Vision as in last note. Discharged improved; to attend as out-patient.

Remarks.—We reported last week a case of hemiopia with hemiplegia, hemianæsthesia, and unilateral sweating, in which there seemed strong reasons for localising the lesion in the optic thalamus. The nature of the case now recorded is much more obscure. The association of hemiopia with some cases of "sick-headache" is well known. If we consider a typical case of migraine with (1) disorder of sight, whether hemiopia or spectra, (2) headache, and (3) vomiting, there is much to be said for the theory elaborated by Dr. Liveing of a nerve-storm which starts at the optic thalamus and radiates downwards along the sensory tract.(a) But, as Dr. Liveing has pointed out, the disorders of vision proper to migraine are essentially transitory. As a rule, they are the initial symptoms of the paroxysm. The occurrence of pains in the left supra-orbital and temporal regions, which came on in the evenings, and lasted for some hours, does not determine the nature of the hemiopia, because the hemiopia continued independently of the pains. It was unchanged for several days. This constancy excludes it from the category of migraine, pure and simple. The hypothesis which readily suggested itself, and upon which, in fact, the treatment was based, was a syphilitic gumma, possibly in the region of the right optic thalamus, with or without (considering the multiple nature of syphilitic lesions) disease of the dura mater. The history of the two epileptiform seizures, the nocturnal pains in the shin and ankle, the improvement under mercury and iodide of potassium, would seem in favour of this hypothesis. But there was no history of secondary symptoms; there were no nodes; the wife had had no miscarriages; the children were healthy. Moreover, there was no optic neuritis. Of course, this does not count for a great deal. The optic neuritis may come on later in the progress of the disease, or it may not occur at all, in a case of cerebral tumour.(b) The patient, it is stated, had had lithotrity performed two years before, which goes for something in favour of his being gouty. It is possible that the pains in the shin and ankle, which he called rheumatic, might be gouty in their nature. The association of larval gout with erratic neuralgiæ is well known. This might throw some light on the nature of the supra-orbital pain, but would still give no clue to the cause of the constant hemiopia. The old-standing disease of the left ear must be kept in mind, and the occasional sequence not only of smouldering meningeal disease, but of caseous tumours in the brain-substance.

HOSPITAL FOR PARALYSIS AND EPILEPSY, QUEEN'S-SQUARE.

CARIES OF DORSAL SPINE—PARAPLEGIA—PROFUSE SWEATING—RECOVERY.

(Under the care of Dr. GOWERS.)

[For notes of this case we are indebted to Dr. W. A. Sturge, Resident Medical Officer.]

E. D., a girl, aged eight years and a half, was admitted to the Epileptic Hospital, June 25, 1875, under care of Dr. Gowers. Symptoms of spinal disease had probably commenced when she was three years old. She began then to complain of pain in her throat. She was taken as an out-patient to Great Ormond-street, where probably the nature of her complaint was recognised, as she was ordered to be kept quiet on her back. Soon afterwards she lost the use of her legs. After lying in bed for several months she seemed to get all right, except that there was slight prominence of the spine in the upper part of the back.

She remained well until twelve months before admission, when she began to suffer from pain in the back and belly, and her mother noticed the curvature becoming more marked.

Six months later she rather suddenly lost power absolutely in both legs and in the right hand, and in a few days in the left hand also. From this date she likewise lost perfect control over her bladder; occasionally was able to pass her water at will, but most frequently would pass it unconsciously in the bed.

From the first onset of her illness she perspired freely, but during the last six months excessively.

Condition when Admitted.—A thin, unhealthy-looking child; eczema on face; right pupil larger than left; cranial nerves unaffected. Spine: A marked excurvation of spines of second, third, and fourth dorsal vertebræ. She can make slight movement of the head in all directions without pain. Absolute loss of power in all parts of upper extremities supplied by the brachial plexus; trapezii act well. Muscular Irritability: All the muscles of the arms required a rather strong faradaic current, and then the contraction was slight only. There was increased excitability to voltaic electricity in the flexors of the arm. In the lower extremities there was also absolute loss of voluntary power. Faradaic irritability in the muscles of the legs was about the same as in the arm, and nearly equal on the two sides, with the exception that in the rectus femoris the irritability was considerably less in the left than on the right side, and much less than normal. Faradisation of the legs was attended by marked reflex contractions of groups of muscles quite distinct from those over which the rheophores were applied. Sensation in the upper and lower extremities unmodified. There were no bedsores on either arms or legs; the skin was a little tender over the back. A marked feature in the case was the profuse sweating; it occurred all over the body, as much on one side as the other; it went on night and day constantly, but was more excessive when the girl was excited in any way. With respect to the bladder, she was not aware when she was passing water. Sometimes she asked for the urinal, but rarely passed any water at such times; there was never any accumulation. The urine was free from albumen; never ammoniacal. Bowels moved once a day unconsciously.

The treatment was absolute rest, tonics, and cod-liver oil.

For about two months the condition remained unchanged; then she became able to move the left hand and the legs a little. The excessive perspiration continued.

In the beginning of October she regained power over the sphincters.

On October 30 she was able to move the right arm a little in addition to the left arm and the legs. Faradaic irritability as before.

One week later she was able to walk a little, resting her hand on the bed.

From this time her progress was rapid. The perspiration ceased, and she was soon able to run about the ward.

Remarks.—With respect to this case Dr. Gowers observed that it illustrated the well-known benefit of absolute rest in the paraplegia of young subjects, secondary to caries of the spine. The child's state on admission was, doubtless, very grave. For some time no improvement was seen, but ultimately there was steady subsidence of the symptoms. The actual cautery has been recommended in such cases. It is questionable whether some of the benefit occasionally resulting has not been due to the rest secured at the same time. In one or two cases in adults in which Dr. Gowers has tried the actual cautery, no improvement has followed. More accurate knowledge is needed of the mechanism by which caries of the spine causes paraplegia, and of the indications by which such mechanism may be recognised. When a considerable paralysis comes on rapidly in the course of a day or two, it is probably produced, not by pressure by the projecting bodies of the vertebræ, but by the extension of inflammation to the membranes or perhaps the cord. The ordinary symptoms of meningeal mischief have been absent in many cases where "pachymeningitis" (inflammatory thickening of the dura mater) was the cause of the paraplegia. In this case there was additional evidence that

(a) "Megrim," by Edward Liveing, page 396.
(b) *Vide* Hughlings-Jackson, *Ophthalmic Hospital Reports*, 1876.

the cord was affected in such an indirect manner, from the fact that the loss of function extended a considerable distance above the position of the obvious mischief in the bodies of the vertebræ —certainly as far as the middle of the cervical enlargement.

The prognosis in such cases of paraplegia is difficult, because not only are we uncertain as to the form of the cord-mischief, but also as to its extent. The loss of motor power corresponded in this case either to slight pressure on the cord, or to its absolute destruction at the damaged spot. The latter was excluded by the persistence of sensibility in the paralysed limbs. This shews no more than that the cord is not entirely disorganised. As long, therefore, as sensation is preserved, recovery may be hoped for. The duration of the paralysis in these cases is not nearly so grave an element in prognosis as in other forms of paraplegia. Dr. Gowers has known cases of complete paraplegia recover after two years' duration. It would seem that if the pressure on the cord be only slight, the conducting power of the fibres may be destroyed, although the structural continuity —perhaps only that of the axis cylinders—is preserved. The cervical region of the cord is a very rare seat of primary myelitis, except those forms which are rapidly fatal, and we have not often an opportunity of studying what may be called the horizontal effects of these lesions—*i.e.*, those which depend on altered function of the nerves given off from the damaged region. In this case the increased irritability to the battery-current in the muscles of the right forearm was interesting, as the condition presented when muscles are separated from their motor centre by an irritating lesion. The sweating was a striking feature. It was at one time so profuse that it caused a miliary eruption on the face. It probably may be referred to altered function of the sympathetic fibres, since the region of the spinal cord damaged is that in which the "cilio-spinal" centre has been placed. The inequality of pupils was further evidence of an affection of the sympathetic, although no difference in the amount of perspiration on the two sides of the head was observed.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 4, 1876.

SIR WILLIAM GULL AND DR. GEORGE JOHNSON.

We have hitherto refrained, advisedly, from noticing the dispute between Sir William Gull and Dr. George Johnson, because it seemed to us the best and wisest course to leave the matter entirely alone, as being one that concerned only those two physicians at first, and then also the Censors' Board of the Royal College of Physicians, to which it had been referred. And even when, a fortnight ago, the decisions of the Censors' Board by some irregular means became known to the public, we made no reference to it, thinking that if a paper of such a character had been intended for the public eye it would have been communicated to us either by the College of Physicians or by one or both of the Fellows especially concerned. But at the meeting of the College on the 26th ult. it was formally determined that the judgment of the Censors' Board on the complaint brought by Sir William Gull against Dr. George Johnson, and Dr. George Johnson's reply, should be made public; that is, the College decided by formal vote, and in deference to the expressed opinion of Dr. Johnson, that the judgment should be read to the assembled Fellows, and that it should not be considered as one of the *Secreta Collegii;* and we therefore now publish an exact copy of it in our report of the proceedings of the College meeting.

We venture, however, still to think that the formal publication of the paper is a very regrettable mistake. In the first place we would observe that the reasons given for thus publishing it—namely, that the account of it which had already appeared was an imperfect, *ex parte*, or garbled statement—can hardly be said to hold good; for, as it seems to us, the report given of it, by one of our contemporaries at any rate, was marvellously full and accurate; so that nothing in point of accuracy has been gained by the authorised publication of it, while we cannot but fear that mischief may follow from such a proceeding. The matter in question, or the root and main ground of it, was not one that concerned the public or the profession at large. It was a question of collegiate discipline interesting the two Fellows implicated, and the College to which they belong. It was, in short, a question of the infringement of one of the by-laws of the College, which we give immediately below, and was very properly referred to the Censors' Board to be considered and settled. The by-law runs as follows:—

"If two or more physicians, Fellows or Members of the College, be called in consultation, they shall confer together with the utmost forbearance, and no one of them shall prescribe, or even suggest, in the presence of the patient or the patient's attendants, any opinion as to what ought to be done, before the method of treatment has been determined by the consultation of himself and his colleague; and the physician first called to a patient shall, unless he decline doing so, write the prescription for the medicines agreed upon, and shall sign the initials of the physician or physicians called in consultation, he placing his own initials last. If any difference of opinion should arise, the greatest moderation and forbearance shall be observed; and the fact of such difference of opinion shall be communicated to the patient or attendants by the physician who was first in attendance, in order that it may distress the patient and his friends as little as possible."

It will be observed, on perusing the judgment of the Censors' Board, that they expressed their extreme regret that "any cause of complaint or misunderstanding should not have been removed by mutual conference, so as to have rendered any reference" to them unnecessary; but the matter having been so referred, they did not hesitate to blame severely points in the conduct of both the eminent Fellows concerned. Their decision was communicated to those gentlemen, who courteously acknowledged it, and then shook literary hands, and agreed to resume mutually friendly relations. There the matter should have rested; or, to use the expression of Sir William Jenner, the document should have been buried.

We will still hope, however, that, as concerns the two physicians especially interested, the dispute or misunderstanding may be allowed to fade away and be forgotten. We can see no object to be gained by calling or looking for any more explanations. The only real explanation is to be found in the recognition of moral and intellectual idiosyncrasies,

and of the fact that when strongly marked individual characteristics are brought into opposition, and no neutralising, softening, or blending force be interposed, misunderstandings and wounded feelings will quickly develope into disputes and complaints.

But the publication of the decision of the Board of Censors is to be regretted, not only because it tends to keep alive the memory of a most unhappy misunderstanding, but also because it may destroy, or greatly lessen, the value and importance of that Board as a court for the settlement of professional misunderstandings and disputes between the Fellows or Members of the College. Hitherto such matters could be referred to the Censors' Board, and arranged without becoming known to the profession at large, or the public; but if there is to be in the future a probability, or possibility even, that the judgments of the Board will be made public, it is hardly to be supposed that their help to arrange differences will be sought promptly, or with any feeling of confidence or satisfaction, and thus a valuable aid to peace and friendliness may be lost. And, again, if the decisions of the Board are to be read at the meetings of the Fellows, it will be difficult to prevent statements in explanation and partial discussions of them; and anything of that sort cannot fail to lower the dignity of the Censors' Board and of the College. The possibility of such results is surely greatly to be deprecated.

At the College meeting to which we have referred, some discussion took place as to the publication of the College proceedings. We imagine that there has been a general understanding among the Fellows, and it has certainly been the custom, that only such of the proceedings shall be published as are contained in the abstracts of the minutes hung in the hall of the College; but no regulation of the College forbids the publication of any portion of the proceedings that has not been declared secret. The Fellows, on admission to the College, promise, among other things, "to regard as secret its proceedings, when the College so desires it." But it really lies with the President himself to prevent the publication of any matter brought before the College; for one of the by-laws decrees that no Fellow shall divulge any of the proceedings of the meetings, or of any meeting, "the proceedings of which he shall be required by the President to keep secret." The President cannot therefore be surprised at, or blame any one for, the publication of any College resolutions or proceedings, if he has neglected to use the power thus vested in him—a power which, it is clear, he can use, and is meant to use, *proprio motu*, and without taking the sense of the College on the matter.

WINTER QUARTERS IN JAMAICA.

We see on our table Dr. Phillippo's little work on the Climate of Jamaica, and are reminded that something yet remains to be said on the subject of winter quarters for the invalid. The condition of the invalid is, of course, that which must determine the physician in selecting the place to be recommended. Now, a large—or we may say the largest—section of the invalids who winter abroad are persons in imperfect health, rather than affected with definite disease. Persons, for instance, somewhat advanced in life, retired from business, who find time pass rather heavily in our English winter; on the other hand, delicate children of strumous tendency, with propensity to catch severe colds, with, perhaps, enlargement of the glands of the neck; hypochondriacs, dyspeptics—any people, in fact, who cannot brave the open air in winter, should go southward if they can. Nor does it very much matter what place they select, provided that the days are mostly sunny and not rainy, that there are no very sudden changes of temperature, and that enough nourishing food can be had. Whether such persons be sent to Naples, or Malaga, or Egypt, to Rome, Florence, Arcachon, or Algiers, matters little. They will have many of the conditions of an English summer; will have exercise and sunshine by day, and, if wise, will wrap warmly at nightfall. The good effects of a winter abroad to such patients often last for years; it is like a "new lease" of life.

The same remarks apply almost entirely to patients with threatened phthisis, only a little more discrimination is required; and especially are those places to be shunned which have visitations of cold winds and sudden changes. Algiers, Mentone, Malaga, seem to have most evidence in their favour; and Upper Egypt, if the cost is not too great (we spoke lately of Suez and Ismailia); but amongst these and other well-known places it will not be difficult to select a dry, tonic, sunshiny place.

There is a third class of patients affected with irritable bronchitis, asthma, and pleuritic tendencies, to whom a more soothing and less exciting place should be recommended—such as Madeira, and in the spring Pau. To these patients may be added another class, who are strangely neglected in most books that treat of climate, the writers of which seem to think that all maladies are pulmonary. We speak of persons suffering from or threatened with degeneration of the kidneys. To such persons, and to many pulmonary invalids who feel that their physicians are inclined to "give them up" as hopeless, we unhesitatingly say, Make a bold move; go further than to places such as Cairo, Algiers, and Malaga, where evening chills are to be feared; further than the South of France, where at times you will be shivering and crying over a smoky fire of damp wood, sold at an extravagant rate. Go down the Red Sea from Suez to Galle, and enjoy the exquisite balmy warmth —never oppressive in the three winter months,—and the pure ocean air and sunshine. There you will feel that the internal organs are freed from blood-pressure; and the skin active, but not exhaustingly so, relieves the kidneys and lungs. But there is an alternative, of which we are reminded by Dr. Phillippo's book.(a)

There are the West Indies for those who prefer them to the East; and the Royal Mail Steam Packet Company makes the voyage in less than three weeks. Dr. Phillippo writes like a man of sense, and with no tendency to exaggeration. He advises that the voyager should arrive at Jamaica in December, after the rainy season, and then not hang about the lowlands, but go up to the hills. Their climate, he says, "approximates very closely the English summer weather, though without the extremely hot days and dense atmosphere that renders them so oppressive." For the man with health, energy, and capital sufficient to settle there, and cultivate the rich tropical products of the island, Dr. Phillippo, as an experienced resident, holds out a bright—but, we believe, a justifiably bright—prospect.

THE CHAIR OF PHYSIC IN THE UNIVERSITY OF EDINBURGH.

Since last writing, the contest for this chair has been decided, and Dr. Grainger Stewart has been elected to the highest post in the largest and most important medical school in the kingdom. We need hardly say that in this we heartily rejoice. From the first, after taking a fair survey of the claims of the various candidates, and of the wants of the school, we could not help thinking that Dr. Grainger Stewart fulfilled all the conditions better than anyone else. He is a skilled and practised teacher of medicine both at the bedside and in the lecture-room. He is an original investigator and thinker; moreover, a man who has been highly successful in practical life as a physician. The appointment of anyone else would have left Dr. Grainger Stewart as an extramural lecturer, highly popular with the students, and commanding

(a) "The Climate of Jamaica," by James Cecil Phillippo, M.D. London: Churchills. 1876. Pp. 82.

a class which would have seriously interfered with the class of physic in the University. This, we think, is not desirable. The Extramural School is the pride and glory of Edinburgh, and to its existence is due in great part the present flourishing state of things in the Edinburgh School. There men are taught and trained for the work of teaching others. There they have a fair field and no favour. They can command success, or failure may attend them, but there is no protection for them as there is for a University teacher. Nevertheless, when the Extramural School can hold its own with the University teaching, or still more, if its success is greater in any given department, there must be something wrong with the University teaching, or more likely with the teacher. We do not think it probable, nor do we think it desirable, that Dr. Grainger Stewart will have everything to himself. There are plenty of younger men ready to come forward as extramural teachers of medicine, but we certainly think he can hold his own with any of them. In him the student will assuredly find an earnest and painstaking teacher.

We are glad, however, that Dr. Gairdner has not been overlooked. His loss to Glasgow would have been almost unspeakable; the gain to Edinburgh would have been small in comparison. But his appointment as Physician to the Queen in Scotland will certainly tend to mitigate his disappointment—if, indeed, he is disappointed—at the loss of the Edinburgh chair. We question greatly whether Dr. Gairdner's sphere of usefulness would have been increased by his transfer to Edinburgh. This we say being profoundly impressed with the good he has done, and may yet do, among the Glasgow students.

The other Physician-in-Ordinary to the Queen in Scotland is the veteran Sir Robert Christison, Bart.

THE WEEK.

TOPICS OF THE DAY.

On Saturday last the officials of the Metropolitan Board of Works inspected the locality of Goulston-street, Whitechapel, the local authorities having certified to the Board that the district was an unhealthy one, under the provisions of the Artisans' Dwellings Act of last session. The officers of the Board have come to the conclusion that the majority of the houses are not fit for human habitation; and they propose to clear away the old rookeries, and construct blocks of improved dwellings. The district comprises 240 one-room tenements, with 883 persons living in them; 180 two-room tenements, with 360 rooms and 856 occupants; and 89 three-room tenements, with 469 occupants. The net cost of the improvement has been estimated at £109,700. The Medical Officer of Health for St. Luke's, having reported that a large district in the vicinity of Golden-lane, Whitecross-street, and Bunhill-row was an unhealthy area, on the same day the officials of the Metropolitan Board of Works proceeded to investigate and inspect this spot, with a view of preparing plans for the demolition of the houses, and the erection in their stead of healthy and improved dwellings for the working classes. The estimated value of the property is £251,836, and the net cost, after a recoupment of £176,450, is set down at £75,386. It is stated that the Board will take immediate action in both of these cases.

A serious case illustrating the danger resulting to human life from the want of care in supervising gas-fittings in houses is reported from abroad. Three girls, servants at a restaurant in Antwerp, near the Bourse, have died from the effects of an escape of gas in their bedroom. A fourth, who slept in the same room, lies dangerously ill in the hospital. They were called, as usual, in the morning, but did not answer; a smell of gas was perceived, and the door of their room was burst open. Two of the unfortunate young women, aged respectively eighteen and twenty-two, were dead. The other two were at once removed to the hospital, where one of them, a girl of eighteen, expired the next morning. The survivor, of whom there is not much hope, is twenty years of age. An official inquiry into the case was at once ordered to be instituted. Turning off the gas every night at the meter will prevent such accidents to a great extent, though there is then danger if the taps of individual lights are not turned off.

During the past fortnight the Commission on Noxious Vapours have held sittings for the reception of evidence at Liverpool, Tynemouth, and Newcastle-on-Tyne, and have personally visited several chemical and other works at Widnes, St. Helens, Runcorn, Newcastle, and elsewhere. Numerous witnesses have been examined as to the effects of acid gases and other fumes proceeding from these works on vegetation and on health. It is understood that the next sittings of the Commission will be held in London, when evidence on behalf of the manufacturers from the districts of the Mersey and the Tyne will most likely be taken.

The Middlesex Coroners' accounts for the quarter ending September 30 last show that, during that period, Mr. Humphrey had held 281 inquisitions, at a cost of £464 7s. 6d.; Dr. Hardwicke, 182, at a cost of £379 5s. 9d.; Dr. Diplock, 83, at a cost of £158 9s. 6d.; Mr. Payne, 8, at a cost of £21 4s. 2d.; and Mr. Bedford, 64, at a cost of £111 3s. 3d.

An extraordinary statement, which, however, requires corroboration, has been made with regard to the Birmingham Workhouse. An inquest was recently held on the body of a child born in the tramp ward of this workhouse. According to the evidence given, the mother was locked up in the ward all night, and there were no means of communication with the other parts of the house. The other occupants of the ward—five women—did all they could to attract the attention of the officials when the mother of the unfortunate infant was taken ill at one o'clock in the morning. All through the night they hammered with their hands and with a stick upon the door without obtaining assistance. At half-past four o'clock the child was born, and when the clock struck seven, and the door was unlocked, it was found dead by its mother's side. The woman herself, who is still alive, could not, it appeared, get even a drop of water to drink during the night; for, although she entreated the other women to give her some, they stated that they did not dare to do it, as, not knowing anything about such matters, they were afraid to interfere. The coroner adjourned the inquiry, stating that it would be his duty, from what he had ascertained, to lay the facts of the case before the President of the Local Government Board, in order that, if thought proper, an inspector might attend at the adjourned inquest. That inquiry, he added, had forced upon him the conviction that there was a necessity for another inquiry, in which the vigilance of the guardians of the poor might be brought into question. For the satisfaction of all parties, it is certainly desirable that the matter should be thoroughly investigated.

A possible danger has been averted by the prompt action of the Port Sanitary Authorities at Bristol. A large quantity of currants, of the value of between £7000 and £8000, had been brought to the port by a steamer from Patras. It appears that in addition to the currants the vessel was laden with a quantity of lead ore, and, in the rolling of the vessel at sea, some of the ore, in which antimony and arsenic are found, had entered into the cases of currants. The Customs authorities discovering this, communicated with the port medical officer, and under his instructions the whole of the fruit was immediately seized. A declaration was subsequently made before the justices, who approved the action so promptly taken.

According to the latest accounts received, the fatal cases of fever which have appeared in the squadron on the West Coast

of Africa have occurred in the *Active*, the flagship of Commodore Sir William Hewett, V.C.K.C.B. There is reason to believe that the outbreak was not caused by any unhealthiness of the ship itself, but that the fever was contracted up the River Niger. Those first affected had been engaged in the expedition up that river, and had been employed on board a steamer engaged in the oil trade. It is probable that the disease was contracted on board that vessel, owing, possibly, to foul bilges and the want of proper ventilation. The *Active* has been ordered to St. Helena for the benefit of the health of her officers and crew.

Last week, twelve persons were brought before the Manchester Stipendiary, who were each summoned on three charges —first, of wilfully and falsely pretending to be a physician, doctor of medicine, or general practitioner; secondly, with falsely using a name implying that he was recognised by law as a physican, surgeon, or practitioner in medicine; and thirdly, to show cause why a quantity of obscene books or pamphlets found upon his premises should not be destroyed. On the 20th ult., Detective Caminada went to one of the defendants, who styled himself "Dr. Lewis, M.D.," and who also carried on business in Leeds and Liverpool, and paid him 10s. 6d., consulted him about his health, and subsequently he paid him another 10s. He was shown a bottle of water, which was, in fact, a chemical mixture, and was told that he was suffering from extreme nervousness, and the defendant said that he would put him right in three weeks for forty guineas. This defendant was fined £20 on the charge of falsely pretending to be a physician or doctor of medicine, and another charge against him in reference to the obscene literature was adjourned. Another defendant, named Whitchurch, was fined £5; and in other cases fines of £10 and £15 were inflicted. Some of the cases were adjourned for a week. The public analyst for the city had analysed the "medicines" given to the detective, who had consulted all the defendants in turn, and in nearly every case the mixtures were of a harmless and useless nature. After the detective had seen them all, a raid was made upon their premises, and some tons weight of obscene literature were seized.

The "spiritualists" would appear to be having rather a bad time just now. The Slade case in London has evidently stirred up opponents elsewhere, and at the Huddersfield Police-court, last week, the "Rev. Francis Ward Monck, formerly a minister at Bristol," was charged under the Vagrant Act with imposing upon her Majesty's subjects. The details were of the usual description, with the exception that, upon the occasion of the reverend medium performing, an amateur conjurer present offered to do all the *soi-disant* medium had done. He insisted upon an inspection of the spiritualistic paraphernalia, and so frightened the "medium" that he forthwith sought safety in flight, leaving behind a motley collection of "spirit-hands," "musical-boxes," etc. The prisoner's solicitor contended that there was not even a case for a remand, and that the Vagrant Act did not apply to a gentleman in the position of Mr. Monck, who kept his carriage and yacht at Bristol. As, however, there was a charge of defrauding a person out of £20, the magistrate granted a remand, but in answer to an urgent appeal from the prisoner, he consented to take substantial bail for his future appearance.

A very complete mortuary, with a convenient room annexed for post-mortem examinations, has recently been provided by the Vestry of St. James's, Westminster, for that important parish. In opening this building it has been considered expedient to issue a circular throughout the parish, conveying the following information:—It is believed that this mortuary house will be found to be of great use to the poor who live in apartments where it is not practicable for them to set aside a room solely for the reception of the dead; also for hotels, clubs, and lodging-houses, etc., where the safety and comfort of travellers will be promoted by the prompt removal of the dead; and in cases of death from fever and other infectious maladies, in which the continued presence of the dead greatly increases the risk of infection among the living.

GOVERNMENT MEDICAL SERVICE IN JAMAICA.

Newspapers from Jamaica just to hand report the deaths of Dr. H. Hume, Government Medical Officer of the Falmouth District, Jamaica, and of Mr. A. Cutler Nadin, L.R.C.P.E., Government Medical Officer for the Linstead District. The former died on his passage to England, being on sick leave; and the latter died from yellow fever, after an illness of only five days. Mr. Nadin was formerly in practice at Sheffield, and only left that town about twelve months ago. His death so shortly after arriving in the island affords another example of the great risks European medical men run when they accept the post of district medical officer in this tropical island. The dangers of the service appear not to be recognised by the Government; at least, it is the fact that the district medical officers are treated with scant consideration, and, it is alleged, inadequately paid. Recently the Government medical officers in the island addressed a memorial to the Governor, Sir William Grey, in which their grievances were set forth, and redress prayed for. The memorialists state that in the discharge of their duties they are often exposed to personal risk and danger, and many of them have been repeatedly struck down by tropical disease contracted when on duty, and that they are the only civil servants in the colony who cannot claim the privilege of obtaining leave of absence when broken down by sickness and overwork without sacrificing their entire salary. Other minor grievances are referred to, such as insufficient pay for the performance of vaccination and post-mortem examinations, and that the qualified members of the profession are not protected by law from quacks and ignorant pretenders, who are permitted to charge for advice and medicines on equal terms with medical men. No answer has, as yet, been returned to the memorial; meanwhile, some medical officers are dying, and others are leaving the service. Many districts in the interior where Europeans reside are, we are informed, without medical aid, and so they will probably continue, unless the British Government recognises the claims of their medical officers, and encourages medical men of standing to settle in Jamaica. Commenting on the deaths of Drs. Hume and Nadin, *Gall's News-Letter* says—"We sincerely hope sober, reliable men will be found to take their places, for —however painful the remark may be—the fact is that many G. M. O.'s are given to strong drink, and are quite unfit to take charge of the lives of their fellow-men. . . . If his Excellency cannot get better men, there must be some cause for it; and we ask, in protection of society, life, health, and all that is fair, let us have in our country districts men of intelligence and sobriety." We are not in a position to deny the statements of the *News-Letter*,—indeed, we should be surprised if the Government were able to get men of intelligence and sobriety to serve in the country districts of Jamaica, when it is notorious that those who have accepted such offices are underpaid and inconsiderately treated. We are glad to see that the local press have taken up this question. Let the subject be well ventilated in the island, and his Excellency the Governor must give it his attention, and, we should hope, soon place the service on a better footing.

MEDICAL SOCIETY OF LONDON.

At the meeting of this Society on Monday, the 23rd ult., there was a large gathering of surgeons and visitors from town and country—Mr. Annandale, of Edinburgh, being one among the number—to see the last three patients on whom Mr.

Maunder had performed subcutaneous osteotomy with chisel and mallet. Mr. Maunder said that last session, at the Clinical Society, he had read a paper on subcutaneous osteotomy of the femur, performed with chisel and mallet, and had illustrated the subject by the report of four cases and the exhibition of patients. He proposed now to shew three other patients. In this way all that he had done (seven cases) would be known to the profession. He pointed out that he had been gradually led up to osteotomy by failures to correct deformity—the result of strumous hip-joint disease—by more simple methods, such as tenotomy, forcible attempts at extension under chloroform, prolonged extension by weights, and Thomas's splint. He then, in one instance in addition, divided the *neck* of the femur with a saw subcutaneously, and still the patient was not benefited; and that he came to the conclusion that, in this variety of disease, some other means must often be resorted to. At length the idea of dividing the bone below the lesser trochanter occurred to him, and the chisels as used by Professor Volkmann, of Halle, to correct deformities about the knee, commended themselves to his judgment. Instead of using three chisels, as recommended by Volkmann, he had in his later cases used one only (a carver's "cold" chisel, three-eighths of an inch wide). The patients shown were sixteen, twenty-one, and twenty-four years of age respectively. In all great lordosis had existed, but was no longer present. In one the thigh had been fixed at an angle of 118°, and the extremities were now parallel, and the patient could walk so well that she declined a high-heeled boot. In the other two the thigh was fixed at a right angle to the line of the body. Now lordosis no longer existed, and one of the young men could walk so nimbly that he also declined the high-heeled boot. Of these cases, six had been operated upon to correct deformity after hip-joint disease; and one, where the shaft of the femur had been divided about its middle, to correct deformity following malunited fracture in a man of thirty. Mr. Maunder thought that this great success attending the use of the chisel could not fail to recommend it to the profession. Of his seven cases, two of the earlier ones had suppurated *slightly*, for reasons preventable in the future, and detailed in the *Transactions of the Clinical Society* (1876); while in five absolutely not one drop of pus had been secreted, the wound healing primarily, as after tenotomy, and the patients getting about from six to eight weeks subsequent to operation. Photographs showing patients before and after operation were exhibited. Mr. Golding Bird said he had performed osteotomy twice at the neck of the bone —once with the saw, once with the chisel; and he preferred the latter instrument. Mr. Annandale (of Edinburgh) had performed osteotomy several times, but through an open wound, and with antiseptic precautions. He had used both saw and chisel, and had a decided preference for the chisel, because he found that he could use it through a smaller wound and with more precision than the saw; he likewise found that it cut cleanly, and did not splinter even the hard, compact structure of the shaft of the femur. Mr. Napier, Mr. Davy, and Mr. William Adams also spoke. In reply, Mr. Maunder said that the information which had been afforded by Mr. Annandale concerning the action of the chisel on hard bone was most valuable, and was an all-sufficient answer to those who thought the chisel would injuriously splinter the shaft of the femur, for example. He deprecated the use of the drill, which, like the saw, must cause *débris*, which would often promote suppuration. He pointed out that Mr. W. Adams' proposition, that lordosis associated with deformity consequent on hip-joint disease begun in early life was incurable, was not quite consistent with fact. In two of his (Mr. Maunder's) patients, twenty-one and twenty-four years of age respectively, the disease had originated seventeen years ago; lordosis had been extreme, but, in consequence of the operation, existed no longer.

INCREASED WATER-SUPPLY FOR BRIGHTON.

Last week the Mayor and Corporation of Brighton, together with a large gathering of gentlemen invited for the occasion, inspected a considerable addition to the town waterworks, which has recently been completed. The principle on which the works are based is one which was first laid down by the late Mr. Easton, and which was by him successfully applied to Ramsgate in 1834. Mr. Easton ascertained that the rain-water falling upon any elevated chalk formation near the sea would, as a rule, percolate through the chalk, and find its way to the sea by channels which had their outlets near to or a little below the high-water mark. In the case of Ramsgate the fissures or channels which conveyed the water were found to pursue a course almost at right angles to the coast-line, and a short tunnel parallel to that line soon yielded an abundant supply. At the original Brighton Waterworks in the Lewes-road the conditions were the same, except that the channels struck were smaller; and hence the supply, though large, was found insufficient to meet the constantly increasing wants of the growing town. Subsequently the owners of the Stanford Estate allowed the Corporation to purchase at a very moderate price a suitable piece of down-land at Goldstone Bottom, in a situation favourable for sinking into the soft chalk. Two shafts have been completed of a depth of 150 and 180 feet respectively; these were connected by a tunnel, and other tunnels were driven in such directions as to form a subterranean quadrilateral, with the result that rivers of considerable size were opened. The tunnels are about six feet wide, and nine high at the crown of the arch, and their total length is more than half a mile. The water rises in them so rapidly that recently, when, in order to finish off the work, it has been necessary to keep the water as low as possible, the quantity pumped up daily with this object has amounted to no less than 7,000,000 gallons. The present requirements of Brighton are fully met by about half this quantity, so that, without taking the Lewes-road works into consideration, the Town Council has the command of twice as much water as is actually required. But the requirement has hitherto increased rapidly. Thus in 1854 the number of houses supplied was between 7000 and 8000, in 1863 the number had reached 14,000; and at the present time it is nearly 23,000. The magnitude of the new tunnels is not, therefore, in excess of what a prudent foresight would demand; meanwhile, as the experience of Messrs. Easton and Anderson shews that there is little or no tendency to any general leakage from the chalk, in the present works one of the tunnels has been stopped by a dam of brickwork, through which iron pipes are brought out, so that the contained water can be tapped whenever it is wanted; in the meantime it is kept back, and is entirely under control. The water now obtained is of the best possible quality, with the single exception that it is a little hard for some purposes, although not too much so for domestic use; it is absolutely free from any kind of organic defilement, having been effectually purified in its underground journey; and it is never exposed to daylight until it flows out of its pipes in the houses of the consumers. Messrs. Easton and Anderson, the engineers, who have carried out the whole undertaking, are to be much congratulated on the success which has attended their exertions.

OPENING OF THE MEDICAL SESSION IN GLASGOW.

The winter session of the Medical Faculty of the University of Glasgow was opened by an introductory lecture from Dr. McCall Anderson, Professor of Clinical Medicine, who, after speaking of the recent change in the teaching staff of the University, addressed himself chiefly to the subject of the preliminary and professional education of the medical student. He observed that, however invaluable high education is, yet the requirements in that direction might be carried so far that

there would be a risk of polishing the medical student off the face of the earth; and that already the proportion of medical men to the population was decreasing. And he went on to remark that "There was at present a great outcry against the power possessed by no less than nineteen bodies to grant licences to practise, and in favour of what was called the one-portal system, one with which he could not but sympathise; and he should be pleased to learn that a minimum State qualification was likely to be introduced, having no connexion whatever with the universities or Royal colleges, and which everyone on entering the profession was obliged to possess, leaving the present licensing bodies to bestow their honours upon those who chose to seek them, and who were anxious to engage in the higher walks of practice. At all events, he felt very strongly that it would be undignified upon the part of our universities to continue to regard their degrees in the light of mere licences; and he trusted the time was not remote when they would grant them to those only who had passed examinations of a very searching kind, or who had highly distinguished themselves in the science or practice of medicine." At Anderson's University the opening address was delivered by Professor A. M. Buchanan, M.D., who first directed attention to the nature of medical science, and showed why and how it is characterised by more or less uncertainty. He then said that it might be asked if there was any means by which that uncertainty might be obviated, or at least diminished; and, answering the question, he advised "the students first to acquire as many truths and facts relative to medical science as possible, being indebted for such facts partly to their own observation, and partly to the evidence of others; secondly, to group and arrange these facts; and thirdly, to go through the process of generalisation, which consisted in inferring certain general facts, or deducing certain general principles. In performing this process of generalisation, prolonged observation of facts, and an accurate knowledge of those facts which stood to each other in the relation of cause and effect, were absolutely necessary." The lecturer proceeded to notice certain habits of mind which ought to be cultivated by students, such as mental concentration and active inquiry, and to sketch the order in which they should pursue the study of medical science. We regret that it is impossible for us to notice these able Introductory Lectures at any greater length.

DR. ROUSSEL'S BLOOD "TRANSFUSEUR."

The following is a brief account of Dr. Roussel's new apparatus for the transfusion of blood. It consists of what may be described as a cupping-glass of the usual shape, and running vertically through it is a hollow cylinder which serves not only to carry the lancet, but also as a receptacle for the blood. The cupping-glass can be exhausted by an elastic ball which is connected with it, and by this means it is attached to the arm. The cylinder which it contains is placed exactly over the vein from which the blood is to be obtained; and the fact of the cupping-glass being exhausted of course causes the vein to come prominently forward. It is then incised by a spring lancet contained within the cylinder, into which the blood immediately rises. Connected also with this cylinder are tubes, which communicate with a small Higginson's bottle, by means of which the blood is pumped into the patient. In order to expel all air from the apparatus, and also in part to warm it, a quantity of warm water is washed through; this is done by having a special tube with its free extremity in a vessel of water. As soon as all air is expelled, the communication with the water is shut off, and the blood allowed to take its place. The delivery-tube has two nozzles, one of which is inserted into the vein of the patient, and as soon as blood has displaced the water from the apparatus (the water being allowed to run out of nozzle No. 2) the transfusion is commenced. The instrument is exceedingly ingenious, and, as far as we could judge, answered admirably well. Dr. Roussel, in his *brochure* on Transfusion (which we purpose very shortly to notice), lays down the following as some of the conditions necessary for successful transfusion:—1. That the instrument shall not be made of any substances which can be moistened by liquids, since they retain the blood on their surface, and thus lead to rapid coagulation; for this reason, he says, neither glass, wood, ivory, nor copper will answer the purpose. This is also the case with the caoutchoucs of commerce, coloured or vulcanised, as they give off sulphuretted hydrogen, etc., and thus cause coagulation. 2. Variations of temperature are detrimental; the material of which the instrument is made, therefore, must be a non-conductor. 3. There must not be any cessation in the circulation of the blood; as it flows out of the giver, so should it flow into the recipient. The only material which combines these requisites is pure caoutchouc. Dr. Roussel had more difficulty in overcoming this want than any other, and it was only when the Russian Government gave him a special order on the Imperial manufactory at St. Petersburg that he finally succeeded.

THE ARCTIC EXPEDITION.

The return of the Arctic Expedition has given rise to a certain amount of excitement, even in these days of Eastern surprises. The members of it return baffled, it is true, but with records of such displays of pluck, endurance, and steadfast courage as are equal, if not superior, to any furnished by the annals of a country whose sons have long been noted for the possession of such qualities. Under the circumstances, it is much to be regretted that all of the members of the Expedition have not returned alive and well. Unfortunately, in spite of feats of self-abnegation and devotion almost unequalled, some are left behind for ever. The conduct of the officers of the Expedition is beyond praise, and assuredly will not be forgotten by their countrymen.

A very important question arises: How came there to be this loss of life? Of course, frostbite is a thing which cannot in all cases be guarded against, but the main cause of the mortality seems to have been scurvy. It was understood when the ships left that every provision had been made against the onslaughts of this malady, so fatal to seamen in northern climes; and we should be glad to hear from the medical officers in charge some account of the origin and causation of the malady. One thing seems clear: we can no longer trust to tinned provisions to ward off scurvy under conditions such as those encountered in the Arctic regions.

MEDICAL SOCIETY OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

The annual general meeting, preparatory to the session 1866-77, was held on the evening of Wednesday, October 25, in the Hall of the College of Physicians, Kildare-street. The chair was occupied by Dr. Darby, of Bray. The report of the Council for the session 1875-76 was read by Dr. George F. Duffey, Hon. Sec., and unanimously adopted. The election of officers and Council was then proceeded with, and the following were selected as office-bearers for the coming session:—*President:* Samuel Gordon, M.B., President of the College. *Vice-Presidents:* Thomas Hayden, Vice-President of the College; Sir Dominic J. Corrigan, Bart., M.D., ex-President; William Stokes, M.D., D.C.L., F.R.S., ex-President; Alfred Hudson, M.D., ex-President. *Council:* J. Hawtrey Benson, M.D., F.C.P.; J. M. Finny, M.D., F.C.P.; Thomas Fitzpatrick, M.D., Hon. F.C.P.; A. W. Foot, M.D., F.C.P.; T. W. Grimshaw, M.D., F.C.P.; Henry Kennedy, M.B., F.C.P.; James Little, M.D., F.C.P.; S. M. MacSwiney, M.D., L.C.P.; J. W. Moore, M.D., F.C.P.; C. J. Nixon, F.C.P.; John M. Purser, M.D., F.C.P.; W. G. Smith, M.D., F.C.P. *Honorary Secretary:* George F. Duffey, M.D., F.C.P.

THE KNIGHTSBRIDGE BARRACKS.

The first practical step for the demolition of the old Cavalry Barracks at Knightsbridge was taken on Tuesday last, when the first portion of the building materials was sold, consisting of the block of buildings surrounding the parade-ground, containing the troop stables and dwelling-rooms above. The sale also included those portions of the stable fittings which had not been removed. The conditions of sale provide for the immediate removal of the building, stipulating for the clearing away of the slates and roof during the present week, and the removal of the entire building by the middle of December; and a notification informed intending purchasers that it was of the utmost importance that there should be no delay in the removal of the building, and that the conditions of sale would be strictly enforced. This portion of the site will, therefore, be cleared before Christmas, when nothing but the officers' quarters and the riding-school will remain; and the materials of these will shortly be sold, preparatory to the erection of the new barracks, which are at once to be proceeded with. There was a large attendance of buyers, and the entire proceeds of the sale amounted to upwards of £4000. The 1st Life Guards, numbering between 400 and 500, was the regiment last stationed at these barracks, and one portion of the regiment has been removed to the St. John's-wood Barracks, formerly intended for infantry, but converted into cavalry barracks, and which will be the head-quarters of the regiment during the erection of the new barracks at Knightsbridge. The remaining portions have been stationed at Regent's-park, Kensington, and Hampton Court.

THE METROPOLITAN BOARD OF WORKS AND THE ARTISANS' DWELLINGS ACT.

At the usual meeting of the Metropolitan Board of Works, held last week, the following very important report was presented from the Works and General Purposes Committee on various schemes proposed for improving the dwellings of the poor under the provisions of the Artisans' and Labourers' Dwellings Improvement Act:—"Your Committee have to report that they have considered the references made to them from time to time of representations from the medical officers of various districts with regard to areas in their respective localities requiring to be dealt with under the Act of 1875. In pursuance of directions given to them, the engineer and architect have reported on these representations, and each of the localities included in the following report has been carefully inspected, either by your Committee, or by the sub-committee to whom the questions have been referred. The total number of areas in respect of which your Committee directed the preparation of particulars and plans is twenty-two, situated in thirteen different districts of the metropolis. From a consideration of the detailed information afforded to them, your Committee have arrived at the opinion that, as regards eleven of these localities, it is desirable that schemes under the Act should be forthwith prepared, and that the necessary steps should be taken with a view to their being confirmed by the Secretary of State; but that it is not advisable to take any action at the present time with reference to the remaining sites." The report was received and adopted, after a slight discussion, by a majority of thirty-one to two.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The usual half-yearly general meeting of the Society was held on Wednesday, October 25, in the library of the Royal Medical and Chirurgical Society. The chair was taken at half-past eight, by the President, Sir George Burrows, Bart. From the treasurer's statement it appeared that a sum of £1245 10s. had been distributed during the past half-year among fifty-eight widows and thirteen orphans; the expenses had been £135 15s. A legacy from the Rev. H. C. Morgan of £1000 had been paid and invested, and notice of another legacy of £500 from Mrs. Mary Davis Parker had been received. Eight new members had been elected. Four fresh applications from widows for assistance had been admitted. The funded property of the Society had been increased by the purchase of £792 13s. Metropolitan Consolidated Stock. A vote of £20 to Miss Armstrong, daughter of the late Dr. John Armstrong (a member of the Society from 1818 to 1829), was carried unanimously. The President announced to the meeting that the directors had determined, owing to the amount of surplus income in the hands of the treasurer, to make a present at Christmas next of £5 to each widow in receipt of a grant, £2 to each orphan, and £4 to each recipient of relief from the Copeland Fund. The President expressed his thanks to the members present for their attendance, and was pleased to see so many present, and hoped all future general meetings might be as well attended. A vote of thanks to the chairman was proposed, and carried *nem. con.*

CHARING-CROSS HOSPITAL MEDICAL SOCIETY.

The annual *conversazione* of this Society took place in the Board-room of the Hospital, on Friday evening, October 27, when there was a large attendance of members of the Hospital staff and of students. The proceedings began with an address from Dr. J. Pearson Irvine, in which he urged upon students the benefits which the Society could not fail to confer on those supporting it. There they learned to express their ideas clearly, to face the criticism of their fellows, and thus were prepared for the future when called upon to speak among their professional brethren or elsewhere. As an instance of the influence which such associations may have outside hospital circles, Dr. Irvine mentioned that some years ago, when the Navy and Army Medical Services were in a more unsatisfactory condition than they are now, they were frequent subjects of discussion at metropolitan hospital societies. The true status of medical men in these services was so well made known that candidates from London medical schools became very few; and thus necessary reforms were hastened. After some suitable and kindly remarks from Mr. Hird, F.R.C.S., Honorary President of the Society, and from Mr. Canton, F.R.C.S., the remainder of the evening was spent in examining the valuable instruments and specimens exhibited by Messrs. Horne and Thornthwaite, Mayer and Meltzer, Baker, Pillischer, Weiss, and the London Stereoscopic Company. A pleasant evening was spent, and the Medical Society began its new session in the most hopeful manner.

URBAN MORTALITY.

The number of deaths registered in London during the week ending October 28 was 1277. This number is 205 below the corrected average of the last ten years. The deaths included 15 from small-pox, 8 from measles, 60 from scarlet fever, 8 from diphtheria, 18 from whooping-cough, 30 from different forms of fever, and 18 from diarrhœa. With the exception of diphtheria and small-pox the deaths due to the above mentioned (zymotic) causes were considerably below the average: this is, no doubt, to be attributed to the improved sanitary inspection and arrangements which are everywhere evident. The deaths from scarlet fever numbered sixty: when the infectious nature of the disease and the class of the population which forms its chief victims are considered, this number cannot be considered high. The fatality from measles and whooping-cough is especially low. The fever cases included the large proportion of twenty-two from typhoid: this is, or ought to be, more preventable than even typhus, of which there were only three cases. Improved stringency in the precautions against typhoid must be taken, and the medical officers of health for those districts where the cases occurred will, no doubt, exercise stricter supervision.

THE INFLUENCE OF MATERNAL IMPRESSIONS UPON THE FŒTUS.

THERE are two ways of dealing with that class of subjects, which is mostly looked upon either as the traditions of an over-credulous and unenlightened age, or as the records of subjective phenomena, the results of ordinary impressions upon morbidly sensitive nerves. One is impatiently to smother all investigation as unworthy to occupy the attention of a scientific mind; and the other is carefully to place all facts bearing upon the matter on record, and, even if an explanation is not for the moment possible, to wait in expectation that a clue to it may at some future time be the result of more advanced scientific inquiry. Dr. Paul Liebrecht, of Liége, has put on record a very interesting case of congenital deformity of the nose, in a pamphlet which contains as well his impressions on the general question of maternal impressions. The deformity was a remarkable one, consisting of some hypertrophy of the skin and enlargement of the nasal bones, but principally in an enormous development of the cartilage of the septum, which, though it dilated the nostrils, almost completely obstructed them, and produced a condition of things which unmistakably recalled the muzzle of a bull-terrier. The mother was firmly impressed with the fact, which she had often recounted to her promising offspring, that in the early days of gestation she had been severely frightened by a great butcher's dog. The surgical interest of the case is considerable. Dr. Liebrecht appears to have effected an almost perfect cure by removing an oblong piece of skin from the middle line, and taking away a block of cartilage from the centre of the septum, with a little of the nasal bones, and then bringing together in the middle line the two thin laminæ of the cartilage which had been separated, with the mucous membrane attached. A little suppuration occurred, as might have been expected, in the deeper parts, but not sufficient to interfere in any way with the result.

Dr. Liebrecht's reflections on maternal impressions are interesting and well considered. It cannot, indeed, be denied that there is a good deal to be said in favour of the views he maintains; and probably most practitioners will remember cases which have caused for the moment a doubt as to the justifiability of their own scepticism. That in one sense the influence of the parent is felt in the moulding of the particular organs of the body is sufficiently obvious, and it may be argued that it is only a step further to allow that one part of the fœtus may show the effect of the concentrated attention of the mother bestowed upon it, just as it is sometimes maintained that the function, if not the structure, of a part may be altered under mental influence. In one case an aquiline or *retroussé* nose is faithfully handed down from parent to child, in another the infant rejoices in a bull-dog's snout, because the attention of the mother was constantly fixed in that direction.

There is some apparent resemblance between this question and that of mesmerism, and upon both it is the opinion of many, as of Dr. Liebrecht, that we have not as yet sufficient data to warrant us in coming to a final conclusion. Still, it must be confessed that the difficulties at present are so great as to make a firm belief in the relation of the supposed cause to the effect almost impossible, while any practical application of the facts, if facts they be, can only be looked forward to by the most sanguine in a far distant future.

A SUCCESSFUL CASE OF GASTROTOMY.

M. VERNEUIL recently brought before the Academy of Medicine of Paris a youth, aged seventeen, on whom he had successfully performed gastrotomy. The lad had swallowed some caustic potash; this set up œsophagitis. A fortnight later, when the patient began to want solid food, he found himself almost unable to swallow. Catheterism of the œsophagus showed that there was a stricture about seven centimetres down; this rendered œsophagotomy impracticable. Dilatation, though for a while, and to a small extent, successful, failed to bring any permanent relief, and so gastrotomy was performed. An incision, six centimetres long, was made just below the costal arch on the left side, four fingers' breadth from the middle line, when the stomach was easily found. The lad made an uninterrupted recovery, and is now hearty and well, although his condition at the time of the operation was exceedingly unsatisfactory. The case was to be presented *in extenso* before the Society, and the boy was to be fed, on the 31st ult., but the report of this meeting has not yet reached us.

THE HEALTH OF HALIFAX.

MR. D. AINLEY, Medical Officer of Health for Halifax, has just issued his third annual report on the health of the borough, which shows that during the year 2731 births were registered, but there were only 1629 deaths, making a death-rate of 23·5 per 1000, which is a much lower rate than is usually met with at Halifax. The low death-rate is due to the almost entire absence of epidemic disease, the deaths from zymotic diseases being just 150 fewer than occurred in the year preceding. There were several deaths from scarlet fever, which is seldom entirely absent from the town. Mr. Ainley is hopeful that he will be able to limit the disease in the future much more than has been done in the past, as the prejudice against the hospital provided for fever cases has entirely gone, and parents will now readily allow their children to be removed thither if the doctor so advises.

THE REGISTRARSHIP OF THE GENERAL MEDICAL COUNCIL.

THE authorities of the General Medical Council have, it seems, elected a lay gentleman—that is, one not a member of our profession—to the post of Registrar, vacant by the resignation of Dr. Francis Hawkins. The successful gentleman is Mr. Wm. John Clarke Miller, B.A. Lond., and has been up to the present time engaged in the work of teaching. Such a step on the part of the Council had already been hinted at, and was received in certain quarters with becoming indignation. Now that the evil deed has been consummated we may expect vials of wrath to be poured on the heads of the unfortunate authors of this evidently premeditated crime. The mischief is that no end of trouble had been taken to secure a different result.

SMALL-POX IN LONDON.

THE two Small-pox Hospitals at Homerton and Stockwell contained 185 patients last week, as compared with 182 and 187 at the end of the two preceding weeks. The number of actual admissions during the week, however, was only 43, as compared with 69 in the previous week. The number of deaths from this disease registered in London during the week ending October 28 was 15, as compared with 11, 16, and 22 in the three weeks immediately preceding; 9 of the 15 were registered in the North, and 6 in the South districts; 5 cases occurred in the Hospital at Homerton, 2 in that at Highgate, and 8 in private dwellings; 7 of the 15 fatal cases originated in Islington. No less than 12 of these fatal cases were certified as *unvaccinated*, and in the 3 remaining cases there was no information on this point.

MR. LUTHER HOLDEN.

WE share the regret which we know will be felt by all medical students when they learn that this most estimable gentleman is about to resign his seat as an Examiner in Anatomy and Physiology at the Royal College of Surgeons, retaining, however, his chair for Surgery and Pathology. Few examiners have retired amid such feelings of general regret. Mr. Holden possesses all the qualifications for an examiner, being firm, just, and most generous, never appearing

to forget that he once stood in the same place as an examinee. Students can ill afford to lose from the Court of Examiners such men as Hancock and Holden.

THE EPIDEMIOLOGICAL SOCIETY.

THE opening meeting of the session of the Epidemiological Society will be held on Wednesday next, November 8, when, we learn, the President, Mr. J. Netten-Radcliffe, will deliver an address "On the Present Position of Epidemiological Science"—an announcement that cannot fail to attract a large audience.

MEETING OF THE ROYAL COLLEGE OF PHYSICIANS.

THERE is a great deal of human nature in Fellows of the Royal College of Physicians, as well as in members of Parliament, and it is therefore no wonder that a very full house attended the meeting held on Thursday last week, to hear the President make a statement in reference to the publication of the decision of the Censors' Board on the complaint recently brought before them by Sir William Gull. The President related with some minuteness the communications which had passed between himself and Sir William Gull, and which had led to a formal and elaborate statement of his grievances, together with an official report of the trial, being laid before the Censors' Board. These documents were forwarded to Dr. George Johnson, and returned with his comments, which were in turn replied to by Sir William Gull; and upon a careful consideration of all the documents the Censors' Board based their decision, copies of which were sent to Sir William Gull and Dr. Johnson. These were courteously acknowledged by both gentlemen, and the President hoped that there the matter had ended. It had been thought very desirable to avoid putting the matter on record in the minutes of the College meetings, and it had therefore been determined that at the previous College meeting only a bald statement should be made, but that the judgment should not be read to the Fellows unless at the request of Sir William Gull or Dr. Johnson. Since then, however, imperfect and *ex parte*, or, as the President also termed them, garbled reports of the judgment had been published; and under these circumstances he thought that if the College, or either of the two Fellows especially interested, desired it, the document should be read. Some discussion ensued, during which Dr. Johnson expressed a decided opinion that the judgment should be read, while Sir William Jenner and Dr. West, on the contrary, hoped that it would be buried. Eventually it was determined by vote, first that if the decision were read it should not be considered as a "College Secret"; and secondly, that it should be read. The following is a copy of it:—

"Royal College of Physicians, Pall-mall East,
"October 11, 1876.

"The Censors' Board have given careful consideration to the statement of complaint brought by Sir William Gull against Dr. George Johnson, and to Dr. Johnson's reply.

"We exceedingly regret that any cause of complaint or misunderstanding should not have been removed by mutual conference, so as to have rendered any reference to the Censors' Board unnecessary.

"An ordinary perusal of Sir William Gull's evidence at the Bravo inquest, as reported in the *Daily Telegraph*, must, we believe, have led most readers to the conclusion which Dr. Johnson appears to have drawn, and we are, therefore, not surprised that he should have thought it calculated 'to prejudice his position in the case.' But we think Dr. Johnson should have communicated to Sir William Gull the impression made on his mind, so as to have given Sir William Gull an opportunity of publicly repudiating the interpretation put upon his words. The course adopted by Dr. Johnson was one of which we cannot approve.

"We also think that the answers given by Dr. Johnson on his second appearance in court, and of which Sir William Gull complains, indicated considerable warmth of feeling, and were such as might naturally give offence to Sir William Gull. We do not, however, believe that Dr. Johnson intended to impugn the veracity of Sir William Gull, but that, as stated in Dr. Johnson's reply, he desired, from what he considered a sense of public duty and in self-defence, 'to correct and supplement some of Sir William Gull's statements' which were calculated to throw discredit on Dr. Johnson and the other medical attendants.

"Portions of Sir William Gull's evidence appear to us very objectionable from being so open to misinterpretation; but we do not believe that he had any intention to disparage the professional character of Dr. Johnson or 'to prejudice his position in the case.'

"Any further detailed examination of all the features of this unhappy misunderstanding does not appear to us to be either necessary or desirable.

"We must, however, observe that the infringement in this case by Sir William Gull of the spirit, at least, of the by-law of the College relating to the conduct of physicians in consultation was disastrous, and proves the wholesomeness of the by-law and the importance of its rigid maintenance.

(Signed) "JAMES R. BENNETT, President.
THOMAS B. PEACOCK, Senior Censor.
S. WILKS, Censor.
C. B. RADCLIFFE, Censor.
J. S. BRISTOWE, Censor.
HENRY A. PITMAN, Registrar."

After the document had been read, Dr. Johnson expressed his regret that he had not, before going into court the second time, communicated with Sir William Gull. He and his friends had considered the expediency of so doing, and had decided that it would be of no use; but as the Board of Censors held the contrary opinion, he regretted that the experiment had not been tried.

Some other business was transacted at the meeting. It was stated that some fifty copies of the quarto edition, in one volume, of Harvey's works were stored away in the College; and it was resolved—"That a copy of Dr. Harvey's works, bound, be presented to any existing or future Harveian Orator, and to any existing past President, as well as to the present or any future President who shall apply for it."

The Council reported that they had had under consideration the following question, referred to them by the College—viz., "To consider whether any warning should be addressed to the Fellows prior to the annual election, against giving any countenance to a canvass for the Fellowship"; and the Council recommended that the following regulation of the College be printed on the circular sent annually to each Fellow three months before the meeting of Council held for the nomination of Members for election to the Fellowship—viz., "No candidate for any office or distinction in the College shall canvass the Fellows for their votes either personally or by letter."

The President announced the appointments of Dr. Sieveking as Harveian Orator, of Dr. George Johnson as Lumleian, Dr. Braxton Hicks as Croonian, and Dr. Lauder Brunton as Gulstonian Lecturers.

PRIVAT-DOCENTEN AND THE FRENCH FACULTY OF MEDICINE.—It was announced some time since that the grade of *Privat-docenten*, which forms so essential a part of the German university system, is about to be introduced into the French Faculty of Medicine; but the *Lyon Médical* (October 29), speaking of the recent visit to Lyons by M. Waddington, the Minister of Public Instruction, says:—"He has announced very few reforms in superior education. We must put on mourning for the *Privat-docenten*, for here they are dead before they are born. The Minister refuses to concede the essential condition of their existence—their payment by the students, they taking out their inscriptions by the courses of lectures, instead of by a general payment. The official professors will, therefore, have no rivals under the Republic, just as under the Empire, the University refusing to admit, even within its own body, the spur of competition. That would have been a reform of the first rank, which appeared to us fitted to very advantageously replace the *concours*, furnish the element of constant emulation, and open the career of teaching to certain original and independent minds; and deeply do we regret that it is to be abandoned."

FROM ABROAD.

The New Prussian Medical Tariff.

Dr. Börner, the editor of the *Deutsche Med. Wochenschrift*, while publishing the new medical tariff about to be issued by the Ministerial Department for Education and Medical Affairs, observes (October 7) that for his own part he thinks the advantages which may attend these official regulations, as regards the legal recovery of fees, is quite outweighed by their defective adaptability to individuals. A larger portion of the profession in Prussia, however, do not desire the removal of this "*medicinal taxe*," but its reform in accordance with the times. The new tariff about to be promulgated will certainly not meet this view, but will give rise to many discussions and protests; and it will be generally felt that it would be far better to leave the charges of the profession unregulated than submit it to so injurious a procedure. The fees are to be as follows, stated in shillings:—1. For a first visit, 2 to 6; a distance of less than two kilometres (a mile and a half) is not be charged extra. 2. For every succeeding visit, 1 to 3 (!). 3. A night-visit, 6 to 18—night being considered as ranging from 10 p.m. to 7 a.m. 4. When the practitioner visits several members of a family living in the same house, he is to receive only half the fee for the second, third, and other patients; and the same in boarding-schools (*Pensions-Anstalten*). 5. For a visit at an appointed hour, a double fee is chargeable. 6. When the practitioner is detained, besides his original fee, he is to be paid from 3 to 9 per hour. 7. For consultations in the day-time, each practitioner is to receive from 5 to 15; every succeeding consultation half that sum, and every consultation at night double that sum to be paid. 8. Every consultation at the house of the practitioner, 1 to 3 (!); and at night, 3 to 9. 9. The application of electricity, 2 to 6. 10. An operation upon the eye or ear, 15 to 60. 11. A normal midwifery case, 15 to 50. 12. A twin-labour, 9 to 60. 13. Confinement with turning, 12 to 100. 14. Application of the forceps, 12 to 100. 15. Perforation, 12 to 100. 13. Artificial removal of the placenta, 6 to 20.

These are, of course, only specimens from a detailed table of fees, and Dr. Börner compares them with a table of fees agreed upon by the Medical Society of Frankfort at the end of 1874:—1. For a first visit at the residence of the patient, or a first consultation at the practitioner's abode, 2 to 20. 2. For every succeeding visit during the same illness, 2 to 10. 3. For every visit between 10 p.m. and 7 a.m., 10 to 30. 4. For the simultaneous treatment of other members of the family, an increased charge, which is not specified, to be made. 5. For the first consultation with two or more practitioners, each to receive 10 to 30. 6. At every subsequent consultation, during the same disease, each to receive 5 to 20. 7. For a confinement, according to the nature of the assistance rendered (but without further visits), 20 to 150.

The New Paris École d'Anthropologie.

As we stated some time since, the Société d'Anthropologie has resolved to establish an Ecole, and this is to be opened on the 15th inst., under the auspices, as it were, of the Faculté de Médecine; for although that body has determined that it cannot accept it as part of the Faculté, it is willing to regard it as a supplementary establishment likely to be very useful to medical students, and has authorised the delivery of the lectures at the Musée Dupuytren as part of the Ecole Pratique. The Municipal Council of Paris and the General Council of the Seine have both voted subsidies in order that the lectures may be delivered publicly and gratuitously. Moreover, a group of friends of science, among whom are the brothers Rothschild, have liberally subscribed the capital necessary, in order that the new Ecole may be set on foot under the best conditions.

The following is the programme of the various lectures about to be delivered:—1. *Anatomical Anthropology*, by Prof. Broca, General Secretary to the Anthropological Society: Parallel of Man and the Superior animals; Comparative Anatomy of the Human Races; and Craniology. 2. *Biological Anthropology*, by M. Paul Topinard, Curator of the Museum of the Society: History of Anthropology; Physical and Physiological Characteristics of Living Man; and Anthropometry. 3. *Ethnology*, by M. Eugène Dally, late President of the Society: Classification and Description of the Human Races, their Distribution, and their Affiliation. 4. *Prehistoric Anthropology*, by M. Gabriel de Mortillet, President of the Society: Human Palæontology; Prehistoric Archæology; and Determination of Human Remains by means of Archæology. There will be also demonstrations in the museums, and excursions to prehistoric localities in the environs of Paris. 5. *Linguistical Anthropology*, by M. Hovelacque, Secretary of the Society: General Characters, Classification, and Distribution of Languages.

A Successful Case of Gastrotomy.

Prof. Verneuil greatly interested a recent meeting of the Académie de Médecine (*Gaz. des Hôp.*, October 28, and *Union Méd.*, October 26) by a luminous narration of a case, which is believed to be the first example of a successful issue of gastrotomy—an operation performed without success by Prof. Sédillot in 1849, and repeated several times since with a similar result.

A mason, seventeen years of age, and in good health, swallowed by accident, on February 4, 1876, a solution of caustic potash. On the subsidence of the œsophagitis that followed, difficulty of swallowing was found to exist, which continually increased, so that after various trials at passing a bougie had been made in vain, the patient fearing to die of hunger, placed himself under M. Verneuil on May 24. By that time he had become greatly emaciated and had lost all his energy, his temperature being below the normal. He could no longer swallow, and vomited up nearly all he took. Catheterism showed that a very close stricture existed about seven centimetres below the orifice of the œsophagus—at a point, therefore, which rendered œsophagotomy impossible. After watching the patient, and even succeeding with difficulty sometimes in passing a bougie, M. Verneuil at last, finding death from absolute starvation imminent, resorted on June 26 to gastrotomy. An incision five centimetres in length, carried downwards and outwards, exposed, after dissection, the wall of the stomach, which was at once recognised by its white colour. This was secured by forceps, drawn into the wound, transfixed by two acupuncture needles, while it and the peritoneum were fastened to the edges of the wound by means of fourteen points of metallic suture. This done, the wall of the stomach (which since the application of the sutures had become of a violet red) was incised, its thickness being considerable, and in newise resembling what is observed in the subject. A large sound of red caoutchouc was next passed into the stomach to the extent of seven or eight centimetres, and secured by a silver wire, which traversed it and the wall of the organ. A tendency to hæmorrhage from the stomachal incision was suppressed by the hæmostatic forceps, and the whole abdomen was covered with collodion.

We need not follow the progress of the case, which was attended but by few vicissitudes; and from an early period the patient was able to receive fluid food. He was able to get up on August 20, and by September 10 he could assist the nurses in the wards, having gradually recovered all the strength and energy which he had before the accident. The first sound was exchanged for one of an enormous size, which always remains within the fistular aperture. This fistula is rounded, and bordered throughout its circumference by a small projection, formed of the red and smooth gastric mucous membrane. The patient injects through the sound thickened soups, hashes, *potages*, and drinks, having no other sensations at the time than those of heat and cold, and not finding one thing better than another, although after making the injections he often finds his mouth filled with saliva. He can, however, swallow none of this, and is obliged to expel it by the mouth. This privation of saliva and his peculiar mode of alimentation do not, however, seem to inconvenience the patient, if we may judge by his good state of health, and especially by his increase in weight. A month after the operation, this, which had fallen to thirty-three kilogrammes, rose to thirty-four, and at the present time it has reached forty-two. Last Tuesday he was to be present at the Academy, and take one of his meals in their presence. For these he has a very good appetite, and it is a curious circumstance that while they are being introduced into the stomach he executes masticatory movements.

REVIEWS.

Lectures on the Physical Diagnosis of Diseases of the Heart. By Arthur Ernest Sansom, M.D. Lond., M.R.C.P.L., Assistant-Physician to the London Hospital, Physician to the North-Eastern Hospital for Children, Honorary Fellow of the Medical Society of New York, etc. London: J. and A. Churchill. 1876. Pp. 115.

This little book will not attract the idle student. It has a plain, serious, business-like look inside and out, and should any student take it up with the hope of finding an easy "cram" or help in "getting up" the physical diagnosis of cardiac diseases, he will, we are sure, very soon lay it down again. It is the production of a genuine hard worker, and the sound teaching it conveys will not be available without careful, thoughtful, practical study; but the students for whom it is intended—the true, working students, who have already "mastered the rudiments of diagnosis"—will find in it a valuable guide and help in the outpatient-room and by the bedside, and to the busy practitioner it will prove a useful *aide-memoire*, as "presenting the essentials for the clinical recognition of diseases of the heart."

The work includes first a "*Schema*," giving, under the headings Symptomatology, Etiology, Inspection, Palpation, Percussion, and Auscultation, a short analytical index of the physical signs and their interpretation; and then the body of the work consists of six lectures, in which the chief points in diagnosis and the physical signs of the various diseases of the heart are considered with no little minuteness and care. The work is intended, Dr. Sansom says, "to be suggestive, not exhaustive, and is founded, as far as possible, upon personal observation and experience"; and he himself would not wish its teaching and interpretations to be considered as dogmatic and infallible, but as guides and aids to close, accurate observation and thought.

It is a good little book, and we would suggest, in view of a second edition, that it might be made more attractive to even the real students by, and is fully deserving of, rather less close and crowded-looking printing, and somewhat better paper.

Diseases and Injuries of the Eye: their Medical and Surgical Treatment. By George Lawson, F.R.C.S., Honorary Fellow of King's College, London; Surgeon to the Royal London Ophthalmic Hospital, Moorfields; and Surgeon to the Middlesex Hospital. Third Edition, with ninety-five wood engravings. London: Henry Renshaw. Fcap. 8vo, pp. 411.

Mr. Lawson's well-known "Manual of the Diseases and Injuries of the Eye" needs now but brief notice. The fact that a third edition of it has been already required is the best proof of its value and usefulness. In the present edition some articles have been rewritten, and several new ones have been added; but some, also, have been expunged as being out of date, so the book is only six pages longer than in the last edition—not a small virtue in this day of bulky and multitudinous works. Test-types, those in use at the Moorfields Hospital, and corresponding to Professor Edward Jaeger's "Schrift-Scalen," have been added, and are examples of clear and beautiful type. The article on tumours of the orbit—a subject on which Mr. Lawson is an accepted authority—has been much enlarged; Burow's operation for the cure of entropion is described; the article on conical cornea has been rewritten, and Mr. Bowman's operation for the excision of a small circular piece of the cone of the cornea by a trephine added to it; and of the new articles we may mention also one on "xerophthalmia, xerosis, or cuticular conjunctiva." The manual will undoubtedly continue to be a favourite, as it well deserves to be from its completeness, its clear and happy style, and the admirable way in which it is got up by printer and publisher.

A Contribution to the Treatment of Uterine Versions and Flexions. By Ephraim Cutter, A.M., M.D. Second Edition, entirely rewritten. Boston: James Campbell. 1876. Pp. 207.

This work has been written to bring before the profession certain pessaries which the author has designed for the treatment of uterine displacements. The feature which distinguishes these instruments, and which is common to all of them, is that they are kept in place by a hook-shaped support curving back over the perineum, and held up by an elastic band running between the nates, to be fastened opposite the sacrum to a waist-belt. Opposite the perineum is a hinge, by which part of the apparatus can be turned aside during defæcation. The hook carries either a loop (like that of the pessary known here as Priestley's) or a crossbar concave towards the uterus, which passes behind that organ in retroversion, in front of it in anteversion. In cases of flexion the hook is continuous with an intra-uterine stem; or where this is not well borne, a bracket, to support an ordinary intra-uterine stem, not otherwise connected with it. In prolapsus, Dr. Cutter keeps up the uterus by either a cup or a ring attached to the perineal hook.

We are indebted to Dr. Cutter for another new instrument, which he calls a vaginometer. It consists of two graduated stems, expanded at the extremities to about the normal width of the vagina, and capable of being adjusted by a screw, as to relative length and distance from each other, to a known extent. This being put closed into the vagina, and the two blades separated till they fit accurately the anterior and posterior vaginal walls, gives a measurement of the length and capacity of the vagina, certainly more accurate than any obtainable by the finger. From the data thus obtained, Dr. Cutter fixes the dimensions of the pessary he will use. This substitutes precise mensuration for rule-of-thumb guessing; and therefore, like everything which makes medicine more exact, it is an advance.

The novelty about these pessaries is, of course, the plan of supporting them from behind. Contrivances resembling these as to the parts in immediate relation to the uterus have been devised before, but Dr. Cutter's plan of keeping them in place is, so far as we know, quite new. Experience alone can prove its value. Those who have read Dr. Gaillard Thomas' work on Diseases of Women will recollect that he speaks in very high terms of the value of Dr. Cutter's instrument in cases of prolapsus.

The pathological part of this book is not its strongest point. The author looks upon "uterine tips and turns," as he calls them, as responsible for many and various functional derangements; but those who do not so fully go with the mechanical view of uterine pathology will want cases more rigorously analysed than any in this book before they alter their opinion.

The Treatment of Anteflexion of the Uterus. By Ely Van de Warker, M.D., Syracuse, New York. (Reprinted from the *New York Medical Journal*, June, 1876.) New York: D. Appleton and Co. 1876. Pp. 14.

This author treats anteflexions by an intra-uterine stem. He has devised a new flange for keeping it in place, of which it is hard to give an idea by description. We must refer those who wish to know about it to the illustrations in the pamphlet. The author narrates three cases in which patients obtained relief from their symptoms while wearing this instrument. More than three cases, however, will be required to convince English gynæcologists that stem pessaries are free from risk.

Last week, Mrs. Gibbs, of Tyntesfield, Weston-super-Mare, laid the foundation-stone of a Hospital for Incurables at Cheddar. The cost of the site, building, furnishing, and endowing will be defrayed solely by Mrs. Gibbs, at a cost, it is said, exceeding £40,000.

The subscriptions towards the endowment of a Celtic Chair in the University of Edinburgh, in the hands of Professor Blackie, now amount to about £9000. The minimum sum required by the Council for the establishment of the chair is £10,000.

Uterine Thermometry.—Dr. Marduel, after passing under review the various recent German publications that have taken place on this subject, comes to the conclusion (*Lyon Méd.*, October 29) that the existence of a uterine temperature higher than that of the vagina, in the absence of pathological conditions, is a sign of pregnancy and of a living infant; that during pregnancy the existence of the same temperature in the uterus and in the vagina indicates the probability that the child is dead; and that a uterine temperature lower than the vaginal temperature in pregnancy certainly indicates that the child has ceased to live. But, he adds, what practical advantage can we deduce from these facts? Surely one could not, under any consideration, advise the introduction of a thermometer into a uterus suspected of being gravid, and thereby risk the production of abortion.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

October 21.

MEETINGS AT THE MEDICAL INSTITUTION—SALICYLIC ACID IN ACUTE RHEUMATISM—RHEUMATIC HYPERPYREXIA TREATED BY COOL BATHS—DEATHS AFTER VACCINATION—PROSECUTIONS FOR SPREADING SMALL-POX.

THE winter session 1876-77 of the Liverpool Medical Institution was opened on Thursday, October 5, by an exceedingly able address from its President, J. M. Turnbull, M.D. The subject of the address was the modern doctrine of embolism. The effects, immediate and remote, of emboli and thromboses, both large and microscopic, on various organs and tissues, were discussed with rare ability, and illustrated by the detail of a number of striking cases which had come under Dr. Turnbull's observation. This address certainly ought to be published.

At the second meeting, held on October 19, when the ordinary work of the Institution commenced, the necrosed shaft of a fibula, removed entire from a boy, was shown by Dr. Wollaston; and an aneurism of the aorta opening into the pulmonary artery, an aneurism of the mitral valve, and a specimen of disease of the brain, believed to have been syphilitic, were exhibited by Dr. Davidson. A boy, the subject of pseudo-hypertrophic muscular paralysis, was shown to the members by Dr. Glynn, who related also the details of the case. The extreme feebleness of the patient was in striking contrast (as is usual in such cases) with the apparently extraordinary development of the muscles of the calves.

Dr. Paul then gave the history of twelve cases of acute rheumatism that had been treated with salicylic acid in the wards of the Royal Infirmary. The results appeared to be strongly in favour of the drug. The main conclusions arrived at were—1. That its most strikingly beneficial effects are manifested in the more acute cases. In subacute cases there is less, and in chronic cases not any, advantage from its use. 2. That it should be given in doses of not less than ten grains every hour for an adult. 3. That its use should not be abruptly discontinued on the subsidence of the pain and fever, but the interval between the doses more and more prolonged. 4. That by its employment rheumatic fever may in the majority of cases be made a disease of hours, or at most of days, instead of weeks or months, as it was not long ago. 5. That by the brevity given to the febrile condition the chances of cardiac complication occurring are immensely diminished. Charts of the temperatures in the cases were exhibited. In the discussion which followed the reading of the paper, the general testimony of those who had employed the drug was in favour of Dr. Paul's conclusions. The President said that after having tried in succession every reputed remedy for acute rheumatism that had been recommended to the profession for many years past, he felt convinced that none of them were so valuable as salicylic acid. Dr. William Carter briefly related the results of its employment in twenty cases of acute and subacute rheumatism at the Royal Southern Hospital. In the majority the benefits were very marked. In one, though employed from the outset, it did not prevent so sudden and dangerous an elevation of temperature as to necessitate the use of cool baths, under the employment of which the patient recovered. In three, though it diminished pain and fever, it had to be temporarily discontinued in consequence of stomach disturbance produced by it—pyrosis, nausea, or vomiting. He thought that the facts were not yet numerous enough for the induction that had been made by some, viz., that the drug was as much a specific in rheumatic fever as quinine was in ague.

Dr. William Carter then gave the details of two cases of rheumatic fever with very high temperature recently under his care at the Royal Southern Hospital. In the one case the patient's temperature in the course of a very short time rose from 104° to 107° Fahr., and furious delirium came on, succeeded by profound coma and death, before the bath could be employed with any hope of success. In the other case, which at the commencement seemed to be of a mild form, the temperature, while the patient was taking ten-grain doses of salicylic acid every third hour, rose, in the course of two hours, from 102° to 106·2° Fahr., and before the bathing could be commenced to 106·8°. Active delirium accompanied the high temperature, while the joint pains were absent. Altogether ten baths were used, at gradually prolonged intervals, before the hyperpyrexia was subdued. The mean temperature of the baths was 90° Fahr.; the temperature to which they were cooled 75° Fahr., and the average time in the bath thirty minutes. The body temperature was not reduced below 100° or 99° Fahr. in the bath, as it always fell some 2° or 3° further during the first half-hour after the patient was removed to bed. No ill effects whatever followed the employment of the baths in this case. The urine passed after each was carefully examined, and never betrayed the slightest indication of blood or albumen. The conclusion arrived at by Dr. Carter, from the contrast in the results of the two cases which he had related, and from the effects of the bath in another case which he had related during the previous session, was that in acute rheumatism, when from any cause the temperature had attained a dangerous height, such as 106° or 107° Fahr., with accompanying delirium, nothing but the external application of cold could act with sufficient rapidity to avert the tendency to speedy death, and that therefore the cool bath, as on the whole the most convenient method of making such application, was to be recommended as a judicious and hopeful method of practice. In the discussion which followed, Drs. Waters and Glynn each related a case in his own recent practice in which the use of the cool bath had been strikingly beneficial, the patients recovering from conditions of extreme peril.

Inquests were held on October 20 by the borough coroner, Mr. Clarke Aspinall, on the bodies of two children, aged three and four months respectively, who had recently died, as it was thought, from the effects of vaccination. The facts as given in evidence were briefly as follows:—The children, who with their parents lived under very unfavourable sanitary conditions in the most crowded and unhealthy part of the town, had been taken a few weeks previously to the public vaccinator to be vaccinated. About a week or ten days after the operation, Dr. Cormack, who saw the children, found them suffering from inflammatory fever, and their skins covered with a papular eruption. They died in the course of a few days, and post-mortem examinations showed that the cause of death had been acute pyæmia or blood-poisoning, "set up," in the words of Dr. Cormack at the inquest, "by a morbid poison entering the body from without at the time of vaccination or afterwards." It was given in evidence that the child from whom the matter had been taken was healthy, that the matter itself was good, that the lancet with which the vaccination had been performed was clean, and that a third child, who had been vaccinated from the same source at the same time, had continued well ever since. The verdict found by the jury was to the following effect:—"That in each case the child died from the effects of pyæmia consequent on recent vaccination skilfully performed from a good source, but what were the precise causes leading to this blood-poisoning the medical evidence does not enable us to say." In the course of some remarks addressed to the mothers at the conclusion of the inquiry, the Coroner said "they must not get an idea either into their own minds, or persuade others to think, that vaccination was a thing that really ought not to be enforced upon their children. He wanted this to go forth to them and to others—that vaccination had done more for this country than almost any invention they had ever heard of. As far as they knew, it had saved thousands of people either from very sad deaths or from permanent disfigurement; and if, perchance, a child occasionally took bad and died, it might be his (the Coroner's) just as well as it was theirs. But then they must not say on that account that because of a risk which was very slight, considering the large number of cases, therefore a great number of children were not to have the advantage conferred upon them, and which it was so necessary they should enjoy."

Apropos of small-pox, and the methods by which it may be spread, as well as serving to guide medical officers of health to a wider interpretation of the 126th section of the Public Health Act than is generally given to it, the following case is important:—The wife of a milkseller, residing at No. 3, Allcard-street, Liverpool, falling ill of small-pox, was attended by a woman named Stout, who was, however, cautioned by an inspector not to touch the milk or serve it out to customers. She disregarded the caution, served milk to a little girl, who subsequently contracted small-pox, and died, it was believed, through drinking the milk. Dr. Taylor, the Deputy Medical Officer of Health, said he had no doubt the child died from the infection she caught by drinking milk purchased at this milk-house. The 126th Section of the Public Health Act imposes a penalty not exceeding £5—first, on anyone who

wilfully exposes himself while suffering from a dangerous infectious disorder; secondly, on anyone who exposes one so suffering, of whom he is in charge; and thirdly, on anyone who "gives, lends, sells, transmits, or exposes any bedding, clothing, rags, or other things" that have been infected. The charge against the defendant in the present case was—firstly, that by selling the milk she was exposing her own clothes; and secondly, that the milk, which presumably she had infected by handling it after attending on the patient, was one of the "other things" mentioned in the section, and that therefore she was liable under the section for selling it. The magistrate, Mr. Raffles, though entertaining some doubt about the interpretation of the law, expressed his determination to convict, and of giving the defendant the option of appealing if dissatisfied with his judgment. He imposed a penalty, with costs, of £3 10s.

In a case which occurred here not many days ago, where the father of a child, who had died of small-pox in the workhouse hospital, and had been enclosed in one of the loosely constructed parish coffins, insisted on attempting to convey the body in a cab, which contained four other people besides himself, a distance of five miles for burial, the coffin being made to rest across the knees of the occupants, an attempt to obtain a conviction under this section failed, the magistrate ruling that by no stretch of language could a dead body be interpreted to be one of the "other things" contemplated.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 4.

Alfred Meadows, M.D., F.R.C.P., Vice-President, in the Chair.

Utero-Vaginal Rupture.

Dr. Wiltshire showed a specimen of this, removed post-mortem from a patient who had died during labour. The patient was not seen by him during life, the case not having occurred in his practice. He showed the specimen for some friends of his who had referred the matter to him. A fibroid tumour, the size of a large orange, had interfered with the progress of labour. The rupture occurred at the junction of the cervix uteri with the vagina posteriorly. The walls of the uterus were remarkably thick. Ergot had been given.

Dr. Playfair inquired why the forceps had not been applied. A large proportion of cases of rupture followed the use of ergot. An early application of forceps might have averted the catastrophe. He would further ask why gastrotomy was not performed when the child had escaped into the abdomen. It would have given the patient a better chance of recovery.

Dr. J. Braxton Hicks inquired as to the size of the os uteri, and where it was at the time of rupture. If the cervix was down over the head, how was it that the child escaped into the peritoneum?

Dr. Aveling inquired how soon after death the post-mortem had been made. Sometimes displacement occurred from the effect of decomposition post-mortem.

Dr. Meadows suggested that possibly the tumour had been mistaken for the head, the former being so large as to interfere with the descent of the head.

Dr. Roper asked as to the relation of the tumour to the rupture.

Dr. Wiltshire thought that the accident would possibly have been averted if forceps had been used, but there were objections to their employment in this case, which altogether was a very painful one.

Intra-Uterine Tumour.

Dr. Daly related the particulars of a case, where death ensued two hours after removal. The patient had been confined six weeks; violent and continued pain set in. A tumour was detected, and enucleation attempted by the fingers. Rupture of the uterus ensued. There was no hæmorrhage, but the patient died from shock two hours afterwards. Rupture seemed due to softening of the uterus.

Dr. H. Smith inquired whether any incision had been made across the face of the tumour before enucleation was attempted.

Dr. Daly replied in the negative.

Two-Headed Monster.

Dr. Bantock exhibited a specimen where the bodies were united from the breast downwards. There were but two legs, with a third rudimentary one.

Dr. Meadows suggested that it would be well to present it to the museum.

Midwifery Statistics of Thirty-five Years' Practice.

Dr. Clement Godson contributed a paper compiled from the records of his father's practice in Barnet, including the wealthy and the poorest. The results were shown in tables drawn up indicating the percentage of ordinary normal presentations, placental and compound. In the single practice of Mr. Godson there were 2203 deliveries, and in the combined practice of himself and a partner 1020. The records were kept separate, so as to compare the results of the combined and single practice, forceps having been applied more frequently of late years. The maternal mortality amounted only to eight in the 3223 cases; the percentage of still-born children was slightly over 5 per cent.

Dr. Playfair remarked that he had recently pointed out that a low ratio of forceps operations was associated with a high fœtal mortality, and had advocated an increased frequency of forceps operations as calculated to lessen the fœtal deaths. He had then alluded to the remarkable results of Dr. Hamilton, of Falkirk, who had two successive series of cases of 800 and 700 without a single still-birth. He himself (Dr. Playfair) had attended nearly 300 consecutive cases without losing a single child. In Mr. Godson's practice, forceps were used once in sixty-six cases, and in the other once in nine; and yet in both about one out of every twenty children was still-born. He would ask the explanation of this.

Dr. Hicks, in reference to an allusion as to hospital statistics not being so reliable as those of private practice, stated that at Guy's patients were under observation for a month after the confinement, and that the death-rate could be relied upon; it varied between 2·5 and 7 per 1000. Before we could fairly estimate the death-rate from forceps we must first ascertain how frequently ergot had been given.

Dr. Chalmers thought Dr. Hamilton's statistics were quite as likely to require explanation as Dr. Godson's. He doubted the accuracy of so low a rate of mortality as Dr. Hamilton's statistics gave.

Dr. Roper remarked that although the fœtal mortality might be diminished, the maternal mortality was probably increased from the frequent resort to forceps.

Dr. Routh stated that he had gone closely into the question as regards operative midwifery among the London poor and those of the manufacturing districts. Long forceps were more frequently used on account of deformities of the pelvis, and in these cases the risk to both mother and child was increased. Dr. Playfair states that we are justified in using them once in five cases. The late Professor Simpson had shown that the mortality during childbirth was greater in proportion to the number of hours they were left in labour.

Dr. Playfair observed that he had not said that he himself advocated so frequent an application of the forceps. He would strongly insist upon the importance of distinguishing between the high and low forceps operation. The former he considered to be a serious matter, not to be lightly undertaken, not without grave risk to the mother. His remarks applied solely to the low forceps operation, when the head was on the perineum and merely delayed by the want of *vis a tergo*. Under such circumstances the operation was perfectly easy, quite safe, and highly conservative both to the mother and child—far better than giving ergot.

Dr. Godson said that when he commenced practice operative midwifery was looked upon by the public in a very different light from what it was now. Had he used them often, he would soon have had no midwifery practice at all. He never applied forceps so long as there was a prospect of labour being completed naturally without injury to either mother or child. He believed that the large number of premature births accounted in a great measure for the still-births. Had forceps been more frequently resorted to, the mortality would probably have been only very slightly diminished.

Pregnancy complicated by Extensive Malignant Disease of the Cervix Uteri.

Dr. A. L. Galabin related the histories of two cases. In the first, hæmorrhage at irregular intervals had taken place during the whole term of pregnancy. Labour came on at full term; the cervix was dilated by Barnes's bags. Perforation

was then resorted to, and the head extracted by the cephalotribe. The patient recovered. A vesico-vaginal fistula resulted from sloughing. The second case was interesting also, inasmuch as amputation of the cervix by the galvano-caustic was resorted to five months after labour, the patient then being four weeks pregnant. She carried the child to full term, when dilatation of the cervix was effected, and bi-polar version performed, and the child extracted living. Peritonitis set in, but the patient recovered. The two cases showed that delivery might sometimes be effected by the natural passages, when at first sight Cæsarian section seemed the only resource.

Dr. Meadows thought, as a rule, it was better to resort to Cæsarian section, as, although in these two cases the patients fortunately recovered, the maternal risk was so great, and there was an almost uniform death of the child where delivery was attempted *per vias naturales*. In the first case the dilating bags changed the position of the presenting head. This fact he had noticed in another case, and it would be interesting to know the experience of others on this point.

Dr. Godson thought the first case confirmed the opinion he had previously stated as to the advisability of amputating the cervix uteri in cases of epithelioma, notwithstanding the existence of pregnancy.

Dr. Avelino referred to a case where three-fifths of the cervix was involved. The idea of Cæsarian section was entertained, but was avoided by dilating the cervix with the fingers, perforating, and turning. Antiseptic injections were used, and the mother recovered perfectly. Where the whole of the cervix was involved he thought Cæsarian section the better plan.

Dr. Edis referred to the case he had brought forward last year, where delivery was accomplished *per vias naturales*, the child living, the mother succumbing to pyæmia from the pressure and bruising of the soft parts that had taken place during the extraction of the head by means of the forceps.

Dr. Hicks thought the fact of the head being pushed aside was not a common result from the employment of Barnes's bags. This might easily be overcome by drawing off some of the liquor amnii, or by the hand externally pressing the head down.

Dr. Meadows said the accident was most likely to occur when the pelvic brim was contracted.

Dr. Roper stated that he had modified the shape of the bags, and would exhibit them at the next meeting.

Dr. Galabin said that the present was the only case in which the head had been displaced from using the bags, but it was a not infrequent accident. He thought considerable risk would be run by the amputation of an epitheliomatous cervix in a case of ascertained pregnancy from septicæmia.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, October 24.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

On the Use of the Magnet in the Case of a Needle Broken in the Leg.

Sir Benjamin Brodie contributed notes of a case occurring in his son, a boy, aged eleven, who had a sewing-needle accidentally broken in the calf of his leg. The needle could be rather indistinctly felt; and there was inability to use the limb. The boy was seen by Mr. Charles Hawkins, who recommended that no attempt at removal should be made, and prescribed rest. It was determined to try the effect of a magnet, both with regard to the detection of the locality of the foreign body and the possibility of moving it. The experiment was made at the Royal Institution with a powerful electro-magnet, in the presence of Sir B. C. Brodie, Mr. Charles Hawkins, Mr. Prescott Hewett, and Dr. Tyndall; the result being that the exact position of the needle was indicated by the disturbance of a magnetised needle, while no change was produced in the position of the foreign body. The boy was now allowed to move about as usual, the pain and inability to move the limb having ceased. In course of time, the needle passed to the other side of the leg—its change of position being indicated by the magnet; and, having at last been found sufficiently near the skin, it was successfully extracted.

Mr. B. Carter referred to a paper recently issued in the *Dublin Quarterly*, where details were given of some four or five cases in which a magnet had been used by a gentleman in Belfast to determine the existence and situation of iron particles in the eye. He had also used a fine-pointed magnet as an aid to the removal of these.

Sir James Paget said that in Belgian iron factories there was sometimes a large magnet suspended for the removal of small particles of iron from the surface of the eye. They had never been found of use in removing the body when fixed.

Mr. Savory said Mr. Smee had many years ago indicated the use of the magnet for showing the situation and direction of a needle. Nevertheless they were not easy to find.

Pseudo-Hypertrophic Paralysis, with a few Observations on Surface-Thermometry.

Mr. William M. Ord read notes of the case of William M., aged seven years, who had been weak on his legs for four years, and had fallen down very often, without any convulsion or loss of consciousness. His father was consumptive. His mother had chorea before marriage, and was still "excessively nervous." Of the children, the eldest was the subject of the notes; the second brother, aged six, was beginning to develope the same disease: the third, a sister, died of convulsions during teething; the fourth, aged two and a half, was healthy; the fifth, an infant, was very weakly. There was no known history of syphilis. W. M. had enlargement and unnatural hardness of the calves, of the right deltoid, and to some extent of the sacro-lumbar muscles. His attitudes and positions indicated general weakening of muscular power in the back and lower limbs. There was no loss of sensibility in the skin. There was no change or unnatural character in the appearance of any part of the skin. The electrical sensibility of the muscles in general was diminished for faradic currents. For continuous currents, the calves were less sensitive than the thighs, the thighs than the sacro-lumbar muscles. Microscopic examination of the muscles of the calves revealed the presence of a very great excess of adipose tissues, and the commencement of fatty degeneration in many of the muscular fibres. A few notes were given respecting the brother, H. M., who was beginning to show slight enlargement, and to manifest the same sort of weakness, though in small degree. The question of the relative temperature of the thighs and calves was then discussed, reference being first made to a previously recorded case, in which the author found the calves to be decidedly warmer (from 1·9° to 3·8° Fahr.) than the thighs. In the present case, surface-thermometers, made after a pattern originally used by Dr. Sibson, and provided with non-conducting pads, by which loss of heat was prevented, were used. In each experiment, two carefully calibrated thermometers were used together. The skin was kept covered; the instruments were always applied to corresponding parts; were kept on from twenty to thirty minutes; and being non-registering, were read *in situ* with the least possible exposure. The general results were that the thighs, in ten careful observations, were found to be 1·07° Fahr. warmer than the calves. This is still, however, different from the result of seven examinations of healthy persons, in whom the average temperature of the thigh was 1·5° higher than that of the calves. Reference was made to observations of Dr. John Davy on the temperature of different parts of the surface, from which it appeared that different parts of the leg will show greater discrepancies of temperature than similarly conditioned parts of the leg and thigh; also to observations of Mr. A. H. Garrod, upon the effect of exposure of the skin to cold in altering the temperature of internal parts, and on the effect of heating certain parts in depressing the temperature of others. Lastly, remarks were made in regard to the apparatus used; and the author gave reasons for trusting their indications. The value of the results to be expected in the future from the use of thermo-electric apparatus was recognised; but the difficulties at present attending the use of such apparatus were regarded as rendering them unsuitable for clinical purposes. The observations and apparatus of Becquerel and Breschet, and of Dr. Montgomery, were particularly noticed and discussed.

Dr. Gowers thought Mr. Ord's present communication lessened the idea of there being a distinct connexion between the lesion described and the vaso-motor system. By way of a hint as to what might be their connexion with normal structures, he exhibited two specimens—one from a similarly diseased muscle; the other from a small tumour in the spinal canal, which was probably congenital. If germinal tissue could go through such a series of changes as that tumour indicated,

possibly a similar origin might be sought for this pseudo-muscular hypertrophy.

Dr. Roussel then showed a very ingenious apparatus for the transfusion of blood.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentlemen were admitted Members on October 26 :—

Carter, Alfred Henry, M.D. Lond., Birmingham.
Collie, Alexander, M.D. Aber., Homerton, E.
Cory, Robert, M.B. Camb., 14, Palace-road, Lambeth, S.E.
Ewart, Joseph, M.D. St. And., Bewcastle.
Ross, James, M.D. and C.M. Aber., Manchester.
Semon, Felix, M.D. Berlin, 6, Chandos-street, W.
Watney, Herbert, 1, Wilton-crescent, S.W.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 26 :—

Bigg, Geo. Kilworth Sherman, 56, Wimpole-street.
Burton, Samuel Herbert, Great Yarmouth.
Lightfoot, William Spencer, Harwell, Berks.
Rean, William Henry, Poplar.
Richards, Thomas, Salisbury.
Symons, John, Penzance.

The following gentlemen also on the same day passed their primary professional examination :—

Nickoll, John Sayer, London Hospital.
Richardson, Thomas Arthur, Guy's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

St. James's Palace.—The Queen has been pleased to appoint William Tennant Gairdner, M.D., Professor of the Practice of Physic in the University of Glasgow, to be one of her Majesty's Physicians-in-Ordinary for Scotland, in the room of Thomas Laycock, M.D., deceased.

Admiralty.—Staff Surgeon Thomas Robert Warren has been promoted to be Fleet Surgeon in her Majesty's Fleet, with seniority of October 14.

War Office—Medical Department.—Surgeon-Major Matthew Combe, M.D., retires upon half-pay ; Surgeon William Wakefield, M.D., retires upon temporary half-pay ; Surgeon Robert Henry Robertson, from half-pay, to be Surgeon ; Surgeon Parker Smith, M.D., resigns his commission. To be Surgeons-Major—Surgeons Tyler Oughton, William Hugh Jameson, M.D., William Winslow Tomlinson, William Sparks Martin Price, Thomas Francis O'Dwyer, M.D., John Peter Hamilton Boileau, M.D., William Keir, M.D., Lawrence Corban, M.D., William Taylor, M.D., John Mackenzie McLean, M.D., Peter Shepherd, M.B., William Snowdon Hedley, M.D., Theobald Andrew Purcell, Edward O'Sullivan, James McCreery, Humphrey Garden Gillespie, M.D., James Hector, M.B., Charles Edward Martin Shaw, Kennedy Macaw, M.D., William Edward Riordan, Isidore Bourke, M.B., John Murray, M.B., James Bennett Kelly, Daniel Charles Grose Bourns, John Henry Hughes, M.D., John Wickliffe Jones, Albert Benjamin Robinson, David Arno Smet Thorburn, M.D., Eugene Robert O'Brien, M.D., Walter Blake, Daniel Charles Grose, Samuel Flood, John Candy, M.D., Edward Eustace, Espine Ward, John Maturin, David Renton, M.D., and Charles Healy.

Brevet.—Surgeon-Major Matthew Combe, M.D., who retires upon half-pay, to have the honorary rank of Deputy Surgeon-General ; Honorary Surgeon P. A. Minas, Bengal Medical Establishment, to have the honorary and local rank of Surgeon-Major.

The undermentioned officers of her Majesty's Indian Military Forces to be granted a step of honorary rank on retirement :—To be Surgeon-General —Deputy Surgeon-General William Hewitt Seton Burn, Madras Army. To be Deputy Surgeons-General—Surgeon-Major William Jameson, Bengal Army ; Surgeon-Major John Thomas Williams, Madras Army ; Surgeon-Major Thomas Murray, Bombay Army.

BIRTHS.

Croker.—On October 30, at 25, St. Helen's-road, Hastings, the wife of Surgeon-Major Arthur Croker, L.K.Q.C.P. Ire., of a son.

Harris.—On October 26, at 39, Dorset-square, the wife of A. G. R. Harris, M.R.C.S., L.R.C.P. Lond., of a daughter.

Hodder.—On October 12, at Aldershot, the wife of W. H. L. Hodder, M.B., M.R.C.S. Eng., Army Medical Department, of a daughter.

Macnab.—On October 29, at Bury St. Edmunds, the wife of Robert Macnab, M.D., F.R.C.S. Edin , of a son.

Murray.—On October 21, at 66, Great Cumberland-place, Hyde-park, the wife of G. C. P. Murray, M.D., of a son.

Pigott.—On October 29, at Cambridge, the wife of G. W. R. Pigott. M.D., of a son.

Rosser.—On October 23, at Croydon, the wife of Walter Rosser, M.D., of a daughter.

Wegg.—On October 28, at 15, Hertford-street, Mayfair, the wife of William Wegg, M.D. Cantab., of a son.

Worley.—On October 29, at Brook Lodge, De Beauvoir-road, N., the wife of W. C. Worley, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

MARRIAGES.

Crombie—Whitcomb.—On October 24, at the Presbyterian Church, Brighton, John M. Crombie, M.D., M.A., of South Kensington, to Sophie, only daughter of the late Henry Whitcomb, Esq., of Hawley Lodge, Brighton.

Hatt—Scott.—On October 26, at St. Mary Magdalene's, Paddington, Geoffrey Hett, M.D., fourth surviving son of John Hatt, Esq., of 27, Ladbroke-gardens, W., to Mary Jane, daughter of the late Rev. James William Scott.

Hopgood—Thomas.—On October 28, at St. Augustine's Church, Highbury, Albert Byrom, second son of Joseph Hopgood, M.R.C.S., of Slough, to Annie Georgiana, second daughter of R. W. Thomas, Esq., of Slough, Bucks.

Littleton-Lyne.—At St. Andrew's, Plymouth, Thomas Littleton, M.B., F.R.C.S., to Mary Sarah, elder daughter of Lewis Wadham Lyne, Esq.

Macgrath—Ranken.—On October 24, at St. Mary of the Angels, Bayswater, W. M. Macgraith, L.K.Q.C.P. Ire. and L.M., etc., to Sophia White, widow of Lieut.-Col. George Ranken, late 69th Bengal Native Infantry.

Prout—Willing.—On October 26, at the parish church, Great Wakering, William A. Prout, B.A., Trinity Hall, Cantab., to Jessie Sophia, second daughter of G. F. B. Willing, L.R.C.P., of Great Wakering, Essex.

Roberts—Young.—On October 21, at Trinity Church, Dublin, Browne Roberts, L.R.C.S.I. and L.K.Q.C.P.I., to Francis Susan, youngest daughter of Richard Young, Esq., of 14, Leinster-square, Rathmines.

Way—Renner.—On October 26, at St. Mary's Church, Bootle, William Way, M.D., to Dinah Robinson, eldest daughter of John Robinson Renner, Esq., of Bootle.

DEATHS.

Butler, Catharine Penelope, wife of Henry Butler, M.D., and second daughter of the late Thomas Smith, Esq., of Glen Rock, Sydney, N.S.W., on August 27, aged 47.

Dell, Ann, widow of the late Edward C. Dell, M.D., at 10, Williams-terrace, Chiswick, on October 25.

Elliott, John Robert, L.K.Q.C.P. Ire., at Munalighur, Upper Assam, India, from heat-apoplexy, on October 20.

Graham, Thomas John, M.D., of Woodcote End House, at Epsom, on October 28, in his 81st year.

Rumsey, Henry Wildgoose, M.D., F.R.S., at Prestbury, Cheltenham, on October 23, aged 67.

Wright, Frederick Wade, M.B., fourth son of T. G. Wright, M.D., at Milnes House, Wakefield, on October 19, aged 25.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Croydon General Hospital.—House-Surgeon. Candidates must hold medical and surgical qualifications, and be registered under the Medical Act. Applications, with twenty-five printed copies of testimonials, to be forwarded on or before November 8.

Great Yarmouth Hospital.—House-Surgeon. Candidates must be registered. Testimonials to R. R. B. Normau, Hon. Sec., on or before November 8.

Middlesex Third County Lunatic Asylum, Banstead Downs, near Sutton.—Medical Superintendent. Candidates must be married, not over forty-five years of age, and Fellows, Members, or Licentiates of one of the Royal Colleges of England, Scotland, or Ireland, and duly registered in medicine and surgery under the Medical Act, 21st and 22nd Vict., cap. 90. Printed forms, on which applications must be made, may be obtained on written application to the Clerk to the Committee, at the Asylum. Applications, with testimonials, must be sent in on or before November 8.

Public Dispensary, 59, Stanhope-street, Clare Market.—Resident Medical Officer. Candidates must be Licentiates of the Royal College of Physicians of London, or of the Company of Apothecaries, Members of the Royal College of Surgeons of England, and duly registered in accordance with the requirements of the Medical Registration Act, and unmarried. Testimonials, including diplomas and certificate of registration, to be left with the Secretary, on or before November 6.

Trinity College, Glenalmond, Perthshire.—Resident Medical Officer. Private practice in district. Applications will be received by the Warden up to November 10.

Western Dispensary, Broadway, Westminster.—Medical Officer. Applications, with testimonials, to the Secretary before November 6.

Worcester General Infirmary.—House-Surgeon. Applications, with testimonials, to the Secretary, 50, Foregate-street, Worcester, on or before November 6.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Louth Union.—Mr. Thos. W. Bogg has resigned the Welton-le-Wold District ; area 19,666 ; population 2248 ; salary £45 per annum.

St. Neots Union.—Mr. H. Rayner has resigned the Third District ; area 3854 ; population 478 ; remuneration per case.

Belper Union.—The Belper District is now vacant ; area 2852 ; population 8527 ; salary £30 per annum. Also the Workhouse ; salary £27 per annum.

Cosford Union.—The Lavenham District is vacant ; area 9974 ; population 3439 ; salary £52 per annum.

Drayton Union.—The Fifth District is vacant ; area 11,201 ; population 2438 ; salary £21 per annum.

APPOINTMENTS.

Aberystwyth Union.—John E. Hughes, B.M. and M.C., to the Llanfihangel District.

Braintree Union.—Edward Dawson, L.F.P.&S. Glasg., L.S.A., to the Finchingfield District.

Skipton Union.—Wm. Jackson, L.R.C.P.&S. Edin., to the Workhouse.

Cuckfield Union.—George J. M. Smith, M.B. and C.M. Edin., M.R.C.S. Eng., to the Fourth District.

Epping Union.—Wm. Skeine, M.D. Glasg., F.F.P. & S. Glasg., L.R.C.S. Edin., to the Chingford District.

Helston Union.—Banfield T. Vivian, L.S.A., to the Crowan District.

THE opening of a new block of wards forming a portion of the new Marylebone Workhouse took place on Monday. Additional accommodation is thus provided for 300 aged men, eighty aged women, and twenty-four probationers. In addition to these extensive alterations, the guardians are building a new infirmary in the parish of Kensington.

ADMINISTRATION OF SULPHATE OF QUININE.—Dr. Dorville prescribes from one-half to one gramme in a small glass of brandy at the commencement of the cold stage, to arrest the paroxysm or prevent subsequent attacks. In a moderate dose the action of the quinine is rapid and energetic, and its taste so taken is not very disagreeable.—*Union Méd.*, October 19.

PROVINCIAL MEDICAL SCHOOLS.—From the return which has just been made to Mr. John Birkett, F.R.C.S., the Government Inspector of Provincial Schools of Anatomy, it appears that there are 381 gentlemen pursuing their professional studies at the eight recognised institutions, as follows, viz.:—Manchester (Owens College), 110; Leeds School of Medicine, 54; Liverpool Infirmary School of Medicine, 53; Cambridge University School, 42; Bristol (Old Park Medical School), 40; Birmingham (Queen's College), 34; Sheffield Medical School, 17; and Durham University College of Medicine, 31. The above list exhibits a decrease of seventeen from the last session. The total number of metropolitan students registered at the Royal College of Surgeons this year amounts to 1744, which, added to the 381 registered at the provincial schools, gives a total of 2125, against 2167 last year, showing altogether a diminution of 42.

MORTALITY AMONG HORSES IN EGYPT.—The *Gazette Médicale* of October 28 says:—"In letters from Cairo, dated September 23, it is stated that a fearful epidemic prevails among horses, hundreds of these animals having died within some days. On the 18th as many as 200 deaths were counted in Cairo alone, since when, however, some diminution has taken place, from 100 to 150 dying daily. The disease chiefly rages among the horses of the army, one-half of which have already perished. Their bodies are carried far into the desert, amidst those immense bone-quarries of which nothing is known in Europe. Many others, however, are thrown into the canals, which may lead to dreadful consequences. It is supposed that this equine pest has been brought back by the Egyptian Army from Abyssinia." To this we may add that later reports state that fifteen thousand horses are said to have died in Egypt in the last three months; that pashas now ride on donkeys, and that even the heir-apparent himself is to be seen coming in to his daily ministerial work on donkey-back.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

N.—Yes; it will appear in due course.

Culpho.—We do not think that you are *compelled* to give the certificate you inquire about.

Mr. Williams.—The primary and pass examinations for the fellowship of the College of Surgeons takes place this month. *All* candidates will have to undergo an examination in *medicine*, unless they possess a recognised licence or degree.

At Present a Failure.—

"Others, I doubt not, if not we,
The issue of our toils shall see—
Young children gather as their own
The harvest that the dead have sown—
The dead forgotten and unknown."

P. B. S.—It was customary to place a coin with the corpse, generally over the eyes, as Charon's fee. In the ethnological collection in the museum of the College of Surgeons a skull may be seen with an ancient copper coin so placed, and from the *verd antique* in the other socket, it is evident that it was once the receptacle for a similar coin. The following lines on a notorious quack are, doubtless, the lines to which you refer:—

"This quack to Charon would his penny pay.
The grateful ferryman was heard to say,
'Return, my friend! and live for ages more,
Or I must haul my useless boat ashore.'"

C. P., Mile-end.—The reflecting stereoscope was first described in a paper by Professor Wheatstone, entitled "Contributions to the Physiology of Vision," part I—"On some Remarkable and Hitherto Unobserved Phenomena of Binocular Vision," read before the Royal Society, June 21, 1838.

Mr. Campbell.—The interesting "introductory" of Mr. Francis Mason, Surgeon to St. Thomas's Hospital, is published in the form of a pamphlet, through any bookseller.

Med.-Chir. Society.—One of the persons who volunteered, and did attend the last meeting, to "bleed for science," was an *employé* of the Royal College of Surgeons. We cannot tell you in what volume it appeared, but a few years ago Dr. Anderson read a paper at the British Medical Association on "Ephidrosis Cruenta," or bloody sweat. The celebrated Dr. Mead gives illustrations of it in his well-known "Medica Sacra."

E. R., Devonport.—The gentleman alluded to is not the only ex-President of the College of Surgeons who holds the licence of the Society of Apothecaries.

Incorrigible.—Medical Adviser: "Now, first of all, you must not drink beer in the morning." Patient: "No more I should, old fellow, but it so happens there's not a drop of brandy in the house!"—*Punch.*

Experimenter.—Dr. John Davy, brother of Sir Humphry Davy, bequeathed to the Royal Society, in fulfilment of an expressed wish of his brother, a service of plate presented to Sir Humphry for the invention of the safety lamp, to be employed in founding a medal to be given annually for the most important discovery in chemistry made in Europe or Anglo-America. The plate was accordingly disposed of, and the proceeds invested, yielding a little more than £30 a year.

Ambitious Young Physick.—1. The late Sir Henry Holland was for a year Travelling Physician to the Princess of Wales. 2. In 1816 he began the practice of his profession in London. He made two resolutions when he found his practice rapidly augmenting—the first was to take two months of annual holiday, and the second "to keep my practice within £5000 a year."

Philosophical Puzzles.—An American writer shows, by a perfectly just argument, that the much-used maxim, "All rules have their exceptions," is really self-contradictory. If all rules have exceptions, this maxim is itself a rule, and therefore must also have its exceptions. Consequently, the proverb at the same time affirms that all rules have their exceptions, and that some rules do not,—which is an obvious case of proverbial suicide.

O. L. P.—Dr. R. E. Scoresby Jackson lays down the following proposition as to the influence of weather upon disease and mortality. He says—"We are not to assume that because certain conditions of weather, as indicated by meteorological instruments in this country, are opposed to recovery from certain diseases, that therefore patients so suffering are not to be sent into any country where meteorological instruments afford exactly, or even nearly, parallel readings. In other words, in estimating the value of a foreign climate, or the different climates of our own country, we are not to depend so much upon a comparison of the meteorological data of the several places, as upon the meteorological data and the prevalent diseases and death-rate of one and the same locality. To argue, that because a given condition of temperature, atmospheric pressure, and humidity, in Scotland, is accompanied by a certain ratio of mortality, therefore, meteorological data being equal, the same death-rate will be observable in Torquay or Madeira, would be most fallacious. All other things being equal, the death-rate would also coincide; but it requires much more than mere meteorological analogy to establish such a parallelism."

TAN POULTICES IN ANEURISM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As the medical treatment of aneurism has only partially, if at all engaged the attention of medical practitioners, I beg to bring to your notice a case of such disease treated by me some years ago.

The patient, J. S., of middle age, was affected with difficulty of breathing, particularly when at his work as a shoemaker, and, at the same time, was affected with a pulsating tumour in the epigastric region, at the scrobiculus cordis, quite evident to the sight. His general health was good in all other respects. After applying some topical remedies without any improvement, at last I suggested the application of tan poultices to the pit of the stomach. In a few weeks the disease apparently was perfectly cured, but I lost sight of my patient, he having left this town for Reading; since which time no further accounts have been received of him.

The *rationale* of the treatment must appear, I am happy to say, evident to everyone—an astringent application externally applied having then successfully produced a deposition of fibrin internally in the diseased artery, so as almost to astonish me with its favourable result.

As the case is thus far interesting; I think, it is but right to bring the same to the notice of my professional brethren. I am, &c.,

Wallingford, October 25. WILLOUGHBY ARDING, M.D.

COMMUNICATIONS have been received from—

Dr. FRANCIS OGSTON, Aberdeen; Dr. SQUIRE, London; Mr. W. E. POOLE, London; Dr. TILBURY FOX, London; THE SECRETARY OF THE PATHOLOGICAL SOCIETY OF LONDON; Professor SPENCE, Edinburgh; Mr. R. J. GODLEE, London; Dr. GAVIN MILROY, Richmond, Surrey; Dr. HERMAN, London; Mr. CHRISTOPHER HEATH, London; Dr. CARTER, Liverpool; Dr. THOMAS BARLOW, London; Dr. GOWERS, London; Mr. EDWARD NETTLESHIP, London; Mr. JOHN CHATTO, London; Dr. W. H. SPENCER, Clifton; THE REGISTRAR OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON; Mr. H. CARTWRIGHT, London; Mr. GORDON BROWN, London; Dr. EDWARDS, London; Mr. HENRY THOMPSON, Hull; Dr. BRAKENRIDGE, Edinburgh; Dr. CAYLEY, London; Dr. NUASBY, Sunderland; Dr, WILLIAM FARR, London; Dr. J. W. MOORE, Dublin; Mr. J. B. BLACKETT. London; Mr. COLQUHOUN, London; Messrs. PHILLIPS and Co., London, Dr. H. LAWSON, London; Mr. C. R. FRANCIS, Sutton; Mr. G. H. EVANS; London; Dr. A. M. BUCHANAN, Glasgow: Mr. F. B. SANBORN, Boston, U.S.A.

BOOKS AND PAMPHLETS RECEIVED—

Alfred Hill, M.D., Report on the Health of the Borough of Birmingham for the Quarter ending September 30, 1876—James Henry Bennett, M.D., Nutrition in Health and Disease—La Corse et la Sardaigne—Sketch Plans for the John Hopkins Hospital, Baltimore—Dr. H. von Ziemssen, Cyclopædia of the Practice of Medicine, vol. vi., Diseases of the Circulatory System—Cassell's History of India, part 11—W. J. Moore, Surgeon-Major, Harvey and Vivisection—Bentley and Trimen's Medicinal Plants, part 14—Tilbury Fox, M.D., F.R.C.P., Atlas of Skin Diseases, part 14—David Ferrier, M.D., F.R.S., The Functions of the Brain—Sauerstoff und Ozon, ihre Bedeutung für die Diätetik und Heilkunde—Henry Fraser Campbell, M.D., Blood-letting in Puerperal Eclampsia—Abstracts of Specifications of Patents applied for from 1854 to 1866: Metals, part 2, Melbourne, Victoria—J. Warburton Begbie, M.D., Book of Medical Information and Advice—Professor O. P. Santi Sirena, Sulle Terito del Midolle Spinale—W. Morrant Baker, F.R.C.S., Kirkes' Handbook of Physiology—Transactions of the Pathological Society of London, vol. xxvii.—B. Thompson Lowne, F.R.C.S.E., A Manual of Ophthalmic Surgery.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Home Chronicler—American Practitioner—Leisure Hour—Sunday at Home—Gazeta Medica da Bahia—Hardwicke's Science Gossip, November—National Anti-Compulsory Vaccination Reporter—American Journal of the Medical Sciences—Springfield Weekly Republican—Monthly Homœopathic Review—Veterinarian.

APPOINTMENTS FOR THE WEEK.

November 4. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

6. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. General Meeting. Mr. R. Davy, "Degenerative Cysts in Muscles." Dr. Brunton, "Pelvic Hæmatoma." Dr. Crisp, "An Example of Croupal Membrane in an Infant (with microscopical specimen)."

7. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m. Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

PATHOLOGICAL SOCIETY, 8½ p.m. Dr. Hilton Fagge—1. General Anchylosis of Ribs; 2. Aneurism of Pulmonary Artery in Vomica of Young Child; 3. Epithelioma of Bladder, secondary to long-standing Stricture. Mr. Carr Jackson—Injury to Spine. Dr. Cayley—Lymphadenoma of Stomach. Mr. Gould—1. Sarcoma of Thigh; 2. Valvular Disease of the Heart; 3. Recovery after Pyo-Pericardium. Dr. Pye-Smith—Suppuration of Brain and Cord after Cure of an Empyema. Dr. Julius Pollock—Perforating Ulcer of Endocardium. Dr. Fred. Taylor—Fatty Tumour behind Pharynx. Dr. Goodhart—Diffuse Suppurative Inflammation of Mediastinum. Dr. Walters—Scirrhus of Diaphragm. Mr. Sidney Jones—1. Multiple Melanotic Tumour (living specimen); 2. Symmetrical Shortening of Foot from Bone Disease (living specimen). Dr. Thorowgood—Concretion from Vermiform Appendix, removed through incision in back.

8. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

EPIDEMIOLOGICAL SOCIETY, 8½ p.m. Mr. J. Netten Radcliffe (President), "On the Present Position of Epidemiological Science."

HUNTERIAN SOCIETY (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Dr. Herbert Tibbits, "On Electro-Therapeutics."

9. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

10. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

CLINICAL SOCIETY, 8½ p.m. Dr. C. T. Williams, "Sequel of a Case of Contracted Cavity in the Lung, communicated in 1871." Dr. Gowers, "A Case of Lymphatic Leucocythæmia treated by Phosphorus." Dr. Greenfield, "A Case of Hodgkin's Disease, with increase of White Blood-Cells." Dr. Broadbent, "Patients with Leucocythæmia under Treatment by Phosphorus." Mr. Walsham, "A Case of Localised Hypertrophy of the Lung."

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 28, 1876.

BIRTHS.

Births of Boys, 1201; Girls, 1230; Total, 2131.
Average of 10 corresponding years 1866-75, 2229·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	677	600	1277
Average of the ten years 1866-75	701·7	680·3	1385·0
Average corrected to increased population ...	...	...	1482
Deaths of people aged 80 and upwards ...	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	5	2	1	...	4	1	2
North	751729	9	1	6	2	7	1	11	1	4
Central ...	334369	...	2	2	1	...	...	2	1	2
East	639111	...	...	20	1	4	1	3	2	4
South	967692	6	4	27	2	6	1	2	...	6
Total	3254260	15	8	60	8	18	3	22	5	18

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·032 in.
Mean temperature	45·9°
Highest point of thermometer	53·7°
Lowest point of thermometer	35·0°
Mean dew-point temperature	42·4°
General direction of wind	N.E.
Whole amount of rain in the week...	0·16 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 28, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Oct. 28.	Deaths Registered during the week ending Oct. 28.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2431	1277	53·7	35·0	45·9	7·72	0·16	0·41
Brighton	100632	42·7	65	35	54·8	40·0	46·2	7·89	0·01	0·03
Portsmouth ...	124867	27·8	96	40	54·0	40·0	47·9	8·83	0·00	0·00
Norwich	83430	11·2	58	33	54·5	45·0	48·2	9·00	0·00	0·00
Plymouth	72230	51·8	44	32	57·5	41·5	48·9	9·39	0·00	0·00
Bristol	199539	44·8	157	86	56·0	37·6	45·5	7·50	0·01	0·03
Wolverhampton ...	72549	21·4	57	22	52·1	39·1	44·9	7·17	0·02	0·05
Birmingham ...	371839	44·3	326	150	54·0	37·3	45·7	7·61	0·03	0·08
Leicester	113581	36·5	104	37	53·5	40·8	46·6	8·12	0·01	0·03
Nottingham ...	93627	46·9	58	39	56·2	39·1	46·5	8·06	0·03	0·08
Liverpool	521544	100·1	397	211	52·8	40·2	46·9	8·28	0·02	0·05
Manchester ...	357917	83·4	282	161	56·0	40·2	47·9	8·83	0·00	0·00
Salford	138425	26·8	131	82	54·7	36·3	46·0	7·78	0·00	0·00
Oldham	88609	19·0	81	51	...	...	...	...	...	...
Bradford	173723	24·1	110	84	52·0	39·0	45·2	7·33	0·03	0·08
Leeds	291580	13·5	234	109	54·0	37·0	46·7	8·17	0·02	0·05
Sheffield	274914	14·0	261	141	53·0	35·0	45·3	7·39	0·00	0·00
Hull	136933	37·7	125	53	54·0	36·0	47·2	8·44	0·00	0·00
Sunderland ...	108343	32·8	74	41	...	...	...	...	...	...
Newcastle-on-Tyne	139929	26·1	127	54	...	...	...	...	...	...
Edinburgh	215146	51·3	122	57	...	...	...	...	...	...
Glasgow	545144	90·4	407	221	54·5	42·5	47·9	8·83	0·02	0·05
Dublin	314666	31·3	168	115	62·2	36·0	49·8	9·89	0·00	0·00
Total of 23 Towns in United Kingdm	8028595	37·7	5911	3104	62·2	35·0	46·8	8·23	0·02	0·05

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·03 in. The lowest reading was 29·92 in. at the beginning of the week, and the highest 30·16 in. on Wednesday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XI.

DEATH BY HANGING.

(*Continued from page* 510.)

We now come to the point which has next to be considered by the medical jurist in cases of suspension, viz.:—

2. *The proofs* which fall to be adduced by him *of the suspension having taken place during life.* And here, at the outset, we are compelled to admit that, apart from *the moral proof*—with which the medical examiner, *as such*, has but little to do,—the evidence of the mode of death will, in many cases, be of a less decisive character than in most of the other forms of sudden death. The evidence to this effect, apart from the moral proof, is of a twofold character: first, the appearances common to this and some other forms of sudden death; and, secondly, those which have been specially noted in connexion with death by hanging.

The first of these appearances need not detain us long. We have seen that, in hanging, death may take place either by *coma* or by *asphyxia* singly, or, what is most frequently found to be the case, by *the combination*, to a more or less marked extent, *of both;* now the one predominating, now the other.

Thus, when the mode of decease has been by *coma* chiefly or entirely, the engorgement of the vessels of the head will be best marked; and when it has been chiefly or entirely by *asphyxia*, the lungs and the right side of the heart will usually be most engorged. When, again, death has resulted from the combined operation of both modes, little difference will be observable in the state of the circulation within the head on the one hand, and in that of the chest on the other; both may be expected to present this engorgement to a greater or less extent, according to circumstances.

Of the appearances peculiar to, or characteristic of, death by hanging, the most important are those which have arisen from the application of the ligature and the traction exercised on it by the weight of the body on its suspension. The appearances thus produced, and the injuries which may show themselves after death in this way, as might be anticipated, are found to vary to a very considerable extent under the varying circumstances in which they are known to originate, such as the nature of the ligature, the weight of the body, the height of the fall, etc. The remaining appearances in this class are indirect ones, and are, with one exception, such as may be observed at several parts of the exterior of the body. These appearances, both direct and indirect, will be most conveniently passed under review in connexion; and in doing so I shall avail myself of forty cases which I have had opportunity of examining after death in this way—thirty-six of these being suicides, and four violent hangings.

In twenty-one out of these forty cases, or 52·5 per cent. of them, the features had a look of *calmness and placidity;* while in only one instance, and that a suicidal one, had the face *an anxious look*. In none of the cases did *the colour of the face* present anything characteristic. In only one instance (a suicidal one) was *prominence of the eyes* encountered. In thirty-nine, or 47·5 per cent., the *pupils* were more or less *dilated;* while in one they were *contracted*.

In one instance *the external auditory canal* on both sides was full of *blood*.

In fourteen, or 35 per cent. of my examinations, the point of *the tongue* was either *protruded* beyond the front teeth, or so marked by the teeth as to indicate that it had been pressed against these at the time of death.

In three cases there was *frothy mucus at the lips*, and in one of these also at the *nostrils*.

Indications of *excitement of the genital and urinary organs* presented themselves in ten, or one-fourth of the cases under review. The penis was erect in seven, and semi-erect in four. Prostatic fluid had been discharged in eight of the male subjects; urine in four instances; blood in two—one of these last a male, and the other a female, in the latter set down as menstrual blood; and in two (males) the urethra was very red.

On the exterior of the neck the only uniform appearance was *the groove or furrow* left by the ligature. Except where the cord had encircled the neck more than once, the mark was not found to be continuous; and where it had made a single turn it was chiefly confined to the front of the air-tube and the prominences of the sterno-mastoid muscles. (The usual direction, and the position of the knot, will be reserved for notice under Strangulation.) Marked whiteness of the bottom of the furrow was encountered in twenty-seven (or 67·5 per cent.) of my observations; in thirteen (or 32·5 per cent.) it presented the dry, brown, and horny state known as "the parchment skin"; in five it was slightly abraded; while only in two were the borders of the groove reddened, and that both above and below.

In proceeding to the appearances which present themselves in the interior of the body, to prevent misunderstanding it may be well to premise that those which follow are chiefly founded on twenty-two out of the forty cases on which I have been commenting, a complete inspection not having been obtained in some of the others.

The subcutaneous areolar tissue under the groove presented, more or less distinctly, in all the inspections, a *white silvery* and *dry streak* at the points of the greatest pressure of the cord. At the same points *the injection of the skin at the bottom of the groove*, or the minute *ecchymoses of the cutis vera*, noticed by Neyding and Bremme (*Annales d' Hygiène*, No. lxxix., pages 288-9; and *Horn's Zeitschrift*, vol. xiii. page 247) were encountered in five (or 22·7 per cent.) of the cases; in four the injection being well marked, but the ecchymoses only once.

In one case a small quantity of *clotted blood* was found effused *under the integuments* in front, *under the furrow*, and on the *left side of the neck;* in another a like *ecchymosis* was met with in *the interior* of the *left sterno-mastoid muscle*, where the cord had pressed; while in a third a few of the fibres at the *interior border of the* same *muscle* were seen to be *ruptured*. One case showed slight abrasions of the skin of the front of the neck, a little below the mark of the cord. In one the sheath of *the carotid artery* on one side was a good deal *injected*. Where the ligature had crossed the right *carotid arteries* there were, in two of the cases, *transverse ruptures of their middle and inner coats*. A copious *mucous froth* was present in the *pharynx* in nine cases, in the *trachea* in six, and *in the lungs* in four; in none of them bloody. In one case there was *blood* in some quantity *in the pharynx and larynx*.

Marked *redness* of the *lining of the trachea* was only seen in 36·6 per cent. of the cases.

Severe violence was only encountered in two of the bodies *inspected*, and on the view of two *criminals* on their removal from the scaffold. In one of the bodies inspected the thyroid cartilage had been crushed, and presented a rent from above downwards on one side of the cartilage from top to bottom; in the other the thyroid cartilage was completely detached from the os hyoides.

The first of these last two cases was investigated by the law authorities, but though the hanging was effected by the agency of a second party, the deed was found to have been *unintentional*. The affair was an unusual one. During the breakfast-hour at a cotton-mill at Woodside, near Aberdeen, one of the men was toying with a female fellow-worker, to whom he was attached, and in sport threw around her neck a loose leather strap suspended from the roof of the apartment. At this moment the machinery was set agoing, and the girl was drawn up to the roof by the strap, and suspended there for a few minutes before the engine could be stopped, but too late for saving her life. In the second case there was nothing to account for the injury, as one foot at the time the body was found was only a few inches from the ground, and the legs lay across the back of a chair in the vicinity. In one of the executed criminals, fracture of the larynx could readily be felt, and in the other fracture and dislocation of the atlas was made out.

The only remaining special appearances noted internally in the inspection of the bodies of the hanged were—in four marked expansion, and in two marked collapse of the lungs; in one deep reddening of the interior of the stomach; in one capillary or punctiform ecchymoses of the heart and lungs, in one of the scalp, and in one of the kidneys.

I have adduced these results of my own observation as they bear out those advanced by Orfila, Remer, and Caspar, in opposition to the views promulgated previous to their time as to the special appearances characteristic of death by hanging. I need not insist, in opposition to statements to that effect received and iterated in our earlier writers on this subject, on the not

unfrequent absence in the dead body of the greater number of such appearances. It is of more consequence to direct your attention to the circumstance that these special appearances would admit of being imitated in the body suspended after death from other causes. Frequent and characteristic, for instance, as are the appearances on the neck after death by suspension, too much value should not be placed on their presence as indicative of death in this way. The groove or furrow on the neck, it should be known, being a mere physical effect of the suspension, would be produced by the suspension of the body as readily *after* as *before death*, and most of the characters we have assigned to it be thus imitated, more or less successfully—facts clearly brought out in the experimental trials undertaken by Orfila and Caspar with the express object of determining this very point. As the result of these experiments, Caspar concludes that the mark of "the cord" in hanging "is a purely cadaveric phenomenon," and "that any ligature with which any body may be suspended or strangled, not only within a few hours, but even days after death, especially if the body be forcibly pulled downwards, may produce a mark precisely similar to that which is observed in most of those hanged while alive."—("Forensic Medicine," vol. ii. page 173.)

The only exceptions which can be safely admitted to such *negative* conclusions from the appearances about the neck would be those instances in which the effects of the drop from a considerable height would leave the severer injuries we have noticed (fractures or dislocations of vertebræ, etc.), *co-existing with evident traces of vital reaction*. Such injuries as these would, of course, be reliable indications of the suspension having taken place during life, though the rarity of their occurrence would not authorise the opposite conclusion where no traces of them were discovered.—(*Ibid.*, page 174.)

Bremme, while he admits the accuracy of Neyding's description of the state of the skin at the bottom of the groove when met with, does not with him consider that the presence or absence of this test would suffice to distinguish betwixt suspension *before* or *after death*. Bremme (1) did not meet with them at all in his examinations when the death had been instantaneous, and when the cord had been removed immediately after death. He (2) met with them when the death had been instantaneous, and the cord had been left around the neck for a considerable time. And (3) when the death had not been instantaneous the application of the ligature at a subsequent period gave rise to them.—(*Horn's Zeitschrift*, vol. xiii. page 247.)

Some weight would attach to ecchymoses of the bottom of the groove and in its vicinity, as noticed in two of our cases, but for the circumstance that suspension of the body *during life* or *immediately after death* might equally give rise to them to some extent at least.

We are thus brought to the conclusion that the inspection of the body after death does not furnish any positive proof, in the great majority of instances, of the suspension having taken place during life.

Were the appearances we have passed under review such as *could only happen in death by suspension*, and were all, or the greater number of them, *invariably to be met with after death in this form*, the determination of the character of the fatal issue would be a comparatively easy problem. We have seen, however, that this is not the case in the mass of instances of death by hanging. While the *general appearances* encountered in the cavities of the body point to one or other of two of the modes of death generally, or to both of these combined, not only do the signs in question just passed in review differ in different cases, but many of them may be absent altogether, while several of them, though vital appearances as usually encountered in the hanged, may be imitated by similar appearances producible on the body after death from other causes.—(Devergie, pages 17, 18.)

You will, then, perceive that the evidence of death by hanging derivable from the examination of the body *in some instances* may not be found to amount to more than *a mere probability*. Such a *probability*, however, may admit of being *strengthened* by the examiner finding *the concurrence of several, if not the whole, of the usual signs*, in *the same case*. *The probability* would approach, if it did not reach, to *certainty*, where such of the few *signs* as are *of a purely vital character* were encountered in the body, along with *the indications* of one or other of *the forms of sudden death* into which the suspension of the body is known to resolve itself; and where, in addition, *none of those morbid appearances which could account for death in any other way are discoverable* by the inspector. I shall only add here that, by combining with circumstances such as these last *the moral proof* of which the medical examiner is sometimes in a condition to avail himself (as we shall see by-and-by), *the highest certainty may be readily arrived at* on the point in question.

(To be continued.)

CLINICAL LECTURE
ON A CASE OF MALIGNANT STRICTURE OF THE ŒSOPHAGUS.

Delivered in the London Hospital, October 17, 1876.

By C. F. MAUNDER, F.R.C.S.,
Surgeon to the Hospital.

Gentlemen,—You will recollect that while "going round" on Tuesday last I was requested by Mr. Mark Hovell, on behalf of Dr. Sutton, to see a patient with a view to performing gastro-stomachotomy.

I will read the notes supplied by Mr. Hovell:—

"James W., aged fifty-seven. Malignant stricture of the œsophagus. Admitted July 5; died October 12, 1876. Patient has been a fairly healthy man, but suffered occasionally from sick headache. No family history of tumours. The first time he noticed anything wrong with his gullet was in May, 1875; and then, while having his dinner, found that one of the first mouthfuls he took (not an unusually large one) remained, after he had masticated and swallowed it, at a place in the œsophagus which he marked by pointing to about the middle of the sternum. He strained hard to swallow the morsel, but could not; then took several glasses of warm water, and after much retching succeeded in bringing the food up again, but he was so frightened at the occurrence that he went home and laid down. He ate his tea as usual that evening, and, as he had no subsequent trouble, gradually forgot the circumstance. Enjoyed good health for four months.

"In September, 1875, he noticed for the first time a sort of roughness in the œsophagus while swallowing, 'as if the food scraped him.' This scraping feeling gradually increased. In about a fortnight he felt as if there were something in his throat which prevented him from swallowing properly. Food seemed to go down for a certain distance, and then lodge, but on making a strong swallowing movement the food seemed to slip past the obstruction. This difficulty in swallowing slowly and steadily increased, and after a time food which had been swallowed was returned. This obliged him in February, 1876, to confine himself to liquid diet.

"In March he began to find that he could scarcely swallow liquids. He then went to a doctor, and a bougie was passed. After this he was able to swallow liquids for about another month, the stricture being kept open by a bougie passed two or three times a week.

"On admission, urine small in quantity, very cloudy, specific gravity 1019, acid; no albumen, blood, nor sugar. Brandy mixture two ounces, with the same quantity of milk and beef-tea, ordered to be given as an enema every four hours.

"He has been in great part fed by nutrient enemata since admission, and during the first month he was in hospital he gained three pounds in weight. A bougie has been passed from time to time, but the attempt to pass one about a fortnight ago failed, and subsequent attempts have been equally unsuccessful. For the last few weeks only three enemata have been given daily, and at times he could not retain them. The addition of twenty drops of laudanum to each enema, however, enabled him to hold them better. He gradually became more and more wasted, and latterly, being unable to retain enemata, complained of distressing thirst and of his mouth being dry.

"On October 11 an operation was performed. He retained an enema the same evening, and one the following morning, but none after. He sank gradually, and died on the evening of the 12th."

I will take up the case from the time of my seeing it. On reaching his bedside I observed some urine in his *pôt de chambre* highly charged with blood, apparently a new feature in his case. Finding that the patient was deemed to be the subject of a cancerous stricture of the œsophagus, I thought it possible the urinary tract might be somewhere similarly affected, and thought it right to postpone the operation that I

might see Dr. Sutton upon the subject. You must recollect that healthy kidneys are believed to be essential to the success of a serious operation. Dr. Sutton saw me the next day, and requested me to perform the operation; for although the patient could not last many days, Dr. Sutton thought he would die easier if his intolerable thirst (a most distressing symptom) could be relieved. Dr. Sutton also thought that the blood in the urine might be accounted for by passive congestion consequent on extreme weakness. Both the patient and numerous friends were anxious for operative interference. I concurred with Dr. Sutton.

Operation.—In proposing to do this operation you will take care that your patient is not the subject of transposition of organs—a condition that has twice come under my notice—once in a dead subject, and once in a living man. In the man under consideration the liver-dulness was natural, and the left hypochondriac region was markedly tympanitic, as though a distended stomach were there—its usual position. Great emaciation existed, with a receding abdomen. The patient was very feeble, having become unable to retain enemata, but he walked into the theatre. Chloroform was administered, and I made a longitudinal incision, from two to three inches in length, downwards from the point of the ninth rib and external to the sheath of the rectus muscle. Having divided the integuments and broad muscles *seriatim*, I reached the peritoneum, and severed this to a similar extent, and exposed small intestine. This being my first case of gastro-stomachotomy (an operation rarely performed), I had, in searching for the stomach, to rely upon a preconceived notion of the sort of sensation which that organ would yield to my finger when touched by it. I hoped, also, to be guided to it either by the left lobe of the liver, or possibly by the spleen. I altogether failed to detect it; and, having already of necessity explored the cavity to a degree inconsistent with the principle of *non-interference* (which I advocate and deem so essential to the success of abdominal surgery), I contented myself with opening what might be either colon or stomach. I called your attention to this important principle of non-interference, and illustrated its value by alluding to four cases—two infants and two adults—in which I had advised the making of an artificial anus by opening the abdominal cavity (gastro-enterotomy). Mr. McCarthy operated in one instance, myself in the other three. All recovered—a result I believe due to strict attention to special details.(a) I was the less anxious to determine absolutely by more free exploration at the wound which viscus I was about to open, because, as the chief object of the operation was to relieve thirst, the injection of fluid could be made into either, though in larger quantities into the bowel; and it is a noteworthy fact that as the patient became unable to retain enemata, he complained more and more of thirst. The operation being completed, the patient was returned to bed, and died thirty hours subsequently.

At the post-mortem examination the anterior abdominal wall was cut away so as fully to expose the viscera. The artificial opening had been made in the transverse colon. The pyloric end of the stomach, empty and very contracted, could be seen situated high up in the cavity. The left hypochondrium contained a hollow viscus, which Mr. McCarthy, who made the autopsy, at first thought was the distended stomach, but which proved to be the splenic angle of the colon; and this it was which yielded marked resonance on percussion prior to operation. This completely concealed the bulk of the stomach (quite empty and very contracted), which could only have been reached during life by tapping the intestine and dragging it down when collapsed. The intestines were greasy, as in the first stage of peritonitis. The middle of the œsophagus was the seat of cancer, and the right lung had a large nodule of a similar growth in it. The kidneys were congested, but no malignant deposit was found in them; and thus the blood in the urine was explained.

It has been announced that the recent Hospital Sunday and Saturday collection in Liverpool realised over £10,000.

Naval Medical Supplemental Fund.—At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 24th ult., Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £90 was distributed among the various claimants.

(a) *Clinical Society's Transactions*, 1876.

ORIGINAL COMMUNICATIONS.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
Physician to the Hospital for Diseases of the Nervous System.

Amongst the different branches of medical science, etiology appears to have been at all times less thoroughly investigated than others. We have during the present generation seen pathology, diagnosis, and therapeutics advancing with rapid strides, while the obscurity which hangs over the causes of disease has not yet been perceptibly dispelled. In our best text-books of medicine, etiology occupies but a small space; and it is only with regard to some of the zymotic diseases—such as typhoid fever and cholera—that our knowledge of this all-important matter has of late years become somewhat more precise. Yet if, as a trite saying has it, "prevention is better than cure," then etiology must be of greater moment than therapeutics; and in the present state of our ignorance on this subject, any contribution, however slight, to the elucidation of the causes of disease must be of value. I therefore feel that I have no apology to offer for submitting to the profession the following communication, on which I have spent a considerable amount of labour, and which I trust may, at least in some measure, lift the veil which still hangs over the mode of production of a most important class of diseases.

Only vague notions are at the present moment entertained by the profession on the prevalence and fatality of nervous diseases; for although some able investigations into the causation of a few special diseases of the nervous system have been made, and in this country more particularly by Sir George Burrows, Dr. Russell Reynolds, and Dr. Sieveking, who have endeavoured to elucidate the causes of apoplexy and epilepsy, yet nothing comprehensive has as yet been established with regard to the etiology of the entire class of these maladies. The frequency with which they occur, the place they occupy in the general mortality of the nation, the age at which they are most murderous, and the peculiar influence of sex upon their development, are, as yet, quite unknown. Amongst the general public and a portion of the profession a notion is prevalent that nervous diseases, and more particularly paralysis and insanity, are, and have been for some time past, on the increase; that, inasmuch as the struggle of life is keener, the competition more intense, the work heavier, and the anxiety more absorbing, than used to be the case in previous periods of the history of mankind, more especially in the large centres of population, the nervous system is more liable to break down by exhaustion and disease than was the case in former times. It should, however, be understood that such notions and assertions have at present no scientific base at all; but that they are made at random, and often only in order to prove or to illustrate some preconceived ideas of those who propound them. Do nervous diseases occur in a certain definite proportion, or do they vary perceptibly from time to time? Are paralysis and insanity really more frequent nowadays than formerly? Are large towns more suitable for their development than the country? Are men more subject to them than women? Is the Anglo-Saxon race more liable to their invasion than other races? These, and a number of similar questions, still await solution.

That there should be so much uncertainty concerning these interesting subjects is unquestionably, to a great extent, owing to the fact that the few observers who have occupied themselves with the study of these problems have deduced their conclusions almost entirely from their own private and hospital practice; and their statements must, on account of the smallness of the numbers from which they have been derived, be unsatisfactory and unconvincing. Even where such researches have extended over a series of years, erroneous conclusions appear to have been arrived at. Thus M. Falret, for many years physician to La Salpétrière, ascertained that of 2297 cases of apoplexy, 1660 occurred in males, and only 637 in females; and Dr. Hammond, of New York, found the proportion to be 153 male, and 76 female cases in a total of 229. These numbers have led those authors to confidently express the opinion that cerebral hæmorrhage is more common amongst men than amongst women; and yet it is shown by my researches, which comprise not 229 as Dr. Hammond's, or 2000 like M. Falret's, but nearly a quarter of a million cases, that

women, in England at least, are rather more liable to apoplexy than men, and this not only for a year or two, but absolutely in the whole period over which the investigation extends. Unless we, therefore, assume that deaths from apoplexy occur in France and in the United States in a very different proportion from what they do in England, we are led to the conclusion that the two physicians just named accidentally happened to come across more cases of males than females in the limited field of observation which was at their disposal; and that their deductions are therefore devoid of value.

In order to arrive at truly reliable and definite results, I have addressed myself to that large storehouse of facts—the Annual Reports of the Registrar-General. Dry and repulsive as large volumes filled with numbers are to the uninitiated, their contents become of surpassing interest to those who wish to recognise some general law to account for the apparently unconnected and accidental facts which come under our observation in daily life, and to perceive something fixed and stable where without such research there appears to be nothing but chance. The only regret I have experienced in studying these volumes, which have been compiled with so much industry and care, was that they are not more complete and comprehensive, and that certain important omissions from the data placed at the disposal of the Registrar-General prevent us from gaining such a complete insight into the more hidden springs of morbid action as we would desire to obtain. But, taken as they are, they were to me of the very greatest value, as they allowed me to deal, not with hundreds or thousands, but with hundreds of thousands of cases, extending not only over a few years, but over a considerable period in the life of the nation.

It is perhaps not to be expected that in a work of such magnitude as the Registrar-General's Reports absolute accuracy should prevail. There must be sources of error, not only in collecting the information, but also in tabulating it; and, perhaps not least, in seeing the work through the press. To give only a few instances of such errors, which indeed are found to be very numerous in these volumes, I may mention that in the Report for 1848, on page 1, the total of deaths from all causes is returned at 399,533, while on page 294 of the same book the deaths of males from all causes are returned as 202,265, and those of females as 196,268, making a total of 398,533; which involves an error of a thousand deaths.

Again, on page 1 of the Report for 1850, the total of deaths for the year is given as 368,995, while on page 156 the deaths of males are put down as 186,289, and those of females as 182,318, making together not 368,995, but 368,607, involving an error of 388. I have also frequently found that in retrospects, where comprehensive surveys of deaths from certain diseases are given as they have occurred in a series of years, the numbers printed are quite different from those which had previously been given in the several volumes as they appeared from time to time. Thus, for instance, an Appendix to the Report for 1858 contains a table of the causes of deaths which were registered in England and Wales in each of the nine years from 1850 to 1858; and it is certainly singular that the numbers given in that Appendix should in eight years out of the nine differ very considerably from those previously printed in each annual volume. There are no data to enable one to decide whether this is owing to printers' errors or whether additional information concerning past years has been received and utilised at the Registrar-General's office subsequently to the publication of the several volumes; so that it is impossible to make out which of the numbers given are correct. In order, however, to insure as much uniformity as possible, I have always taken the numbers first given in the several volumes as they appeared, and not corrected them according to later statements, which might possibly be erroneous in their turn. In consequence of such and similar errors, the percentages which I have taken do not absolutely tally. Registration of deaths in England and Wales commenced in 1837, but as the first Report embraced only six months, I have disregarded it, and begun with the year 1838, from which period every Report that was issued has embraced a period of twelve months.

On commencing the work of extracting from these volumes the information relative to diseases of the nervous system, I hoped to be able to utilise the entire series extant—viz., from 1838 to 1871; and if I could have carried out this plan, my tables would have become much more complete than they will be found to be. I was, however, disappointed to discover, on going through these Reports, that, although the Registrar-General had for the first five years tabulated all the *causes of death* for England and Wales—this being for me the essential part of his work—he had ceased to do so in 1843, and only recommenced giving that information in 1847, so that there is a blank in my tables extending from 1843 to 1846. It was all the more perplexing to me to find such singular and important omissions, as it appeared that the volumes for the four years just mentioned contained a large quantity of matter which seemed to be of exceedingly little consequence for students of national pathology. Thus the Report for 1845 is encumbered with a lengthy historical sketch of the town of Northampton from the beginning of the tenth century, giving the christenings and burials in the whole town, and a variety of other information from the Doomsday Book, but not a single word or figure concerning the causes of deaths in England. In some few instances the omissions in these Reports appear almost capricious. I found, for example, that in the Report for 1842, which appeared in 1844, the deaths of males and females from different causes had been given for all England, the metropolis alone excepted; while in the succeeding volume for 1843 a full report of the deaths of both sexes in the metropolis appeared, but no mention was made of the rest of England.

As the Registrar-General is practically irresponsible in his department, and may give or withhold information according to his pleasure, it was to me a matter of congratulation that for the last twenty-five years he has detailed without any break of continuity the facts which were most important for my purpose.

In the first five years over which the Reports extend this information is not so complete as in the later ones. In the Report for 1840, for instance, the total of deaths from diseases of the nervous system in England is given, but not the proportions of males and females, although these are printed in all other Reports; and in the tables for the different divisions of England, which were first introduced in that year, the metropolis has been left out. Apart from the errors and omissions, however, for which the compilers of these volumes are responsible, there is another circumstance to be taken into consideration before we attempt to utilise their labours; and that is, the degree of care and conscientiousness with which the certificates of death have been filled up by the medical practitioners of the kingdom. We shall probably be right in assuming that the entries of more recent date are more correct and reliable than those which were made when registration was first commenced; and it will be seen further on that the first period of five years which is included in my investigations differs in such striking respects from the subsequent ones as to create suspicions of difference of registration. That this should be so is fully explained by the circumstance that the diagnosis of disease is at the present time not only altogether much more advanced than it was forty years ago; but is also much more universally disseminated amongst the general body of practitioners than formerly. Amongst many proofs for this, I will only mention that I have found the entries of *old age* as a cause of death to have gradually diminished as time went on, from 10·57 per cent. of the entire mortality, which it was in 1838, to 5·46 per cent. in 1870. Now, it seems impossible to assume that thirty-five years ago twice as many people should really have died simply of old age, without disease, than is now the case; for this would show such a deterioration in the public health as could not be taken for granted on such evidence alone. To my mind these numbers simply prove that thirty-five years ago medical men put down old age more frequently as a cause of death than they are in the habit of doing now, when the search for disease as a cause of death is keener, and consequently more successful. Fortunately, however, the groups of nervous diseases which appear in these Reports have such striking and characteristic features that, on the whole, the errors under this head, with the exception of the first few years, cannot amount to anything very considerable.

In the earliest volumes of the Reports, the division of England and Wales into sub-districts was exceedingly complicated. London, Manchester, Salford and suburbs, Liverpool and suburbs, Birmingham, Middlesex, Hertfordshire, Bedfordshire, and most of the other counties, were taken separately, so that it was rendered difficult to obtain a survey over the whole. In 1840 a better subdivision of the country into eleven districts was adopted, which has continued unaltered up to the present time.

The first of these subdivisions comprises the Metropolis; the second is called the South-Eastern, and includes part of Surrey, Kent, Sussex, Hampshire, and Berkshire; the third consists of

the South Midland Counties—viz., part of Middlesex, Hertfordshire, Buckinghamshire, Oxfordshire, Northamptonshire, Huntingdonshire, Bedfordshire, and Cambridgeshire; the fourth contains the Eastern Counties of Essex, Suffolk, and Norfolk; the fifth comprises the South-Western Counties—viz., Wiltshire, Dorsetshire, Devonshire, Cornwall, and Somersetshire; the sixth includes the Western Counties of Herefordshire, Shropshire, Worcestershire, Staffordshire, and Warwickshire; the seventh consists of the North Midland Counties of Leicestershire, Rutland, Lincolnshire, Nottingham, and Derbyshire; the eighth subdivision is composed of the North-Western Counties of Cheshire and Lancashire; the ninth contains the West, East, and North Ridings of Yorkshire; the tenth consists of the Northern Counties of Durham, Northumberland, Cumberland, and Westmoreland; while the eleventh and last is formed by Monmouth and Wales.

The system generally followed by the Registrar-General in the enumeration of deaths from disease is as follows:—The deaths from *all* causes of males and females in England, and each of the eleven divisions are given first, then come the specified causes of deaths, and finally the classes of disease which have caused the deaths. These are subdivided into seventeen large sections, of which the most important numerically are—zymotic (1), tubercular (3), nervous (4), and respiratory (6) diseases. These seventeen large sections are first given by themselves, after which the several diseases which are comprehended in the sections are tabulated in detail, both for males and females. Separate entries are also given for causes of death in London at twenty-four different periods of life, the first five years of life having separate entries each, after which, periods of from five to five years are tabulated, up to ninety-five years of age. In the later Reports, however, the twenty-four periods of life have been cut down to seventeen, inasmuch as, after the age of fifteen, periods of ten instead of five years have been tabulated.

In the first annual Report for the year 1838 the following nomenclature was adopted for diseases of the nervous system:

1. *Cephalitis.* Under this heading are included inflammation of the brain and its membranes, or encephalitis and meningitis, and also myelitis and spinal meningitis.

2. *Hydrocephalus*, or dropsy of the brain. This disease, which is now generally called meningitis tuberculosa, only remained in our class until 1842, when it was expunged from it, and transferred to the class of tubercular diseases. This being the more suitable pathological place for the affection, I have not tabulated the cases of hydrocephalus for those years in which it appeared amongst nervous diseases, but deducted them from the sum total of deaths, so as to insure, as far as possible, uniformity in my tables.

3. *Convulsions*, spasms, or fits. This entry is more particularly intended for infantile convulsions or eclampsia, which constitute, as we shall see presently, by far the largest cause of mortality from diseases of the nervous system altogether.

4. *Apoplexy*, the apoplectic fit. Apoplexy being merely a symptom, and not a disease, this entry probably includes not only cases of severe cerebral hyperæmia and cerebral hæmorrhage, but also sunstroke, and acute intoxication by opium, alcohol, and other narcotic poisons. On the whole, however, fatal cases of cerebral hæmorrhage must, in the nature of things, form the large majority of cases classed under this heading.

5. *Paralysis, palsy, the paralytic fit, hemiplegia, and paraplegia.* This rubric contains chiefly cases of softening of the brain giving rise to hemiplegia, but also of paralysis owing to cerebral hæmorrhage which has not immediately proved fatal, to chronic spinal disease, such as myelitis, progressive locomotor ataxy (which generally ends in paralysis), infantile paralysis, and shaking palsy. Diphtheritic paralysis would probably be registered as diphtheria; and lead-palsy and other forms of paralysis do not generally prove fatal; while general paralysis of the insane would be registered under the heading of insanity.

6. *Delirium tremens*, or potatorum, was, until the year 1858, included in the class of nervous diseases, but was then transferred into Order 3 of Class I. (zymotic diseases), and registered, together with intemperance, under the heading of alcoholism. No reason was given why this change was introduced. I have, however, continued to tabulate the cases of delirium tremens until 1871, in order to gain as extensive a survey as possible of the fatality of this complaint, which I look upon much more as a nervous than as a zymotic disease.

7. *Tetanus*, trismus, locked-jaw, has only been registered until 1858, when it was expunged without explanation.

8. *Chorea*, St. Vitus's dance, has remained as a special entry to the last.

9. *Epilepsy*, the falling sickness, includes in these Reports catalepsy and hysteria; but as hysteria is hardly ever fatal, and catalepsy extremely rare, it appears probable that almost all cases which have been registered were such of true epilepsy.

10. *Insanity*, including monomania, dementia, and idiocy.

11. *Disease*, a general term which is made to include softening without paralysis, abscess, tumour, atrophy of the brain and spinal cord, and diseases of the eyes and ears. This rubric forms a kind of lumber-room into which everything is thrown which cannot be registered under any of the foregoing headings.

It would be easy to raise objections to, and suggest improvements for, this classification of diseases of the nervous system, but considering the time when it was adopted, and the general state of medical education at that period, it appears good and useful. The introduction of any changes, however trifling, in such reports, without there being an absolute necessity for it, should always be deprecated, as they seem to impair their usefulness. The Registrar for Paris(a) employs a very similar, but to my mind rather preferable, mode of registration. The following entries appear in his reports under the heading of diseases of the nervous system—encephalitis, meningitis, cerebral congestion and hæmorrhage, chronic disease of the brain, disease of the protuberantia bulbi and spinal cord, epilepsy, eclampsia, tetanus, chorea, insanity, diseases of the organs of special sense. No such reports are as yet given for the whole of France.

"Annual Reports of the Metropolitan Board of Health" have for some years past been published by the Inspector of the City of New York; and I regret that this publication should not have been accessible to me. For Germany such reports are still wanting. My friend Professor Westphal, of Berlin, has informed me that the "raw material" for them is ready for the city of Berlin, and that there is a prospect of such reports being soon regularly published.

(To be continued.)

CLINICAL REMARKS
ON PRECISION IN THE USE OF TOPICAL REMEDIES.(b)

By S. MESSENGER BRADLEY, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary, and Lecturer on Practical Surgery at Owens College.

In beginning these remarks Mr. Bradley said:—I gladly comply with the request made to me that I should deliver one or two lectures on the application of topical remedies, as a good deal of haziness pervades this subject, and as it is important that a student should be able to give a reason for the faith that is in him, as to why a lotion in certain cases is preferable to an ointment; why cold is indicated in one case, heat in another; when electricity is likely to be of service, and in what form; why motion is likely to prove beneficial at one time, rest at another; and so forth. And in fulfilling this task I will, as far as possible, try to show how remedies may be used with precision, and avoid allusion to agents of merely fanciful value, else might I speak of fevers cured by the clinical thermometer being placed in the mouth; or of the *Sanguinaria Canadense*, at one time hailed as a panacea for cancer; or of the hypophosphites, vaunted to cleanse us of our island's scourge, consumption. New remedies not unfrequently suffer from over-praise; and by-and-by we see the drug which was absurdly vaunted as a cure-all fall into an equally undeserved desuetude.

In these lectures, however, I shall only speak of remedies whose action is in a great measure known, and which may consequently be employed with some certainty as to the result, and shall treat in turn of the local use of caustics, cold, heat, lotions, ointments, pressure, electricity, rest, and motion. And first let me speak of caustics.

The caustic agents employed in surgery may be divided into alkaline, acid, and *special* caustics, such as chlorides of zinc and bromine. Nitrate of silver, which, *par excellence*, is called "caustic," scarcely merits the name, as it only enters into superficial combination with the fluids of the tissues,

(a) *Bulletin de Statistique Municipale de la Ville de Paris.* (Paris, monthly.)
(b) Delivered in the Manchester Royal Infirmary.

forming an albuminate of silver, the liberated acid acting, as far as it goes, like the other acid caustics which have shortly to be considered.

The *alkaline* group, sufficiently represented by caustic potash, act very vigorously, converting the destroyed tissues into a dark and glutinous pulp. They operate by absorbing water and uniting with the oxygen or acid of the tissues, all the time dissolving the nitrogenous substances, until they finally come to rest, when a condition of equilibrium or neutrality is attained. We consequently select alkaline caustics when we desire a deep and searching action, and therefore they are suitable for the removal of warts, cheloid and other similar flat growths, or for the formation of sloughs, as in carbuncle, etc. United with lime, caustic potash becomes more manageable, and is occasionally very serviceable in destroying a gland infiltrated with the specific virus of syphilis, when, as sometimes happens, we cannot get a suppurating bubo to heal. With the same agent I have succeeded in completely rubbing away a flat epitheliomatous growth on a man's cheek, which had become evolved from a pre-existing cheloid formation. We should always have numerous bits of blotting-paper at hand when we employ caustic potash and lime, to wipe away the black treacle-like slough which is formed, and so see that we do not penetrate too deeply. At the end of the sitting, vinegar-and-water should be sponged over the part to arrest further action. Largely diluted with water, the caustic alkalies are useful in checking cutaneous irritation, and in the form of lotions and injections are usefully employed in the treatment of eczema and leucorrhœa, in both of which diseases the abnormal secretion is acid.

The mineral *acids* in a concentrated form are all caustic, but sulphuric and nitric acids are those most frequently selected. They penetrate less deeply and widely than the preceding group, and are therefore especially indicated where a rapid and superficial action is needed. They act by yielding up their oxygen to the tissues, which in its nascent condition burns the carbon and finally comes to rest as a neutral salt. The acid caustics are indicated in the treatment of such sores as soft chancres, or indeed whenever we wish to destroy the surface of a sore and inaugurate a fresh mode of action. In cases such as these, when we wish to limit the caustic action very accurately, the acid should be applied by means of a glass capillary tube, and after its operation is over, iodoform should be dusted over the sore. This constitutes the best treatment for the non-infecting form of syphilitic sore. In cases of sloughing ulcers or sloughing stumps, fuming nitric acid, freely applied under chloroform, answers better than anything else in hastening the detachment of the slough and inducing healthy action. The acid caustics may be used locally in cases of cutaneous and veno-cutaneous nævus—in the former by tattooing, in the latter variety by subcutaneous injection with a fine syringe,—but I have found carbolic acid a decidedly better agent. Diluted in the proportion of two to eight ounces to a bath, the acids act powerfully upon the cutaneous capillaries, and so are energetic in bracing up and stimulating a torpid skin. For the same reason they are useful in checking sweating; sponging with Rimmel's vinegar and water being a convenient and pleasant mode of prescribing acid for this purpose. By virtue, too, of this principle of astringency, the acids, when diluted, are useful stimulants to indolent ulcers, or for arresting the bleeding from leech-bites, or for hardening the skin of tender feet,—though for the latter purpose salt and water is a better agent; and, indeed, I should recommend those of you who contemplate an autumn walking tour to prepare for the tramp by soaking your feet in salt and water twenty minutes every night for a week before you start.

Chloride of zinc, introduced by Campbell de Morgan, is an efficient and valuable caustic. It acts, at the same time, as a disinfectant and deodoriser, and is especially indicated when we wish to destroy cell-growth beyond the region which the knife has reached; hence its value after ablation of the breast for cancer, for it finds out and destroys numerous cells which have escaped the scalpel; and as it arrests putrefaction for several days, it is a capital plan to inject a strong solution of chloride of zinc into deep sinuses, with or without bone at the bottom; for by this means we often succeed in destroying the living pyogenic membrane, and so put a stop to cell-proliferation. Caution is needed in employing this agent in operations about the mouth and throat, as, when swallowed, it acts as an irritant poison. In the proportion of from one to five grains of chloride of zinc to the ounce of water, we have a powerful astringent, and therefore a valuable remedy for gonorrhœa and allied disorders.

Bromine is a remarkable and powerful caustic; its action is not thoroughly understood, but it may be conjectured that it acts much in the same way as nascent oxygen, burning the tissues with which it comes in contact until it enters into chemical combination with them, and so comes to rest. Its action is long-continued and very painful, so that it is well to administer an anodyne prior to making any extensive application of the drug. Bromine should be mixed with spirits of wine, in the proportion of one part bromine to three parts spirits of wine. The admixture should be made slowly, and in the open air, as the fumes are very suffocating. It is principally used for destroying young cells, especially cancer-cells, when removal of the growth by the knife is necessarily partial or impossible. Applied by means of a glass brush to the os uteri in cases of uterine carcinoma, or to the tongue in the same disease, it is certainly of service in checking for a time the progress of the malady.

Iodine is an agent belonging to the same group, and possessing similar, but less powerful, caustic properties. It is, however, an excellent disinfectant, and, mixed in various proportions with water, is a valuable agent in cases of obstinate sinuses, sloughing sores, and freely suppurating cysts, which resist other treatment. I lately employed iodine and boracic acid in a series of cases in which there was sloughing, such as crushed and lacerated hands, and found both answered very well; but while the parts healed quite as quickly and inodorously with the boracic acid as with the iodine, there was far less pain with the former than with the latter remedy, and no weeping attendants, as invariably happened when the dressings were made with iodine.

Cold may be employed in the form of ice, or ice poultices (made by mixing bits of ice with a linseed poultice), or evaporating lotions, or irrigation. Cold acts through the vaso-motor nerves upon the capillaries, constringing and even emptying them of blood, and this not merely in those capillaries immediately in contact, but owing to the dispersion of the nervous filaments, even at a considerable distance, and thus renders the advent of congestion and inflammation physically difficult or even impossible. It should be used with some caution, as, if its action be kept up too long, it may destroy the vitality of a part, as happened lately in a case of femoral hernia, when, after operating, I applied ice with a view to prevent peritonitis: this it achieved, but produced a considerable slough of the integuments, which was a long time in healing over. The value of cold is typically seen in cases of sprain and of violent wrenchings of a joint. For example, after breaking down adhesions in cases of fibrous anchylosis, I know nothing so certain to obviate the tendency to synovitis as the immediate and continuous application of ice to the roughly handled joint. In the same way, thin bandages, wrung out in cold water, kept cold, and applied with a fair amount of pressure, constitute the best of all treatments in cases of recent sprains and contusions. Besides causing contraction of the capillaries, cold, still acting through the trophic nerves, produces muscular contraction, to which property is due its efficacy in causing contraction of the relaxed parturient uterus; while its former property gives it value as a hæmostatic in cases of oozing from a stump or other parts after operation.

Nor should I omit to mention the value of ice as a topical remedy after operations in the region of the throat—*e.g.*, after excision of the tongue, the first twenty-four hours is a period of peculiar peril, from the tendency to inflammatory infiltration and consequent suffocation. This risk is in a great degree removed by directing the patient to constantly suck small lumps of ice. And while referring to its value in throat cases, I may mention that it is often of signal service in cases of idiopathic tonsillitis.

Heat is employed in the form of the cautery (actual and galvanic), and by poultices and fomentations. When we desire to combine a cutting with a cauterising action we employ the galvanic cautery; when its cauterising properties alone are needed, the actual cautery is selected; but there is no essential difference in the mode of action of the two. The use of the cautery may be briefly stated to be to arrest bleeding and to act as a counter-irritant. As an example of its use in the first case, I may mention its employment in excision of the entire tongue, and shall not consider it out of place to briefly describe the operation. Removal of the tongue was until lately one of the most bloody and fatal of operations; but owing chiefly to the introduction of the galvanic écraseur, it may now be practised with no loss of blood and with but small present risk to life. Nunneley simplified the old opera-

tion of Syme by substituting a cut through the floor of the mouth for the division of the inferior maxilla; and my colleague Mr. Whitehead further improved on Nunneley's plan by simply passing an armed needle through the mylo-hyoid region, and threading the tongue through the loop of wire conveyed through this aperture. Even the wound thus caused is, however, unnecessary, for by first dividing the tongue along the raphé from base to tip, by means of the galvanic wire, each half may readily be removed by a cut with the wire travelling at right angles to the first incision, and by this means the inconvenient charring of the soft parts of the floor of the mouth, through which the wire would pass in Mr. Whitehead's plan, is obviated. The actual cautery is employed to stop bleeding in all cases when it is very difficult or impossible to apply ligatures, as after excision of the upper jaw, or after removal of piles, which are incomparably better treated by the clamp and the actual cautery than by any other plan. The value of heat as a counter-irritant is especially well seen in cases of chronic synovitis and arthritis of a more general kind. In these cases it stimulates the lymphatics and the capillaries at a considerable distance, and so excites absorption of exuded material and causes disappearance of old inflammatory thickenings and bands of adhesions. Even in pulpy degeneration of joints, when all active symptoms have subsided, the free use of the actual cautery followed by absolute rest is sometimes crowned with complete success, and it should certainly be resorted to in all such cases before practising excision.

Poultices and fomentations act beneficially by relaxing the capillary system, and so favour absorption; in this way they often prevent suppuration, though, if inflammatory action has proceeded beyond a certain point, they hasten the issue by this same power of relaxation. Hence, nothing is more rational than to apply poultices when an abscess is in process of formation, though their application should be at once discarded after evacuating the contained matter, and Lister's method of dressing commenced, or the plan more recently suggested by Mr. Callender. Poultices made of Iceland and other kinds of moss are sometimes recommended as possessing special properties of absorption, but I have not been able to determine whether they do in reality possess any advantage over those made of linseed-meal. The inestimable value of hot fomentations in relieving the pain of angeioleucitis following a dissection-wound must not be overlooked. No one who has suffered from such an accident will be likely to do so, nor will fail to urge their employment in similar cases, always insisting on the absolute necessity of their being, like a toper's toddy, hot and strong and frequently repeated.

Lotions and Ointments.—To a large extent it is a mere matter of taste whether an ointment or a lotion be selected. It may, however, be stated in general terms that where large surfaces of cuticle are destroyed, as in cases of burns and scalds, ointments are preferable, inasmuch as they prevent radiation, and so, in a great measure, preserve the necessary animal heat. Ointments, again, are chosen sometimes simply because, owing to the locality, it would be difficult to apply lotions—as, *e.g.*, in injuries or diseases about the face and the flexures of joints. When insoluble substances, too, are thought desirable as local applications, we are constrained to employ an ointment in which the drug is conveniently contained. Lotions, on the other hand, are cleaner and cooler, and generally more pleasant. They are of course very numerous—fashion, as variable in these matters as in a lady's dress, makes a drug popular for a time, to give way to some fresh rival; but, numerous as they are, they may be classed into astringent, stimulant, and sedative. Pre-eminent among the first group stands lead lotion, which, combined with spirits of wine or with opium, you see so extensively used in the wards of this hospital. Lead, when added to an albuminous fluid, throws down a precipitate, which is an albuminate of lead, and this substance it is which coats over the abraded surfaces, forming an impermeable envelope; at the same time, it constringes the capillaries. It is, indeed, this double action which renders lead such a valuable agent where there is any cutaneous inflammation to be subdued. Hence it is most useful in cases of erysipelatous mischief, or in checking inflammation consequent upon compound fractures, or in allaying the pain of synovial and other forms of articular inflammation. When a stimulant rather than a soothing action is sought, we resort to other agents, such as our red lotion, which is composed of one grain of sulphate of zinc and five minims of tincture of lavender to an ounce of water; or to the nitric acid lotion; or, when the specific action of mercury is needed, as in cases of syphilitic sores, to the black and yellow washes of the Pharmacopœia. The sedative group, again, are best represented by the lotions which contain opium or other anodynes, combined with various ingredients of an astringent or a stimulating nature, according to the necessities of the case. Their use is clearly indicated whenever pain is severe.

I pass on to shortly consider antiseptic dressings.

Antiseptic dressings were introduced into the practice of surgery from a belief in the germ origin of putrefaction. This theory maintains that putrefaction, which is in its turn the cause of septicæmia, pyæmia, etc., and therefore the chief cause of death after operations, is the direct result of the presence of minute organisms, called bacteria, which probably act by stealing oxygen from the tissues, pulling down the complex fabrics, and converting the higher quaternary compounds into simpler binary products.

The object of antiseptic dressings is to prevent the ingress of these organisms, or to destroy them if already present. The chief agent employed for this purpose is carbolic acid, which, in a saturated watery solution of one part of acid to twenty of water, is very fatal to these minute organisms. The spray, under which you see operations performed and dressings carried on, has chiefly the extrusion of these unwelcome guests in view; the carbolised gauze is employed for a similar purpose, and also because the carbolic atmosphere which it insures is inimical to the development of bacteria; but if infected air has already had free access to an open wound, then it becomes necessary, by means of chloride of zinc, or the stronger solution (one to twenty) of carbolic acid, to destroy the germs already present before using the ordinary antiseptic dressings. Whatever be the final issue of the contest upon the germ theory of disease, nothing can ever imperil the stability of this mode of dressing, until, perchance, the same almost perfect results be attained by a somewhat simpler process. If the theory be finally triumphant, it seems as if it must carry with it, as a corollary or "rider," that by a thorough adoption of antisepticity in our hospitals we shall be able to exorcise the demon of "hospitalism," whether it appear in the guise of pyæmia, or erysipelas, or other septic trouble.

Of course it often happens, as in cases of operations about the mouth, or in cases of crushed hands and feet and allied injuries, that it is difficult to carry out antisepticity in its entirety; when such is the case it is still well to employ some antiseptic agent as a lotion, etc. For this purpose nothing answers better than boracic acid. Unlike carbolic acid, this agent is quite unirritating to the cuticle, while it is equally good as a disinfectant. It is only slightly soluble in cold water, but freely so in hot water, so that the best plan is to prepare a hot saturated solution, and into this dip the lint to be subsequently used. When dry the boracic acid forms a glittering crust of crystals on the lint, and this supersaturated material should be applied *over* a piece of lint wetted in a solution of the acid. This mode of dressing answers admirably in cases of callous ulcers of the leg, or in cases of lacerated and contused wounds in various situations.

(*To be continued.*)

Chromatised Gelatine as a Cement.—Chromatised gelatine, obtained by the addition of one part of bichromate of potass to five parts of a solution (5 or 10 per cent.) of gelatine, forms a most excellent cement for glass. The surfaces to be united, after being smeared with the cement, are placed upon each other and exposed to the sun. After a few hours the adhesion is perfect and almost invisible, and boiling water itself has no action upon the cement.—*Journal de Méd. de Bruxelles*, July.

A School for Ambulance-Bearers.—A school of a novel kind has just been established at Vincennes, in the court-yard of the Military Hospital. Every day a number of soldiers give instruction in the art of erecting as rapidly as possible tents for the use of ambulances in campaigns. The tents are immediately furnished with their bedding and all other appurtenances for the supply of from six to twenty patients. At a given signal, the bedding, etc., is removed, the tents are struck, and the patients are supposed to be conveyed away in carriages beyond the point of danger. Experiments are tried of all apparatus proposed to the directors of the school, all of which are undergoing successive examinations.—*Union Méd.*, October 31.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

POPLITEAL ANEURISM — SUDDEN PLUGGING — GANGRENE OF LEG AND FOOT—AMPUTATION—SECONDARY HÆMORRHAGE — SEPTICÆMIA — DEATH.

(Under the care of Mr. CHRISTOPHER HEATH.)
[From notes by Mr. A. P. GOULD, B.S., Surgical Registrar.]

T. O., aged twenty-six, was admitted on September 7, 1876. He gave the following history:—He was a carman, had enjoyed good health all his life, was rather intemperate, had not had syphilis; his mother died of consumption; in all other respects his family history was good. While walking on September 4 he felt a sudden numbness come over the left leg; it increased as the day wore on, and was accompanied with a darting pain. He took to his bed, and applied hot fomentations. As it became worse he came into the hospital.

On admission the patient had a florid, feverish appearance; pulse full, quick, and bounding. The left foot and lower two-thirds of the leg were devoid of sensation and cold, the cold being absolute at the foot, but gradually getting less above. The skin was mottled of a purple colour, the toes being quite livid; pressure had no effect on the lividity. On the outer side of the leg, about the middle, there was a patch of skin of a diffused purplish colour; a bulla had risen between the first and second digits. There was slight œdema of the foot and lower part of the calf, but scarcely pitting on pressure; above this, solid inflammatory œdema as high as knee. No pulsation in anterior or posterior tibial vessels. A firm swelling, about the size of a walnut, could be felt in the popliteal space; no pulsation in it. Temperature 100·4°. The limb was wrapped in cotton-wool and slightly raised; the bowels were opened with a saline aperient, a febrifuge mixture ordered, with a narcotic draught at night. The toes rapidly became completely black, dry, and gangrenous; but the sensation in the leg above somewhat improved.

On September 14 it was noted that the temperature was lowered below the middle of the leg on the inner side, and below the upper one-third on the outer side, and that the cold was absolute on the back of the foot. Sensation on inner side of leg exaggerated as low as inner malleolus; no sensation on outer side below the middle, nor on the foot. Swelling in ham increased, less defined; extending up from it along popliteal space was a hard cord. Tongue coated, dry; temperature 100·8°; pulse 96. Delirium every night. Patient complained of the sharp darting pains in the limb.

On the 16th a line of separation formed around the slough on outer side of leg; above this and on the inner side the skin was red. The gangrene showed no signs of spreading. The patient's condition was bad: his tongue furred and dry; pulse rapid (100 to 120) and soft; temperature persistently high (100° to 103° in the morning); sleep disturbed by delirium. It was therefore determined to amputate. This Mr. Heath did on September 20, removing the limb about a hand's-breadth below the knee by a short anterior and a long posterior flap. The calf muscles were dissected off the posterior flap, the gastrocnemius being healthy in appearance; the soleus was pale and anæmic, but perfectly sweet in odour, and not fatty when examined microscopically. No tourniquet was used, and only a few drops of blood were lost, but it was thought best to ligature the tibial vessels; a few other small vessels which bled were twisted or ligatured, catgut being used. The operation was performed under the carbolic acid spray; antiseptic silk sutures and drainage-tubes were used, and the gauze dressing applied.

When the stump was dressed, on the 22nd, the flaps were slightly œdematous, and redness extended for some distance from the edges. No bagging; discharge serous, sweet; great sensitiveness of stump. Patient took his food well; slept well; had very little pain. Tongue dry; pulse full, soft, dicrotous, 105; temperature 102·3°. Ordered a mixture containing carbonate of ammonia and opium.

For the next few days he somewhat improved, his temperature falling a little, and his strength increasing.

On the 26th three sutures were removed, and it was found that there was no union of flaps. Wound granulating; discharge quite sweet. The long posterior flap was supported by a strip of plaster under the dressing.

On September 28, at 10 p.m., blood soaked through the dressing, and a large clot was found in the dressing; no bleeding point seen. The dressing was reapplied with a firm bandage. He slept badly through the night, and had a slight shiver in the morning; and at 10 a.m. his temperature was 104·6°; pulse 132, very compressible. From this time he became worse. On October 1 a red blush appeared over right inner ankle; this diminished by the 2nd, and had disappeared on the 3rd. On October 2 he had slight epistaxis; his temperature rose to 105° at 10 a.m. On October 4 it is noted that he had been very delirious during the night, and that his mind was not quite clear then. Temperature 104°; pulse 120, very soft; tongue dry; skin hot; features pinched. No action in stump; discharge sweet. Deficient resonance in both backs and axillæ; respiration bronchial; no râles.

October 6.—Much worse: weaker, delirious, subsultus, and hiccough. Respirations 54. Cough, with tenacious expectoration, which had to be wiped from his mouth. Over the back of right forearm and hand there was a livid, red, ill-defined, raised blush; it extended also above the elbow as far as deltoid on outer side of arm; no fluctuation.

7th.—Quite unconscious; cyanosis; profuse sweating; pulse very soft and rapid; temperature 102·7°. Stump wrapped in oakum pad. At 8 p.m. the temperature was 106·1°. For the last three days the urine had contained a trace of albumen.

He died at 3 a.m. on October 8.

Examination of Amputated Leg.—All the tissues gangrenous; no clot in arteries. For the upper three inches of tibial arteries the inner coat was softened, and under it was seen recent atheromatous deposit. Coagula in veins, adherent below.

Autopsy, twelve hours after Death.—Heart flabby; blood very fluid; no petechiæ; no staining of lining membrane of heart. Slight streaks of atheroma seen in aorta. Raised ovoid opaque patches of atheroma seen on posterior surface of right common iliac artery, and of both external iliac vessels as they pass over the brim of the pelvis. Both femoral arteries atheromatous. Right popliteal artery very atheromatous, there being raised deposits all round the vessel just behind the knee-joint. The left popliteal artery is dilated into a fusiform aneurism about the size of an apricot, filled with a clot, firm and laminated externally where it is adherent to vessel, softer and darker internally; a clot continues up from this along all the popliteal artery. The internal coat of the artery ceases at the upper and lower ends of the aneurism. The popliteal vein is adherent to the artery, not obliterated by it; no clot in it. The vessel below the aneurism is empty; no clot in it; the edges of it are united below in a linear manner—no sign of the ligature. Glands in right iliac fossa enlarged, black. Lungs: Lower lobes deeply congested; portions of the left sink in water; no abscesses. Spleen large, very soft. Liver large. Kidneys cloudy, swelling. No extravasations in intestines. Arteries of brain and upper limbs examined; not atheromatous.

Remarks.—This case presents several points of interest. The common cause of gangrene after ligature of the femoral is stated to be some obstruction to venous return. But in this case there seems reason to believe that the gangrene, which had already commenced when the patient was admitted, was due to occlusion of the aneurism and non-establishment of the collateral circulation. No coagulum was found post-mortem in the popliteal vein, and at the time of the operation it was specially noted that although no tourniquet was used the tibial arteries did not bleed. The preparations of the great vessels were shown by Mr. Barker at the meeting of the Pathological Society on the 17th ult. Mr. Barker drew special attention to the position of the atheromatous patches. There was "gelatinous swelling" on the posterior wall of the right common iliac, on each external iliac passing under Poupart's ligament, and along the femorals. It was pointed out that these were spots where the several arteries pulsated against bone. Exception was taken to this view, as explanatory of one cause of atheroma, by Mr. Morris, because, in this specimen, although the aorta pulsated against the vertebral column along its whole length, yet it was free from disease; and by Mr. Hulke, who pointed out that in bending a flexible tube the strain is greater on the convex side.

The case is of interest in its bearing on antiseptic surgery. The man died from septicæmia, although the wound was sweet throughout. Septicæmia had doubtless commenced before the amputation. The black pigmentation of the iliac glands subsequent to this gangrenous condition is worthy of notice.

HULL GENERAL INFIRMARY.

THE SURGERY OF 1875.

(Reported by Mr. HENRY THOMPSON, House-Surgeon.)

In attempting to give a short review of the major operations performed at the Hull Infirmary in 1875, a few preliminary remarks are necessary. The results altogether may be considered very satisfactory, showing, so far as statistics may be relied on, that small provincial hospitals compare favourably with larger central ones, and even with private practice.

During the year, in 121 operations of all sorts, there certainly were fourteen deaths; but of these, five occurred after herniotomy; one after colotomy, in which the patient was almost moribund when admitted; one after trephining, in which the post-mortem showed extensive fracture of the base; and one after lithotomy, in which the patient died of cerebral softening—independent, it may be said, of the operation;—thus leaving only eight deaths to be fairly reckoned in the usual mortality after operations. Only two deaths can be said to have occurred from hospitalism; both of these died of erysipelas. One was a half-starved man from a neighbouring workhouse, who underwent excision of the eyeball; the other was a woman, who died after excision of the breast.

No doubt can exist that the after-results of operations depend, in a very great measure, not only upon the sanitary condition of the hospital itself, but also upon the cleanliness of the bed-linen and other surroundings of the patient. In all these particulars the Hull Infirmary will compare very favourably with any other institution. Owing to an improved system of ventilation, to the constant practice of isolation of everything contagious, to extreme precautions as regard bed-linen, etc., and to antiseptic surgery, erysipelas and pyæmia, which used to be rife, are now seldom seen; and the surgeons have never now to consider whether the hospital is sufficiently healthy to allow them to undertake any capital operation.

Up to about October the usual dressings employed were lint and carbolic oil; but about that period antiseptic surgery in its entirety was first commenced in some of the cases. Under that treatment there have been some splendid results, both during the end of 1875, and the whole of 1876 so far. Some of these cases were read by Dr. King at the Sheffield meeting of the British Medical Association; and the review of the surgery of 1876 will go fully into the account of them.

As regards anæsthetics, with the exception of about one-fifth, ether was the one used. It is given in a cone of flannel surrounded by guttapercha, and, in the opinion of nearly all connected with the hospital, is far preferable to chloroform, both as regards the danger of administration, and the after-effects upon the patient.

During the year twenty-two amputations were performed, with two deaths. Of these twenty-two, eight were primary, three were secondary, and eleven were for disease.

Primary Amputations.

The primary amputations of the upper arm were both treated antiseptically, the operations being performed under the carbolic spray, and both they and the after-dressings being strictly after Lister's method. The first case was that of a boy aged thirteen (under the care of Mr. Craven), whose arm was amputated in the lower third of the humerus for injuries sustained by being run over. The second case was that of a man aged thirty-three (under the care of Mr. Craven), admitted with a crushed arm, the result of a railway accident, necessitating amputation just below the tuberosities of the humerus. In both these cases the discharge from the stumps consisted at first of blood-stained serum only, and then at the end of two or three days of pure serum. The vessels were secured with carbolised catgut, and the flaps stitched together with the same material. In the first case, owing to the flaps being made rather short, the stump had partly to heal by granulation, and consequently a complete cicatrix was not formed until thirty-three days after the operation. In the second case, however, the man was discharged with a perfect cicatrix in twenty-two days, and the stump was only dressed six times altogether.

Only one primary amputation of the leg took place, the patient being an old man of seventy-two. He died of exhaustion on the third day after the operation.

Secondary Amputations.

The secondary amputations of the leg were performed after attempts had been made to save the limbs. In the first case it took place three months, and in the second case six weeks after the accident.

T. M., aged fifty-five, admitted under the care of Dr. Lunn, on December 21, 1874, with a very severe compound fracture of tibia and fibula. The man was a great drunkard, and shortly after his admission he had a severe attack of delirium tremens. On admission, amputation was advised, but he refused to consent. Accordingly an attempt was made to save the limb. A large portion of the tibia, however, necrosed, and at the end of three months he consented to the amputation. He was greatly exhausted by the delirium tremens and the prolonged suppuration, but eventually completely recovered.

In the second case, that of P. W., aged thirty-nine (under the care of Dr. King), the following were the injuries. The internal malleolus was seen projecting through a wound over it, and consequently dislocated from the apposing surface of the astragalus. Three inches above this there was an obliquo fracture of the tibia, the upper end of which was projecting through a wound on the inner surface of the leg. The fibula was also broken, and the broken ends were in connexion with, but not protruding through, a wound about three inches above outer ankle. The fractured bones were replaced in position, the wounds syringed out with one to twenty carbolic lotion, dressed with carbolised gauze, and the limb swung on Salter's splint. However, in spite of every care having been taken, putrefaction took place, and the discharge in consequence became very profuse. Numerous abscesses formed in different parts of the leg, and the man rapidly emaciated. After about five weeks he began to improve, but the ankle was so completely disorganised that amputation was found to be necessary. This was done by anterior and posterior flaps, in about the middle of the leg. Thirty-three days after the amputation, severe secondary hæmorrhage occurred. The greater part of the stump had then quite healed, leaving only a small granulating wound, and a sinus extending along outer side of tibia, from which latter the hæmorrhage took place. Accordingly the house-surgeon cut down upon and tied the anterior tibial artery in the upper part of its course. No more hæmorrhage broke out after that. The ligature came away on the eleventh day, and the man was discharged cured, 151 days after the accident, seventy-two days after the amputation, and thirty-nine days after the ligature of the anterior tibial.

Amputation of the Thigh for Disease.

This operation was performed in the following cases:—Five for disorganised knee-joints (chiefly strumous), and one for congenital paralysis of the leg, in which the paralysed limb interfered with the patient's occupation as a barber. The ages were respectively 8, 13, 21, 24, 28, 28. One death took place—viz., in the case of an extremely emaciated man, aged twenty-eight, with a completely disorganised scrofulous knee-joint, who at the time was suffering from chronic catarrhal pneumonia, and in whom amputation was performed at the patient's urgent request, although it would have been difficult to find a worse subject. He died exhausted, twenty-three days after the operation.

Amputation of the Leg for Disease.

The first of the two cases was performed on account of an osteoid cancerous growth springing from the interior of the shaft of the tibia. The patient was a man aged fifty-seven. (Dr. King.)

The second case was one of caries of the tarsus, also involving the lower ends of the tibia and fibula. Amputation was performed by Dr. Lunn at the seat of election. The patient was an unhealthy woman aged twenty-five. She, however, recovered without a bad symptom.

The Syme's amputations were both rendered necessary on account of caries of the tarsus. One patient was a child aged seven, and the other was a woman aged thirty. This latter case showed in a remarkable manner the danger attending the application of irritants in unhealthy subjects. The woman being extremely anæmic, every drop of blood was of consequence. Esmarch's bandage, therefore, was applied. On removing the bandage there was such free oozing from the whole cut surface that perchloride of iron was applied. All this surface sloughed. Fortunately the sloughing was only superficial, leaving plenty of covering for the stump, but the recovery was retarded.

Amputation at the Shoulder-Joint.

The case in which this operation was performed is worthy of being more fully recorded on account of several points of interest, both connected with the history of the case, the

comparative rarity of the disease, and the method of restraining the hæmorrhage during the operation.

T. P., aged fifty-one, admitted under the care of Dr. King on June 23. He gave the following history:—Some time during the October previous, whilst carrying a sack of corn on his back, he slipped and fell, striking his right arm against the edge of a plank. No fracture occurred, and very slight bruising, but ever afterwards movement of the arm caused him pain, and he has never been able to work since. In a few days a swelling appeared on the outer side of the upper arm, and this has gradually increased in size. One sister died of cancer of the breast. The man has been a great drunkard. He has lost flesh and strength rapidly lately, and is at present weak and cachectic-looking. On admission, at about the middle of the upper arm is seen a tumour of the size of an orange. This tumour is situated on the outer and back part of the arm; it is lobular, semi-elastic, with one or two small softened patches, and slightly movable. The superficial veins are distended, but the skin freely movable over it and intact.

The operation was performed on the day of admission. Ether was administered, and then Esmarch's bandage was applied by Mr. Plaxton round the hand upwards to shoulder, and carried with figure-of-eight over shoulder and round the chest (a pad being placed in the axilla). The bandage round the arm was removed before the commencement of the operation. So successful was this, that not a drop of blood was lost from the axillary artery itself. On removing the figure-of-eight bandage, very sharp hæmorrhage took place from numerous small vessels, and altogether no less than twenty-four ligatures were applied. The amputation was performed by long deltoid and short internal flaps. The stump healed rapidly, and the man was discharged cured on July 26, thirty-three days after the operation. Microscopic examination of the tumour showed it to be a spindle- and round-celled sarcoma.

(To be continued.)

PRACTICAL INSTRUCTION IN VACCINATION.—The importance of this as now insisted upon in this country (especially since the abolition of apprenticeships, during which it was usually obtained) is strongly brought out by what has occurred at a *concours* for the *externat* of the Lyons hospitals. One of the questions was "Vaccination," with an exhibition of its mode of performance on the subjects. Prof. Aubert, one of the judges, reports (*Lyon Méd.*, November 5) that the candidates showed themselves so little able to perform this trivial operation properly that out of nearly forty only four acquitted themselves creditably!—some of them, indeed, making the most ludicrous mistakes in conducting it. And yet almost all these candidates had already shown their competence in difficult questions, although they failed in so simple a matter. This arises, M. Aubert states, from the French official teaching not being demonstrative enough. At the end of his education the student finds himself ignorant of a number of simple details which are yet of great importance. He insists upon the necessity of providing for practical instruction in vaccination.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN OCTOBER.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction	20·40	0·084	0·135	0·000	0·008	13·8	2·4
West Middlesex	20·41	0·082	0·135	0·000	0·006	13·8	2·4
Southwark and Vauxhall	20·20	0·050	0·105	0·001	0·008	13·8	2·8
Chelsea	20·90	0·077	0·120	0·000	0·007	13·8	3·8
Lambeth	20·06	0·091	0·120	0·001	0·007	14·3	3·3
Other Companies.							
Kent	24·24	0·010	0·255	0·000	0·000	18·2	5·1
New River	19·38	0·027	0·120	0·000	0·004	14·3	3·3
East London	19·51	0·037	0·105	0·001	0·005	13·3	2·4

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Southwark and Vauxhall.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 11, 1876.

SCOTTISH INTRODUCTORY ADDRESSES.

IN the Scottish Universities, besides the common custom of listening to an introductory and truly academic prelection from the Principal, it has become increasingly prevalent for the students to be called upon to hear another in each class-room. Introductories, therefore, though at a discount here in London, seem to prosper in the North. As we have often had occasion to remark, this may be a good or a bad thing, according to the capacity and powers of the lecturer; and to listen to a good class introductory is just as good for the student as it is bad for him to listen to a bad one.

This year, from various causes, an unusual amount of interest centres in some of these addresses, and this induces us to speak of them rather more fully than we should otherwise have felt inclined to do. To begin with the senior professor. Dr. Gairdner, of Glasgow, had to meet his class under what might to another have been very difficult circumstances, but the heartiness and truthfulness, the mental force and vigour of the man easily triumphed over these difficulties. It was not likely, in point of fact, that he would have an audience hard to please, for if the Glasgow students know when they are well off they will be only too glad to have Professor Gairdner for their teacher. We could have heartily wished Dr. Gairdner success, but our feelings of regret—and we fancy that the same feelings are manifested by all who wish well to Glasgow—were readily appeased. Another point alluded to by Dr. Gairdner was also addressed to a sympathetic audience—we mean Dr. M'Kendrick's appointment to what practically means the Chair of Physiology. On this we have already had occasion to congratulate the University of Glasgow, and we are sure the University will in due time have reason to congratulate itself. The third important point Dr. Gairdner referred to was the removal of all disabilities from the Extra-mural School of Medicine. We are sure this is a step in the right direction. Nothing gives such a healthy tone to a university or school as free-trade in teaching.

In Edinburgh Dr. Grainger Stewart had to make his *début* as tenant of the grandest chair in any medical school in this country. He could well, therefore, plead for grace if his first discourse was not of the same calibre as some which had been delivered under like circumstances, for at the time of delivering this address he was only a three-days-old professor. He therefore most wisely devoted himself to a sketch of the method which he considered best in the pursuit of the study of medicine, and of the plan of teaching he had himself resolved upon. Certain of his remarks were very well worth quoting. For instance, his description of the therapeutic scepticism, which still is prevalent, though, fortunately, less so than was the case a year or two ago, was exceedingly good. Taken from Goethe, it is as follows:—The spirit of medicine is easy to be grasped: "one studies through the great and little worlds (*macrocosm* and *microcosm*) to let things go in the end as pleases God." His opinion—an opinion with which we heartily concur—is that much of this scepticism arises from an ignorance of therapeutics. The fact is, materia medica has been so much decried as a study that students can be with difficulty made to attend to it; and we are quite sure of this, that let a man's knowledge of therapeutics in the abstract be what they may, if he does not exactly and intimately know the various forms, doses, and uses of is *armamentarium medicum*, he will fail as a practitioner. As to his proposed mode of teaching, we think Dr. Stewart indicated a highly satisfactory and very practical mode of instruction. Each year's course would be complete in itself, and would give the student a fair conspectus of the whole science and art of medicine; but as this would, of course, be more or less imperfect in detail, he proposes each year to take up some special subject, and deal with it more minutely. Thus one year he might take the nervous system in this way, another year the circulatory organs, another year the alimentary system, and so on. Moreover, he proposes to have weekly examinations, and that a syllabus of the lecture for each day shall be issued to the students. This last plan, when the class is large and the work of the session rigorously divided into sections, cannot be too highly commended. With smaller classes the same end may be attained by writing on a black-board, or by laying down the divisions one after another as the lecturer proceeds through his subject.

Professor Lister, in his remarks introductory to his proceeding with the regular business of the class of Clinical Surgery, gave his hearers some account of what he had seen in America on the occasion of his visit to the Medical Congress at Philadelphia. He had been invited to take the chair in a section devoted to antiseptics, and took advantage of the occasion to expound his own views. This he did in a speech—or rather an address—lasting, he said, not less than three hours. The old Scotch ministers were famous for the length of their sermons; but we doubt if many of them could have defeated Professor Lister when engaged, heart and soul, in the exposition of doctrines he has done so much to extend and popularise. In conclusion Professor Lister urged upon his hearers the paramount necessity for surgeons most especially to cultivate feelings of mercy and love for their fellow-men.

Dr. M'Kendrick's inaugural address was delivered in Glasgow, as is usual under such circumstances, with the full pomp of the professorial staff. In it he indicated the position which he held a university professor dealing with such a subject as physiology should seek to occupy. Such a man, Dr. M'Kendrick holds, should be totally free from the trammels of practice, or of aught to divert him from his true work of teaching and demonstrating a rapidly advancing science, in which false facts are plentiful as blackberries. This was the duty of such a professor; but, besides that, a certain amount of work in the way of investigation was also expected of him. This undoubtedly is true. To a certain extent a man in such a position has not only to teach—that is, to do his duty to his students,—but he has also to do his duty to his school in advancing its general reputation for learning. But in no case should the latter take the place of the former: his duty as professor is primarily to teach; original investigation comes after. Fortunately for the interests of the Glasgow Medical School, Dr. M'Kendrick possesses almost the whole, or the whole, of the teaching appliances belonging to the late Professor Hughes Bennett, together with much else, which he has since accumulated, for illustrating physiological truths. For this, no doubt, due accommodation will be provided, but it will be a shame if Glasgow, so munificent as she has been in other things, does not provide a physiological laboratory replete in every convenience and contrivance altogether apart from anything the new professor may bring with him. Alluding to the name still given to the chair he now holds, Dr. M'Kendrick spoke of the idea it conveyed to us of the condition of the science and art of medicine in former days. The Institutes of Medicine (the name or title of the chair) are three—physiology, pathology, and therapeutics. Of these the last has long been handed over to the respective domains of medicine and surgery; the second is now so important as to demand a chair for itself: thus the institutes of medicine have practically come to mean physiology; and that too, by means of the introduction of natural history and comparative anatomy into the ordinary Scotch curriculum, now means in reality human physiology. This chair we hope Dr. M'Kendrick, yet a young man, may long continue to hold; and that his teaching may be as much appreciated as it deserves to be.

"PSYCHICAL FORCE."

Professor Calderwood has been entertaining the Moral Philosophy Class at the University of Edinburgh with a disquisition on "Science and Spiritualism." In some respects the lecture was a sound one. The Professor showed the utter baselessness of the attempts to connect the so-called spiritualistic manifestations with the spirits of deceased human beings, and spoke with proper contempt of the hollow nonsense which some persons are eager to receive as communications from the unseen world. He showed that the one condition necessary for the alleged manifestations is the presence of the "medium"; for it may fairly be said if there is no "medium" there is no "spirit manifestation." He says at some length, as we ourselves have lately done, that the chief qualification of a medium seems to be a nervous system peculiarly liable to excitement and disturbance. So far he is orthodox, and so he is when he says:—"Granting that the medium is essential, is he not the source of all that appears?"

But now comes a question. Most of us think that the spiritualistic manifestations, the rappings, tappings, movements of furniture, playing on musical instruments, and other disorderly actions which constitute a common manifestation, are produced by the medium voluntarily, who, having begun by deceiving himself, at last attempts to deceive others into the belief that the things done are *not* done by himself. As a matter of course, the observer finds it very difficult to detect the way in which the performer does his "business." Mr. A., the observer, makes an appointment, goes to the medium's house, pays his fee, is indulged with a *séance*, sees and hears wonderful noises and perturbations of the furniture, and all the while cannot detect any movement of the hands or feet of the medium; for all that, he no more doubts that the movements and sounds are produced by the muscles of the medium than he doubts that the eggs or feathers which a conjuror produces out of a pocket-handkerchief were brought there by the conjuror himself, and not from the invisible world.

But if these phenomena are not the work of ghosts, nor of a professor of legerdemain, is there no other explanation?

Yes, there is; and it is that by which Mesmer, nearly a century ago, accounted for the phenomena he produced; which has been worn threadbare by mesmerists, "biologists" so-called, and other professors of the charlatanic sciences, and which has now been rehabilitated under the name "psychical" or "psychic force." This is supposed to be a kind of overflow or boiling-over of nerve-force. It used to be spoken of, fairly enough, in the works of the more respectable writers on mesmerism, as a consequence of intense volition. For instance, a patient has a paralysed limb which his own will is unable to move; a strong man making mesmeric passes, accompanied by intense volition that the paralysed muscles should move, was supposed to be able to act upon those muscles. It is thus stated by Professor Calderwood:—"Nerve-energy generated within the human organism is transmitted along the nerve lines, and transmuted into muscular activity. The question thus arises, May not this energy or force pass off from the body in which it is generated, and, as an invisible agent, act upon material objects as electricity or magnetism does?"

According to this hypothesis, then, the spiritualistic manifestations consist in a kind of delirium or insane movement possessing the articles of furniture, and arising from the escape of invisible nerve-force from a human being in whom it is generated in excess. The rappings and tappings in that case would be analogous to the snappings heard on the explosion of the electric spark. Professor Calderwood is evidently a thorough believer in mesmerism. "New and important facts," he says, "have been established concerning the action of nerve-force; there is much to warrant a conclusion that this force is, in many circumstances, passing unconsciously from the body, and producing effects of which we are unobservant. . . . . The most striking result of a positive kind connected with mesmeric phenomena, and the phenomena erroneously described as spiritualistic, is the undoubted evidence of a possible communication between mind and mind by a channel distinct from our ordinary methods of communication, and somehow connected with the possibilities of our nerve organism."

We cannot help lamenting that the Edinburgh students, instead of being invited to study the great writers of the past and present age, should be treated with disquisitions on a subject so obscure if true, but really so hollow, baseless, and deceptive as the pseudo-science of mesmerism. Not one particle of evidence has yet shown that nerve-force can pass out of the organism in which it is generated. Any channel between mind and mind other than the ordinary senses is a matter of mystical speculation. The forces to which the name of mesmerism, odylic force, electro-biology, animal-magnetism, psychic force, and nerve force (in the sense understood by Professor Calderwood, who repudiates the term "psychic") are all delusions otherwise than in so far as they may represent the influence of the strong man upon the weak, the imaginative, and the hysterical. There is no more evidence that the human will can act beyond its nerves and muscles than there is for believing that the soul of a hysterical woman can search the viscera of a living man to ascertain the seat of disease. To sum up: three solutions of spiritualistic phenomena are propounded—first, the ghost theory, which we reject; secondly, legerdemain, which we accept; and, thirdly, the notion of an overflow and escape of nervous force, which has been in various forms put forth during the last century, and which remains as incredible as ever.

INFANTILE DIARRHŒA IN LEICESTER.

The excessively high mortality from infantile diarrhœa which has prevailed in Leicester for many years past, especially during the later summer months, has excited a good deal of alarm in the town; and the Corporation, although by some they have been blamed for having done so little to check it, have spared neither trouble nor expense in order to discover its causes.

Our readers may perhaps remember that on this point three several medical reports have been published, each one advancing a different theory; and recently Dr. Wm. Johnston has added a fourth. The first was drawn up by Dr. Sloane, who attributed the fatality to impure milk. The second was the conjoint production of Dr. Buck and Mr. Franklin, who came to the conclusion that the infantile diarrhœa of Leicester was specific in character, and that the chief condition accounting for its high mortality was a water-logged subsoil. The third report was made by Dr. Crane, who was of opinion that solar heat was the chief factor in generating the disease. In preparing his report, Dr. Johnston had the advantage of being able to consult the reports already published, and was thus placed in a more advantageous position than either of the other reporters; and as a result he arrives at conclusions which will, we have no doubt, be accepted as the nearest approach to a correct solution of the question that has yet been advanced. Dr. Johnston dismisses Dr. Sloane's theory without discussion, as he considers that the influence of impure milk in the causation of summer diarrhœa in Leicester is *nil*. He disagrees also with the report of Dr. Buck and Mr. Franklin, as the cases of the disease which have come under his notice have never presented anything "specific" in their nature, or differing from the cases of infantile diarrhœa occurring in other parts of the country; and he shows that the water-logged condition of the subsoil is insufficient to account for the sudden variations in the mortality from the disease. These variations he finds corresponds to changes in the temperature, the mortality increasing with the rise in temperature, and *vice versâ*. He therefore agrees with Dr. Crane in regarding *solar heat* as the chief feature in *generating* the disease; but, following the line which we indicated when considering the report of Dr. Crane, he shows that in Leicester through bad drainage the subsoil becomes sewage-logged, a general impurity of the well-waters is established, and a state of matters is engendered highly inimical to health, and most favourable for the propagation of disease. He shows that the "fall" of the Leicester system of sewers varies from 1 in 392 to 1 in 912. Such gradients he states are "frightfully insufficient" for the proper drainage of such a town as Leicester; the sewers become choked, and overflow after heavy rainfalls, saturating the sub-soil with diluted sewage. The poisoned subsoil is constantly giving off noxious emanations, the baneful effects of which are made more disastrous—and, consequently, more apparent—by the influence of summer heat. It is a significant fact that of the 299 fatal cases of diarrhœa amongst children under five years of age that occurred in Leicester in 1875, almost 90 per cent. took place in the districts drained by the sewers which Dr. Johnston condemns as "frightfully insufficient" for proper drainage.

The remedy proposed by Dr. Johnston is, of course, a new system of drainage; until this be carried out there will be the same condition of *sewage-logging*, and the same generation of noxious gases, resulting in much the same amount of infantile mortality annually. The Corporation of Leicester cannot afford to neglect Dr. Johnston's report. If, as he states, the sewers of the town are in a worse condition than those of any other large town in Great Britain, and that to this fact its excessive infantile mortality is due, it is their duty, no matter what the expense, to provide an adequate system of drainage. During the last twelve years more than 3250 deaths from diarrhœa alone have occurred in Leicester. The probable cause of the greater proportion of these deaths has now been pointed out to the Corporation of the town, and the members thereof will be seriously to blame unless they take immediate steps to apply the appropriate remedy.

THE WEEK.

TOPICS OF THE DAY.

A WELL-ATTENDED public meeting was held last week in aid of the building fund of the Metropolitan Free Hospital; the Lord Mayor presided, and the gathering took place at the Mansion House. Among those who assembled on the occasion were Sir Charles Miles, M.P., Sir Sydney Waterlow, M.P., Sir John Bennett, Dr. Finch, the Rev. Wm. Rogers, and several others. The speakers who supported the several resolutions which were put to the meeting and carried, stated that it was proposed to erect the new building upon the site of the "Old Parr's Head," near Bishopsgate Church, at a cost of £25,000, the institution thus provided being capable of affording accommodation for 150 beds, and of allowing for the relief of 400 out-patients daily. In the new building it was proposed to set aside an entire floor for patients of the Hebrew faith. In conclusion, the Lord Mayor consented to receive subscriptions, and it was resolved to ask several bankers to do the same.

The Registrar-General's Returns for 1874, recently issued, show that 69 of the 526,632 persons whose deaths were registered in England in that year were stated to be 100 years old or upwards. These centenarians comprised 16 men and 53 women; and the oldest were 6 widows, described as being 104 years old. Of the 33 women, all but 8 are registered as being widows. Among the whole 69 there is only 1 who is styled a gentleman. One of the men is described as a pensioner, 1 woman as an annuitant, and another woman (100 years old) as a ward in Chancery. One of the men is described as a farmer, 1 as a yeoman, and 8 of the women as widows of farmers (6 of them in Wales), and 1 as the widow of a gamekeeper. Two of the men are registered as agricultural labourers, and 6 of the women (3 of them in Wales) as widows of agricultural labourers or of gardeners. Two of the women were servants. One of the men was a sailor, and 1 of the women the widow of a coastguardsman. But the majority of these aged persons are described as having been occupied in ordinary trades, or as being the widows of persons so occupied during their lives. Of the whole 69, the deaths of as many as 19 were registered in Wales, 9 in the metropolis, and only 4 in the north-western division of England.

The Medical Officer of Health for Derby, in his quarterly report, just issued, states that there have been between forty and fifty cases of small-pox in the district since July 27 last, the date of the reception of the first case into the Derbyshire Infirmary. Out of this number only two deaths have taken place, and both these were of unvaccinated persons. The disease was imported from Liverpool into Derby in the person of Lillie Taylor, aged fourteen, who was taken to the Infirmary. At a recent meeting of the Board of Guardians, Dr. Taylor stated that the joint sanitary authorities for Litchurch and Derby intended to close the small-pox hospital, there having been no fresh case reported for some time past.

The Vestry of St. Luke's and the Holborn (District) Board of Works having had laid before them by their sanitary inspectors reports of the spread of contagious diseases by the exposure and sale of second-hand clothing, rags, etc., are taking action in the matter. Mr. Neighbour, the officer of St. Luke's Vestry, reports that among the means of conveying infection is the taking in pledge by certain persons of bed-clothing in which small-pox and fever patients have been wrapped. These articles, without being disinfected, had been pawned to get money for the printing of tickets for a benefit-meeting. He had, with the assistance of the parochial officers, warned the pawnbrokers, and taken steps to prevent, as far as possible, a repetition of this offence. Another great source of danger to the public was the sale of second-hand clothing in the streets by a certain class of women and girls. The clothing was collected from all parts. The Board, under the Sanitary Act of 1866, resolved to take proceedings, and determined to issue the following notice:—"That in consequence of the numerous complaints made to the Vestry by the inhabitants of Whitecross-street and the vicinity, of the danger to the public health by the exposure and obstruction to traffic by the selling of old and second-hand clothing and rags on the public highways, the Vestry have decided to take proceedings against all persons so offending, and for the penalties thereby incurred." The officers of St. Andrew's, Holborn, have also taken action in the matter to prevent the sale of second-hand clothing in the streets of that parish.

It is satisfactory to find that the Manchester authorities did not content themselves with the raid upon quack practitioners in that town which we noticed last week. Since then another sweep has been made, and a further batch of men have been brought before the magistrate, charged with falsely pretending to be physicians, doctors of medicine, or general practitioners, and fines varying from £2 to £15 were imposed, with costs. Five persons were thus convicted in addition to those fined last week, and in all the cases an order was made for the destruction of the immoral handbills and pamphlets, of which an immense quantity was seized by the police. It is much to be hoped that the authorities of other large towns will follow the example set in Manchester. In the present age of boasted enlightenment it is sad to think that a class of men with the flimsiest pretensions to skill and knowledge should be able to find dupes enough to afford them a comfortable living, and it behoves the Legislature to protect such simpletons, as it is abundantly evident that they lack sufficient common sense to take care of themselves.

On Saturday last the Birmingham Coroner resumed the adjourned inquiry on the death of the infant child of Mary Symonds. It will be remembered that, as we stated last week, the child was born in the tramp ward of the workhouse during the night of October 19 last, the mother having been turned out of her lodgings owing to her condition. There was no communication between the ward and the other parts of the house, and the poor woman was unable to get any assistance in her confinement, save from some of the inmates in the same room, who were too much afraid to materially help her. No person appears to have been present on behalf of the Local Government Board at the adjourned inquiry, and the jury returned a verdict that the child had died accidentally immediately after its birth, but that had proper assistance been given to the mother in her confinement the life of the deceased would have been saved; and they severely censured the conduct of the workhouse master, the tramp mistress, and the visiting committee for their neglect.

A lamentable case of accidental poisoning has occurred in the Wirral Hospital for Sick Children. On Saturday morning last the night-nurse administered to a child, whose parents reside in Birkenhead, a quantity of carbolic acid, which she mistook for a dose of medicine. The little sufferer, who had been in the Hospital since February for lung disease, died before the doctor arrived. There is evidently a strong necessity for insuring that carbolic acid be kept in sick wards in some special place or in such distinctive bottles that mistakes of this unfortunate nature should be rendered utterly impossible.

The Dublin Corporation determined last Saturday on a scheme which contemplates, as a beginning, the outlay of nearly £20,000 in creating health-spaces in Dublin, by clearing away old buildings, the nests of disease, in which the working population is at the present moment overcrowded.

At the meeting of the Metropolitan Asylums District Board held on Saturday last a communication was read from the

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Local Government Board, enclosing, for the observations of the managers, a copy of a letter from the Guardians of St. George's, inquiring whether, if the Guardians sent a patient, not a pauper, to any of the hospitals they could recover the expenses to which they had been put. After a discussion it was decided to refer the letter to the General Purposes Committee. A letter was then read from the Local Government Board, replying to a communication sent from the Asylums Board in connexion with the separation of the government of the Hospitals between the stewards and the medical officers. The letter stated that no reasonable objection could be made to the carrying out in their integrity of the orders of February 10, 1875, and that a dual form of government in hospitals could not be allowed. On the adjourned consideration of the report of the Leavesden and Hampstead Committee relative to the future management of the Hampstead Asylum, Sir W. Wyatt pointed out that, in the case of an epidemic of small-pox, if the regulations laid down by the Local Government Board were strictly adhered to, it would be impossible to obtain nurses to attend on the patients. Unless the managers had the fullest freedom of action they could not possibly, tied down as they were by regulations, meet the emergency. He accordingly tendered his resignation and that of the Committee. This, with an expression of regret, was ultimately accepted.

The *East Anglian Daily Times* publishes an extract from a letter received by an inhabitant of Ipswich from Mr. Gladstone, in which the following passage occurs:—"I view with misgivings all new aggressions upon private liberty, unless upon a clear and certain proof of necessity; and I keep my mind open upon the question whether such proof has or has not been supplied in the matter of vaccination." As no one can for an instant doubt the ex-Premier's possession of a more than average amount of common sense, the operation of "keeping his mind open" on the vaccination question must have reference to a possible utilisation of the subject as a hustings cry at some distant date.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.(a)

YEAR after year, for nearly half a century, these Reports, with their carefully compiled and laboriously worked-out details, have been given to the public. Have the results been in an equal ratio to the time and money expended on them? The answer must be emphatically in the affirmative. The weekly Table of Mortality, here arranged for the whole year, is an old London institution, improved and perfected in every manner that forethought and science can devise, and its utility is now very much increased by a publication of corresponding returns from nearly every city of importance throughout the civilised world; it follows, therefore, that, as the Registrar-General remarks in his introduction, "observers, like watchmen on the walls, are ever on the look-out, so that men can see exactly what is going on, and neither plague nor cholera, nor any other great epidemic, can take the nation by surprise." Russia is almost the only country from which no returns are received; but as statistics are beginning to be cultivated there, it is hoped that before long the capitals of that country will co-operate in carrying out the great system of hygienic observation. Little by little the results of fresh sources of inquiry have been added to these returns, and only two points are now required to complete their usefulness—one of these is a record of the age at marriage in all cases, and the other is the age of parents at the births of their children; and though undoubtedly difficult to obtain, there is no reason for supposing they will not eventually be able to be shown. The Report further explains that special inquiry has been made into the connexion which exists between great reductions in the mortality and genuine sanitary work; and the result is decisive. There remains no doubt that the increased salubrity of several towns and districts is entirely due to sanitary measures. Where no such effects follow improvements, it may fairly be assumed the improvement is only apparent, or that the works are imperfect. What is certain is, that—thanks to the increasing and improved sanitary measures which are being carried out all over the country—the mortality of the whole population, though not so low as it is in some countries, is much lower than it is in large empires. That the health of the people is not stronger is partially due to the increasing density of the population, without corresponding arrangements for lodging them, for supplying them with pure water, for preventing the discharge of black smoke into the air they breathe, or for carrying away impurities in the shape of sewage and other deleterious matters. It is, however, satisfactory to find that, after carefully considering the mass of information which reaches him from all quarters, the Registrar-General is able to record that the progress of the health of England is a source of congratulation. Much, he admits, remains to be done; but with a vigilant body of health officers devoting themselves to conservative medicine, it only requires to solve efficiently the sewage and water questions, to build improved dwellings in village, town, and city, to render the health returns as satisfactory as we can ever hope to make them. The Appendix to the Report contains an interesting statement by Dr. Farr on the causes of death in England during the year 1874, considered under the different groupings of diseases.

(a) Thirty-seventh Annual Report of the Registrar-General of Births Deaths, and Marriages in England. Abstracts of 1874. London: George E. Eyre and W. Spottiswoode, Printers to the Stationery Office, 1876.

PATHOLOGICAL MICRO-PHOTOGRAPHS.

THERE can be little doubt that a photographic representation of the tissues of the human body, both in the healthy and diseased conditions, is much needed; the more so as it is well known to those who have studied microscopic anatomy thoroughly that many observers in publishing their papers illustrate them by drawings, which carry out more or less the special views they may have at the time. This is, of course, unconscious misrepresentation; for all who are familiar with microscopic pursuits are aware that it is quite possible for three persons, who examine one object independently, to come to entirely different conclusions as to its actual structure. Therefore, if any publisher could bring out a treatise, illustrated by properly executed photographs, on either ordinary or pathological histology, we doubt not he would find his enterprise a commercial success. And doubtless it is with this idea that Messrs. Coates and Co., of Philadelphia, are bringing out their present treatise, entitled "Micro-photographs in Histology," which is edited by Dr. Carl Seiler in conjunction with Drs. Hunt and Richardson; but unfortunately they have been most unsuccessful in their selection of a photographer, and therefore they may be said to have utterly failed in their scheme. Had they employed Dr. Woodward, of the United States Army Medical Department, they would have obtained photographs of as good a character as is at present possible, whilst they would have also insured an accuracy of anatomical detail. Dr. Woodward has been engaged in the pursuit of micro-photography for more than fourteen years, and those who have had the opportunity of examining his splendid photographs of Nobert's bands, and of various anatomical details, which are to be seen at the Royal Microscopical Society's rooms, will, we doubt not, fully corroborate our statements on this point. Messrs. Coates are bringing out a work which those who are familiar with microscopic details cannot for a moment approve of. Let us take as an example the fourth number of the present work; and what do we find? In the first place, a large photograph of the hepatic cells of a fly. Now, the Insecta are known to have, in

Siebold's words, "no distinct hepatic organs." But, allowing this to pass, we may observe that the part represented is a tube of a considerable length, probably a portion of the salivary tubes, and mingled with this are portions of the well-known air-tubes. Moreover, the photograph is a bad one. Next we have a photograph of leukæmia of the liver, which is not so bad, but is on infinitely too small a scale to be useful. Altogether only one of these photographs is at all fairly done. And the writer, whoever he be, certainly astonishes us when he talks of observers unable to distinguish fat-cells from blood-corpuscles.

WARNING TO SICK NURSES.

A CASE having a special interest for sick nurses, and being intended as a warning to them in the treatment of infants, was tried before Sheriff Pattison and a jury at the Selkirk Criminal Court, Roxburghshire, on the 4th inst. A woman, aged sixty, the wife of a mason, and bearing an excellent character, was charged with the crime of culpable homicide, in so far as, on September 2 last, she did wickedly and culpably, or culpably and recklessly, administer three drops of laudanum to a female child twenty-four hours of age, in consequence of which it died. The accused having pleaded not guilty, the following facts were elicited in the course of the trial, which lasted four hours. About two o'clock on the morning of Friday, September 1, a farmer's wife in the parish of Galashiels gave birth to a female child. Dr. Murray, of Galashiels, was in attendance, and during the day he left the mother and child (which was strong and healthy) doing well. The accused was the nurse in attendance, and, though not a professional nurse, she was in the habit of acting on such occasions. In the course of the Saturday morning the child cried considerably, and as it appeared to be suffering much pain, the nurse said she would give it three drops of laudanum, adding, "It can't do any harm, I have done it before." Three drops of laudanum were accordingly administered to the child, and between three and four hours afterwards it became so ill that Dr. Murray was sent for. On his arrival he found the child suffering from opium-poisoning, and on questioning the nurse she at once confessed what she had done. The child died in about fourteen hours after the laudanum had been administered. Besides Dr. Murray, Dr. Muir of Selkirk, and Dr. Littlejohn of Edinburgh, were examined, all of whom agreed that they would not expect a child to whom three drops of laudanum had been administered to survive, and that even one drop would be dangerous to a child of that age. The defence was that the accused had acted entirely with the desire to benefit the child. The jury found the accused guilty of culpably and recklessly administering the laudanum, but recommended her to the leniency of the Court, believing that she had acted with a good intention, and had only erred through ignorance. The Sheriff, while not questioning the accused's intention, said there was a good deal of this administering of poison by nurses in ignorance of its effects. He accordingly sentenced the accused to six weeks' imprisonment.

MEDICAL DEFENCE ASSOCIATION.

A MEETING of the Council of the Medical Defence Association was held at the residence of Dr. Richardson, F.R.S., on the 27th ult. The Secretary reported that since the last meeting proceedings had been taken under the Medical Act of 1858 against Mr. T. C. Balls, of Bermondsey, and Mr. Swallow, of Kensal-green, for false assumption of medical titles, and that in each case a penalty of £5 was recovered. The East London Branch had also been successful in prosecuting an advertising doctor named Kahn. In the case of Mr. Swallow, the consent of the Apothecaries' Society had been obtained to his prosecution under the Society's Act of 1815, and an action had been entered in the Court of Exchequer for the recovery of the penalty of £20 for infringing the terms of the Act. Copies of letters were read which had been sent to the Master and Wardens of the Apothecaries' Society by Mr. W. Smith, M.R.C.S., of Star-street, Paddington, Dr. F. G. Graves, of Bayswater, and Mr. R. Abud, M.R.C.S., of Eastbourne-terrace, W., asking the Society to withdraw from the prosecution on the ground of Mr. Swallow's extensive practical knowledge, etc., and it was resolved—"That the Council sees no reason to interfere with the legal proceedings now in progress." Resolutions were passed authorising the recognition of new branches of the Association which have recently been established at Nottingham, Newcastle-on-Tyne, and Sunderland. The Secretary stated that he had applied to the Registrar of the Medical Council for the penalties recovered in the metropolitan police-courts under the Medical Act, and had been informed that the penalties are retained by the receiver of the metropolitan police districts, on the ground that the Medical Act of 1858 is overridden by the Act 2 and 3 Vict., cap. 71, which enacts that all penalties recovered in the metropolitan police-courts must be paid to the Exchequer. It was resolved that the Secretary be requested to write to the Registrar of the Medical Council, asking the Council to receive a deputation from the Association in reference to this question. A case having been reported to the Association where one of the metropolitan coroners had received medical evidence from an unqualified person and allowed the usual fee, the solicitors of the Association were authorised to give notice to all the metropolitan coroners that they are instructed to apply to the magistrates in all such cases as may be brought under their cognisance in future, asking them to disallow the fees.

URBAN MORTALITY.

IN London 2613 births and 1403 deaths were registered for the week ending Saturday, November 4. Allowing for increase of population, the births exceeded by 145, whereas the deaths were 165 below, the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the two previous weeks had been equal to 18·3 and 19·1 per 1000, further rose last week to 21·0. The 1403 deaths included 21 from small-pox, 18 from measles, 35 from scarlet fever, 3 from diphtheria, 14 from whooping-cough, 22 from different forms of fever, and 31 from diarrhœa; thus to the seven principal diseases of the zymotic class 144 deaths were referred, against 174, 163, and 157 in the three preceding weeks. These 144 deaths were 129 below the corrected average number from the same diseases in the corresponding week of the last ten years, and were equal to an annual rate of 2·2 per 1000. The deaths referred to each of these seven diseases, except small-pox and diarrhœa, were considerably below the corrected average weekly numbers. The fatal cases of scarlet fever, which in the five previous weeks had ranged between 57 and 60, declined last week to 35, of which 25 occurred in East and South London, including 5 in Bethnal-green, 3 in Bow, and 3 in Plumstead. The 18 deaths from measles included 4 in Bethnal-green, and 3 in Kent-road sub-districts. The 22 deaths referred to fever were 21 below the corrected average; 20 were certified as typhoid or enteric, and in two cases the form of fever was undistinguished in the medical certificate. No fatal case of typhus was registered. Two fatal cases of enteric fever were recorded in Deptford, and 2 in St. Margaret's (Westminster) sub-district. The 31 deaths from diarrhœa showed a marked increase upon the numbers in the two previous weeks, and included 27 of infants and children under five years of age. The 333 deaths referred to diseases of the respiratory organs showed a further increase of 66 upon the numbers in the five preceding weeks—a result which might have been expected from the recent fogs and low temperature. In the Fulham Workhouse the death of a woman was registered whose age was stated to be 103 years. Different forms of

violence caused 41 deaths; 32 were the result of negligence or accident, including 14 from fractures and contusions, 5 from burns and scalds, 4 from drowning, and 6 of infants under one year of age from suffocation. The death of a child aged eight was caused by a cab in the streets; from similar street accidents 45 cases of injury and maiming came under the notice of the Metropolitan and City Police during the seven days ended the 5th inst. Five cases of suicide and one of murder were registered.

THE LAWS OF HEALTH.

It is proposed by the Council of the Trades' Guild of Learning, in conjunction with the Committee of the National Health Society, to organise a course of twenty lectures on the laws of health, to be delivered by W. H. Corfield, M.A., M.D. (Oxon.), Professor of Hygiene and Public Health in University College, London, in the large room of the Society of Arts, John-street, Adelphi, by permission of the Council of that Society, on consecutive Saturdays, commencing November 11, at 8.30 p.m. In three instances the lectures will be given, not on Saturdays, but on the following evenings—on Friday, December 1; Thursday, February 1; and Thursday, March 1;—and there will be an interval of four weeks at Christmas, and of three weeks at Easter. The Council of the Birmingham and Midland Institute have been enabled to give to the town of Birmingham three such courses in the last three years by Dr. Corfield, and another will be given this year by the same lecturer. We understand that the lectures there have been highly valued, and very useful; and we are glad that London is now to have a like advantage with Birmingham. An examination (exclusively on the subject-matter of the lectures) will be held at the end of the course—a plan which has been attended with very happy results at Birmingham. Certificates will be awarded to those who satisfy the examiner, and who have attended not less than fifteen lectures out of the twenty. The price of a ticket of admission to the complete course is one guinea; for a single lecture the charge is one shilling and sixpence. But arrangements have been made for the admission of working men and women at a charge of one shilling for the course, and one penny for a single lecture. The first lecture (November 11) will be a general introduction to the course. Prospectuses containing all information can be had at the offices of the Trades' Guild of Learning, 13, Beaufort-buildings, Strand.

NEW DISCOVERIES.

The first two articles in the last number of the *Centralblatt für Chirurgie*, No. 43, illustrate the fact that the surgery of the present day is not at a standstill, either in respect of its methods of diagnosis or treatment. The first is a typical "preliminary notice," by Professor Lücke, of Strasburg, on the Percussion of Bones. He points out that while the percussion note which can be elicited by one part of any given bone corresponds accurately with that of its fellow on the opposite side, that which is given by the shaft of a long bone differs considerably from that of the epiphysis, and that the note is appreciably modified by changes of density, such as result from chronic inflammation or the union of a fracture. Professor Lücke has not yet had the time to investigate the practical bearings of his discovery, and in his short description he does not dwell upon the complications and difficulties which must inevitably follow its application. The second is a description by Weillez of a most ingenious method of inducing respiration in asphyxiated patients, but which, as the inventor says, is obviously best adapted for newly born children. It consists of a sheet-iron cylinder large enough to contain the whole body of the patient. The upper end is closed by an indiarubber diaphragm, which is intended to fit air-tight round the patient's neck, while at another part of the cylinder is a wide tube, which communicates with a bellows, which can be emptied or filled by raising or depressing a lever. There is a glass window on the side of the cylinder; and an easily movable rod, which rests upon the sternum of the patient, passes out through the wall, so that the movements of the chest may be observed. It is evident that by exhausting the bellows a definite amount of air may be made to enter the chest with more certainty than is possible in the ordinary methods of artificial respiration, unless, indeed, the diaphragm should fit too tightly round the neck; and this does not appear to have occurred in the experiments which were made on the dead subject. The bellows is made to contain one litre, whereas the amount inspired at an ordinary breath is half a litre; but as this can be accurately regulated, there appears to be no danger of over-distending or rupturing the lung. One powerful objection to this "spirophore" must at once suggest itself—viz., its necessary cumbrousness.

DIVINITY AND MEDICINE ON TEMPERANCE.

On Monday, the 30th ult., a medical conference in connexion with the Church of England Temperance Society was held, by permission of the Vice-Chancellor of the University, in the Sheldonian Theatre, Oxford, under the presidency of Dr. Acland, President of the Medical Society and Regius Professor of Medicine. The purpose of the conference was to "consider what means can be adopted to check the spread of intemperance." The President opened the proceedings by an introductory speech, but the chief feature of the meeting was an address by Dr. B. W. Richardson. His views—or perhaps it would be more exact to say his *present* views, or, as Dr. Acland put it, "his latest convictions"—on the subject of alcohol are too well known to make it necessary for us to give any *résumé* of his address here. It was, as usual, eloquent, but expressed most strongly his conviction that alcohol never rendered any useful service whatever; that it is an agent as potent for evil as it is helpless for good; and that "it begins by destroying, it ends by destruction, and it implants organic changes which progress independently of its presence even in those who are not yet born." He advocated, in fault of something better, the Permissive Bill. Professor Rolleston also spoke strongly in favour of the same Bill, and of abstinence from alcohol "as from opium, strychnine, or any other deadly poison." Such speeches appear, we must take leave to observe, rather out of place at a *temperance* conference. The meeting was very largely attended by clergymen and medical men, but we do not see that any of the staff of the Radcliffe Infirmary attended, with the exception—an important one—of the President.

SMALL-POX IN LONDON.

The deaths from small-pox, which had been 16, 22, and 15 in the three preceding weeks, rose again to 21 last week; four adult cases were certified as vaccinated, 11 were certified as unvaccinated, and in the remaining 6 cases the medical certificates did not furnish any information as to vaccination. Of the 22 fatal cases, 8 were recorded in the two Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell, 1 in the Highgate Small-pox Hospital, and 1 in St. Thomas's Hospital; the remaining 11 deaths from small-pox occurred in private dwellings. Five of the deceased small-pox patients resided in Hackney and Homerton, 3 in Islington, 2 in Kensington, 1 in St. Luke's, 1 in Spitalfields, 2 in Whitechapel, 1 in Mile-end Old Town, 1 in Bermondsey, 2 in Clapham, 1 in Battersea, and 2 in or near the Wandsworth-road. Thus, 8 fatal cases orginated in the North, 2 in the West, 1 in the Central, 4 in the East, and 6 in the South groups of districts. The two Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell contained 231 patients on Saturday last, against 177 and 185 at the end of the two preceding weeks. No less than 101 fresh cases were admitted during the week, the highest weekly number of admissions since the beginning of the present epidemic being 62.

THE DRAINAGE OF THE THAMES VALLEY.

At a meeting of the Richmond Select Vestry held this week, Colonel Burdett in the chair, a letter was received from Mr. T. J. Nelson, the City Solicitor, enclosing copies of resolutions passed the previous evening by the Hampton Wick Local Board, of which he is chairman, to the effect "That the necessary advertisements and notices be given, pursuant to the provisions of the Public Health Act, 1875, of the intention of the Board to take and use for the purpose of providing for the sewage of their district, and of the urban sanitary districts of Surbiton, Kingston, New Malden, Ham Common, Richmond, and Teddington, and so much of the Richmond Rural Sanitary Authority as consists of the parishes of Petersham, of certain lands in Hanworth and Hounslow, and also to make and construct the necessary main sewers through the parishes of Teddington and Twickenham, and that such notices be given in conjunction with the urban sanitary authority of Richmond, if they are willing to join in giving them." Mr. Maxwell moved, and Mr. Hertslet seconded, that the Vestry should join in the notices. An amendment was moved and seconded—"That the consideration of Mr. Nelson's letter be deferred until Colonel Cox's report respecting the recent conference at Westminster had been received." This amendment, as well as a subsequent one, was lost, and ultimately the original motion was carried.

"PERIODICAL PLUNDER AND JUSTICES' INJUSTICE."

We have received a post-card, on which is printed, with the above heading, the various fines that have been imposed on Mr. J. Abel, of Faringdon, for neglecting to have his child vaccinated. Since March he has been fined seven times, in all £10 9s. 3d. He complains that though "the magistrates have the power to impose a merely nominal fine, they have administered justice (?) without mercy, by imposing on every occasion the highest fine allowed by law." For our own part, we think that it would be better that an obstinate defier of the law should be imprisoned for contempt of court, rather than repeatedly fined; or that the magistrate should have power to issue a peremptory order for immediate vaccination. Better still—give the alternative of accepting vaccination from the cow.

THE GLASGOW EXTRAMURAL SCHOOL OF MEDICINE.

At a meeting of the Glasgow University Court, held on the 7th inst., it was agreed to recognise, as qualifying for graduation in the University, on the conditions of the ordinance, the lectures of the following extramural lecturers:—Dr. M. Charteris and Dr. A. Wood Smith, on Practice of Medicine; Dr. James Morton and Dr. John Dougall, on Materia Medica; Dr. A. Lindsay and Dr. William MacEwen, on Medical Jurisprudence; Mr. H. E. Clarke, on Anatomy; Dr. W. J. Fleming, on Physiology; and Dr. James Stirton, on Midwifery.

HUMAN PHYSIOLOGY, AND ITS APPLICATION TO DAILY LIFE.

We understand that Dr. Carpenter, F.R.S., Secretary to the Gilchrist Trust, has, for the benefit of the primary teachers of the metropolis, made arrangements for the delivery of a course of lectures by Dr. B. W. Richardson, F.R.S., at St. Thomas's Charterhouse Schools, on Human Physiology, and its application to daily life. The course was opened on November 3 by Dr. Carpenter, who gave an address on "A Sound Mind in a Sound Body."

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The second meeting of the twenty-first session was held on Friday, November 3, at the Royal Kent Dispensary, Greenwich-road, the President (Dr. Creed) in the chair. Mr. J. B. Saundry read notes of a very interesting case of abscess presenting under Poupart's ligament, giving rise to considerable difference of opinion as to its nature during life.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

An influential meeting of the members of the British Medical Association resident in Manchester and the neighbourhood was held on October 27, at the Manchester Royal Institution, when it was decided that the Association should be invited to hold its annual meeting for 1877 in Manchester; and it was also resolved to nominate Dr. W. A. Eason Wilkinson, Senior Physician to the Manchester Infirmary, as President-elect. The invitation was presented by a deputation, of whom Dr. Wilkinson was one, at a special meeting of the Committee of Council on Wednesday last, and was accepted. August 7 has been fixed on for the first day of the annual meeting, we believe; and we understand that Manchester has submitted the name of Dr. W. Roberts to give the Address in Medicine.

FROM ABROAD.

DR. WEIR MITCHELL ON FUNCTIONAL SPASMS.

In an article in the October number of the *American Journal of the Medical Sciences* Dr. Weir Mitchell states that his reason for drawing attention to the obscure subject of functional spasm and its near clinical relations, is that in some of the most annoying and seemingly hopeless cases he has been able to give considerable relief. Moreover, some of the forms of spasm are not as yet fully recognised, or are regarded as mere curiosities beyond relief. After adverting to Duchenne's definition of functional spasm, as consisting in pathological contractions manifested during the exercise of certain voluntary or instinctive movements—as exemplified in writers' cramp, and spastic disorders of shoemakers, tailors, etc., he goes on to say:—

"Putting aside these well-known instances, I desire to call attention to a class of cases which, although nearly related to these, differ from them in several important particulars. They consist of three distinct classes—1. Those in which the functional activity of a muscle, or set of muscles, gives rise at times to an exaggeration of the motions involved naturally, and sometimes also to more or less spasmodic activity in remoter groups. 2. Those in which the functional action of one group results only in sudden, and possibly in prolonged spasmodic acts, tonic or clonic, in remote groups of muscles not implicated in the original movements. 3. Those in which standing or walking occasions general and disorderly motions, affecting the limbs, trunk, and face, and giving rise to a general and uncontrollable spasm without loss of consciousness. The first group is, to my mind, one of the most curious. The pure instances—that is, those in which a normal motion is liable to become excessive—are rare. Some cases of writers' cramp nearly fulfil the conditions; but here pain or sense of fatigue is often, nay usually, superadded, and the over-action is not merely excess, but involves inco-ordination almost inevitably. I mean, therefore, that there exists a set of rare cases in which the motor act becomes suddenly exaggerated."

In illustration, Dr. Mitchell relates the case of a watch manufacturer, whose work had consisted for many years in picking up and adjusting minute screws. His health was faultless, but within two years he had acquired a peculiarity which rendered steady work impossible. In the course of his work, the forefinger and thumb became locked upon the object held between them, and although this could be pulled away by means of twine, the spasmodic locking continued. It occurred ten or twelve times a day, and lasted from ten to thirty minutes. Of late, when turning over the leaves of a book, the thumb and finger would from time to time close with violence, so as to tear the page. There was no pain, and only at times a slight tremor of the parts; and the moment the spasm was over, the man could resume picking up his screws. No treatment proved of avail, and he abandoned his occupation. Many trades are liable to cramps of over-used muscles, which are usually brief and painful; but others may occur in which there is a "lock-spasm"—a lasting or permanent painless spasm. A sawyer became the subject of such in his biceps, the spasm occurring not oftener usually than once a day, and giving rise to such a locking that efforts seeming to endanger the bone failed to relax it. On one occasion the spasm only

yielded after the arm had borne a weight of eighty pounds for five minutes in a most disadvantageous position. Under the use, first, of the induction-current, and after a while of hypodermic injection of atropia into the belly of the muscle, the spasm first diminished, and after several months ceased—"a very unusual result of treatment, if it was a result, in these forms of spasm." A third case was that of an officer who had formerly suffered much from neuralgia in the palm, after gunshot wound of the median nerve, and who now complained that while holding anything in the hand a sharp pain would come on unexpectedly where the median divides in the palm, and the flexors would instantly and violently close the hand, the palm being sometimes cut by the violence with which the nails were driven into it. The spasm lasted from two to ten minutes, and then relaxed. The plan of repeated blistering (at least twelve blisters having been applied to the palm), which is so often valuable in local nerve troubles, was here successful.

These cases, Dr. Mitchell observes, are very rare, as are those in which a normal muscular act occasions remote associated movements, the most familiar of which is that of lifting a palsied arm during the action of yawning. "Histrionic spasm" of the face also offers some odd illustrations, as in the case of Miss Inman, given by Marshall Hall, in which drawing down of the right angle of the mouth caused at once spastic closure of the right eye. In a case that occurred to Dr. Mitchell, in the person of a plumber, forty-five years of age, who, after a blow on the back of the head, had suffered from horrible spasmodic action of the trapezius, sterno-cleido-mastoid, and adjoining muscles, these had abated and were followed by a new affection, in which, whenever he began to chew, the submental muscles would jerk his mouth open, and so hold it until he shut it with his hand. When ready to swallow, his face was a picture of terror. As soon as he gulped down a mouthful, the jaw instantly flew open, his head was drawn down and back on the left shoulder, his face was convulsed, sweat broke out on the forehead, and the attack was at an end. Dr. Mitchell has seen many other cases of this form of spasm, and in nearly all laughing, talking, but above all chewing, seemed to provoke the return of the spasm. In other spasmodic cases, all the abnormal phenomena are related to the act of walking—exaggerations of walking, as they might be defined. Of these Dr. Mitchell relates some interesting cases, for which we regret that we have not space. An extraordinary case is also related as one of "pendulum spasms," in which the pendulum-like motion of one arm was caused, aggravated, or varied by almost every voluntary action, such as moving the other arm, speaking, eating, etc., the movements taking place with extraordinary rhythmical regularity, and being frequently timed at 160, with a power of being increased to 200 on stretching out the other arm. The movements could be arrested, but were brought on again by any voluntary movement.

A still more rare group of cases exists, in which, while the patient is at rest prone, or in one case seated, no spasms exist; but when he assumes the upright position he is at once seized with general convulsive movement, which may or may not persist. A remarkable case of this kind occurred in a tailor, who, as long as he was seated or on his back, was able to execute any movement he pleased. If, too, he got up slowly and watchfully, and then stood still a moment, he could walk as well as anyone; but if he jumped up suddenly from the prone or sitting position, he was seized, as if by a spell, with a convulsive attack, in which there was giddiness, but no loss of consciousness. The attitude he then assumed was extraordinary: the right leg was bent at the knee, and the left was thrown over it, and grasped it in violent flexion; the body and head were twisted to the right; while the right arm in extension was raised, and the left thrown outwards and backwards in extreme pronation. Then there was a general writhing of the whole frame, the muscles of the face twitching here and there; and, with a groan of relief, his attack was over.

Dr. Mitchell thus terminates his communication:—"I believe I shall have done a good service by directing attention to the fact that voluntary motion may give rise to various forms of spasm. It is familiar enough that morbid sensations may do so, or that in an over-excited state of motor centres a normal sensation may occasion like results, as in tetanus. As regards the cases to which I have here called attention, two explanations lie open to us. Voluntary acts give rise to spasms in the muscle willed to move, or in remote groups of muscles. There is at times an unusual discharge of nerve-force in some of these cases, as in the "lock-spasms" I have reported; or else the muscle itself has become the means by its over-use of hypersensitising the sensory centre which takes record of its activities, so that from this centre at times excito-motor impressions are radiated on to near or remote centres, and result thus in spasms. It will be found, in all of these cases, that when an ordinary functional motor act gives rise to spasms elsewhere, these occur in muscles which have physiological and therefore anatomical relations to the muscles which, by their normal use, gave rise to the morbid activities. Thus, the face muscles are physiologically allied, and so volitional movements of one of them may cause spasms in others. The motion of one arm starts spasms in the other; and walking, which involves naturally the swinging of the arms, has a like potency. Why talking or chewing should do the same is less clear; but such morbid relationships have analogies in the cases of neuralgia, where the long irritation of one centre results at last in the like disturbance of remoter sensory centres, and in radiated neuralgias, which are usually of unilateral relationship."

The Sanitary Condition of Switzerland.

The *Gazette des Hôpitaux* of October 26 contains an abstract of an interesting paper read by Dr. Lombard, of Geneva, at the recent meeting held by the Helvetic Society at Basle, in which he stated the results of his researches as to the present distribution of disease in Switzerland. *Intermittent fevers*, formerly so common, have diminished in all parts of the country, and even have quite disappeared from some localities where formerly they were very common. At the present time there are but two marshy districts, the cantons Valais and Tessin. In the former, in spite of all the precautions that are taken, the inundations of the Rhone still continue frequent; and in Tessin almost all the districts bordering on the course of the river and its affluents are more or less exposed to malaria, and especially the long valleys which pour their waters into the large lakes. In other parts of Switzerland intermittent fever and periodic neuralgia are only met with as isolated cases, and that with less frequency in proportion to the altitude. The mean mortality resulting from *phthisis pulmonalis* is 77 per 1000 deaths, being a much lower proportion than that of most other countries of Europe. Thus in Belgium this varies from 168 to 198, and in England is 124. It varies much in the different cantons and cities of Switzerland, being 104 at Zürich, from 105 to 107 at Basle, 101 at Geneva, 104 at Neufchâtel, 37 at Fribourg, 49 in Valais, 50 in Thurgau, and 17 in Zug. Two influences are brought into view by this investigation—viz., the deleterious effects of industrial occupations as compared to agricultural, and the benefit of high altitudes, cases of phthisis being less frequent in proportion to the height attained, so that it entirely disappears in the very high valleys. *Goître* and *cretinism* exist in Switzerland—the first, in different degrees, in almost every part; the other in certain regions only, and tending to diminish as prosperity and civilisation are extended. With respect to the geographical distribution of cretinism, the Valais occupies the first place, it being found as well in its principal valleys as in its numerous lateral valleys—which, with few exceptions, contain many cretins. The cantons of Vaud and Bern have cretins in only very few localities; and the same comparative immunity exists in all the cantons situated in the principal Jurassic valleys—as Neufchâtel, Solothurn, Argovia, and Basle. The grand mass of the Alps is, consequently, together with the Valais, the principal endemic seat of cretinism. *Inflammations of the respiratory organs* are, as might be expected, amongst the most widely spread diseases in Switzerland, being found with a frequency which increases with the altitude. They are, indeed, met with in a very severe epidemic form in the higher valleys, where what is termed the "*alpenstich*" is a malignant and probably contagious pleuro-pneumonia. *Scrofula* and *rheumatism* are very prevalent throughout the whole of Switzerland, and seem to increase with the altitude. Epidemic *cholera* has never reached the districts of the centre of the country; the only places where it has prevailed, when it has existed in their vicinity, are almost all situated near the frontier—as Geneva, Porrentruy, Basle, Locarno, and Bellinzone. The only places at any distance from the frontier that have suffered from its ravages are Zürich and Arau. *Alcoholism*, as everywhere else, is making progress in Switzerland, and in some cantons carries off many

victims. The mortality from delirium tremens is limited in many towns and cantons to 1 or 2 per 1000 deaths; while in others it is raised to 5 or 6, and in some localities to 35 per 1000. The number of *blind* persons in Switzerland is 76 per 100,000 inhabitants, which is a relatively very low proportion. In France there are 84 per 100,000, in Sweden 81, in Holland 100, and in Norway 184. On the other hand, in Bavaria there are only 52, in Prussia 58, and in Belgium 68. The cantons in which most blind are found are the Grisons (130), Appenzell (109), and Tessin (103); while fewest are found in Glarvs (42), Geneva (44), and Schwytz (46). The *deaf-dumb* exist in the proportion of 245 per 100,000 inhabitants, which is nearly five times larger than in France, where it is 58. The Valais occupies the foremost place (498), and after it come Lucerne (436) and Argovia (434). At the other extremity of the scale are Geneva (171), Glarvs (45), and the district of Basle (84).

REVIEWS.

Ueber das Lehren und Lernen der Medicinischen Wissenschaften an den Universitäten der Deutschen Nation, nebst allgemeinen Bemerkungen ueber Universitäten. Eine Culturhistorische Studie. Von Dr. THEODOR BILLROTH. Wien.: Druck und Verlag von Carl Gerold's Sohn. 1876.

Teachers and Students of the Medical Sciences at the Universities of the German Nation, with some General Remarks on Universities. An Historico-Educational Study. By Professor THEODOR BILLROTH. Vienna: Published by Charles Gerold, jun. 1876.

THIS work, which extends over 500 pages, and is in parts very closely printed, is the most important contribution to the subject of medical education which has appeared for a long time. In Germany and Austria it has attracted immense attention, and we feel confident that it contains a great deal which medical reformers in this country may study with the utmost profit. Professor Billroth, as tutor at Berlin, professor at Zürich, and again professor at Vienna, has had great opportunities of studying all that pertains to medical education. With his splendid reputation as a surgeon and clinical teacher, and with his acknowledged ability as an independent investigator, it needs no argument to point out the weight which attaches to his opinions. The clear and eloquent style which readers of his Surgical Pathology are so well acquainted with, characterises the present work. It teems with suggestive thoughts and passages which mark the philosophic mind, while, all throughout, we cannot help admiring the pains with which the author has handled and condensed the vast material which forms the basis of his remarks.

The first chapter, at which we can only glance, deals with the Development of the Medical Faculties in the German Universities, and the author's purpose in writing it was to show what a very modern thing a medical faculty, in the present sense of the word, is. The medical faculties of the old universities, founded in the thirteenth, fourteenth, and fifteenth centuries, had only two or three professors, who taught the precepts of Avicenna and Galen, which they made their pupils afterwards discuss. There was no attempt to enlarge the boundaries of medical science by research. Tradition was the only criterion, and practice was the purest empiricism. The instruction was conveyed entirely in Latin. In the course of the sixteenth century special instruction in anatomy was introduced, but it consisted principally of mere verbal description, unaided either by anatomical preparations or freshly dissected material. Still later the professor dissected and demonstrated in the presence of his students, but they were not allowed to dissect for themselves. The present system of teaching anatomy is scarcely yet a hundred years old. The professor of anatomy taught physiology in many universities up to quite a recent period. Special lectures on botany and chemistry were not given till the seventeenth and eighteenth centuries, and their complete separation into distinct professorships only dates from the middle of the present century. Curious combinations of two or more subjects under one professor were very common in the older medical faculties—*e.g.*, anatomy and botany; chemistry and botany; surgery, botany, and pharmacy—but this need not surprise us when we find that up to the end of the last century, and even later, it was presupposed that each professor was master of *all* the sciences taught in his faculty. We may remark, *en passant*, that this idea appears not to be quite obsolete in England, for there must be not a few teachers, especially in the smaller London medical schools, who have successively occupied several chairs—for example, those of botany, materia medica, forensic medicine, and medicine.

Passing on to the subject of Practical Clinical Teaching, Professor Billroth points out the stages by which separate professorships of clinical medicine and surgery, of obstetrics, and of diseases of the eye, and other so-called specialities, arose. Observing the recent dates at which the teaching of the medical sciences became broken up and distributed among a number of professors, we see how the methods of demonstration and research which have arisen since the middle of the last century—or we should almost say in the last forty or fifty years—have borne fruits by accumulating an amount of knowledge which it requires several individual teachers to grapple with. Without entering further into the details of their development, we should say that Professor Billroth claims for the German universities in their present form, and of course more particularly in relation to medicine, that they are not only places for educating medical men, but also places where *research* is carried on. "Since about the year 1840," he says, "the German professor is almost universally expected not only to know and to teach the latest results of the investigations of others, but also to be himself an investigator and an advancer of the branch of science which he teaches."

The second chapter of the present work, which is perhaps the most important, for us outsiders, of the six chapters into which the whole book is divided, deals with the present German Method of Medical Instruction, and with the question of the Connexion of the State with the Universities. Without entering into the details of Professor Billroth's arguments, we shall endeavour to show what his views are on the general questions of medical education, which all countries alike are interested in answering. And first, as to the preliminary education of medical students, he holds that the natural sciences ought to occupy a considerable share of the attention of the future medical student while at school, for "the due comprehension of modern scientific medicine makes a long preparatory stage, in which the mind is trained in ways of thought, an essential condition." "What better preparatory school, then, can the physician have than the study of the natural sciences? The method by which he examines all the parts and all the functions of an animal, is the same which he must apply to the investigation of disease. The study of the natural sciences serves not only as a gradual introduction to anatomy and physiology, but it serves to cultivate the power of simple careful observation, which so few people possess from birth. Teachers are substantially agreed that the study of medicine must be preceded by the study of the natural sciences; but they are not unanimous as to the extent to which the latter is to be pursued." With regard to chemistry, Professor Billroth is of opinion that both inorganic and organic chemistry should be *well* learnt, and that some amount of proficiency in manipulation and analysis should be acquired by all; but the special applications of the science to physiology, pharmacy, forensic medicine, etc., should be reserved for the special lectures by the professors of those subjects.

Physics should be also learnt in a general way, but without any special reference to medicine, and without requiring the students to do practical work in a physical laboratory. Botany, zoology, and mineralogy the author regards in the light of means by which the student learns the methods of investigating nature—by which, in fact, he acquires the scientific spirit. The simple increase of knowledge which these sciences bring with them he considers of quite secondary importance. As to botany, not only would Professor Billroth have the student attend systematic lectures on it, but he would have him take part in botanical excursions and in work in a botanical laboratory, if he were so inclined. Zoology and comparative anatomy should be taught together, and Professor Billroth regards the latter especially as one of the most valuable subjects, if well taught, for giving breadth of view and producing the habit of thought best suited to the investigator of nature. He is much in favour of short courses of lectures, not only on mineralogy, but also on geology and crystallography, both because of their relation to chemistry and palæontology, and also because they are nowadays almost necessary parts of a good education. Professor Billroth agrees with those who think that some knowledge of logic should not be required of medical students. We must beg to differ from him on this point. We should be glad to see logic made an integral part of the education of every medical student; if he knew no

more than "Whately's Fallacies" and the chapter on the Methods of Experimental Inquiry in "Mill's Logic," it would be better than nothing.

Passing on to the subjects which are universally held to be essential for a medical student to learn, the author expresses his opinion that the professor of anatomy should not teach the so-called topographical or surgical anatomy, but should leave that entirely for the surgeon to deal with afterwards. The necessity for practical microscopical work is now so well understood in the British medical schools, that we need scarcely quote Professor Billroth as to the importance of this kind of study. We may say, however, that he is much opposed to the subdivision of physiology into several branches—*e.g.*, physiological chemistry, physiological physics, and experimental physiology, etc.,—as has been proposed by some persons of late, under the idea that the subject of physiology is now too wide a one for any single professor to be able to grasp. There is much truth in the remark that it seems like a contradiction to pretend to teach a physiology to students which a single professor is inadequate to comprehend. Passing on to the subjects of pathology and materia medica, we may say that Professor Billroth regards attendance on a course of lectures on general pathology as essential, as also on pathological demonstrations and courses of pathological histology, and he thinks that the students should be taught to make post-mortem examinations themselves, which at present, in England, a large number have no opportunity of doing. Materia medica should include the usual description of drugs and their properties, with an experimental demonstration of the most important poisons; but the art of prescribing and the special indications of particular medicines should be left for the professor of clinical medicine. Lectures on dietetics and balneology ought to be given for the sake of those students who may desire to attend them voluntarily. A complete course of lectures on medicine proper ought to be provided, as, in fact, it is in England, by each medical school or faculty. "It is all very well to teach medicine by means of so-called demonstrations. The value of systematic lectures does not consist solely in imparting knowledge; what they do for the student in addition, is to teach him the habit of close attention and of abstract thought, and keep him from regarding everything in a purely practical light, and from simply learning what is technical and professional."

Professor Billroth's opinions with regard to his own special subject—namely, surgery,—deserve the closest attention. He is greatly in favour of reducing the course of lectures on general surgery to much smaller dimensions than usual at present. The processes which wounds undergo in healing, as well as the description of tumours, ought to be relegated to the course on general pathology. The surgical lectures need only consist of general remarks on the clinical phenomena of the various forms of injury and their consequences, and on the injuries and diseases of the skin, muscles, bones, and joints. Fractures and dislocations and operative surgery Professor Billroth would exclude almost entirely. We cannot do better than quote his own words:—"My experience gives me no ground for saying anything on fractures in special lectures which cannot be said at the bedside; and dislocations, except those of the shoulder, are among the rarest surgical cases that I am accustomed to meet with. I cannot, therefore, see the use of lecturing about such curiosities. It is very fruitless work giving special lectures on operations to students—they will learn them by practice on the dead body, and by seeing them done in the theatre. It seems to me very unnecessary to teach students the details of difficult operations. A person who has not been an assistant in a surgical ward, and there done the typical operations on the dead body dozens of times, until he can operate in his sleep as well as if he were paying close attention, will never become an operator. I deem it much more important to teach students in the surgical lectures *when* it is essential to operate, and to describe to them the simplest operative procedures, and those which must be undertaken at a moment's notice for the purpose of saving life, and to leave everything else to a later period when the student enters the wards." Special lectures on orthopædic surgery, on diseases of the urinary organs, and on other special branches of surgery, Professor Billroth considers of importance, although, as he remarks, they will only be attended by advanced students or young practitioners who are specially preparing themselves to become surgeons. With regard to military surgery, he considers that no war in modern times is likely to break out so quickly that it would not be possible to prepare a number of surgeons by special lectures before the first battles could take place. Systematic lectures on midwifery and diseases of women, Professor Billroth does not seem to be very keen about, rather preferring that these subjects should be taught at the bedside. He is, however, much in favour of short courses on skin diseases and syphilis, aural surgery, diseases of children, and mental diseases as a regular part of the systematic instruction, in case there are no special clinics for these subjects attached to the school. We come now to the subject of clinical instruction, and we may say that Professor Billroth's chief aim in his remarks on it is to impress his readers with the importance of making the instruction in the four chief clinics which he admits (the medical, surgical, obstetric, and ophthalmic) as complete as possible each in itself. For example, in the medical clinic the student must be able to see all the modern aids to diagnosis—the laryngoscope, the various forms of electricity, the ophthalmoscope, etc.—constantly employed, without the necessity of sending a patient with hoarseness to the throat department; or one with paralysis to the electro-therapeutist's. In the same way, on the surgical side, he must see percussion and auscultation used when necessary, the secretions and excretions chemically and microscopically examined, as far as is possible, at the bedside, just as in the medical wards. "The student ought always to regard his clinical teacher in the examination and treatment of patients in the light of a complete physician, whether the latter be at the head of a medical, surgical, ophthalmic, or obstetric clinic." We have not space to enter fully into the author's remarks on the teaching of clinical surgery, but we cannot resist quoting his idea of the requirements of a surgical clinic. He says, "I consider that, to be worked properly, it should not be attended by more than fifty students, supposing they are industrious. The professor should have about sixty beds at his disposal, only forty or fifty of them being filled at a time, so as to keep the wards from overcrowding, and thoroughly clean. As large an out-patient department as possible is to be attached to the clinic. There must be two assistant-surgeons, and from four to six dressers (*Unterärzte*), airy work-rooms for the professor and his assistants, and an operating theatre, with good provision for the students. There must be well-ventilated rooms for the classes of operative surgery, and a supply of about fifty bodies in the summer to operate on. There must be proper kennels and hutches for keeping the animals used for experiment. Every day two hours ought to be devoted to teaching special clinical surgery; and, lastly, there must be well-lighted store-rooms for keeping the instruments and bandages, and a special place fitted up as a museum of surgical preparations."

With regard to operative surgery, Billroth considers that every student ought, before his final examination, to take at least two courses of operative surgery—one with the assistant-surgeon, and one with the professor; and the latter should let him perform the minor operations on living patients, under his guidance. Billroth lays great stress on the value of the out-patient room, as a means of bringing before the student the slighter forms and earlier stages of surgical affections which cannot be taken into hospital, and yet are those which he will meet with most frequently in his after-practice. In conclusion, Professor Billroth reasserts the right of the professor of surgery to have every class of case to which surgery is applicable represented in his wards, and he strongly deprecates any regulation by which the professor is forced to transfer his patients to special clinics—for example, chronic skin diseases and ulcers to the clinic for skin diseases, diseases of the throat to the laryngoscope clinic, of the male urinary and generative organs to the special clinic for such diseases, etc. With regard to the treating of diseases of the eye and diseases of women, Professor Billroth has nothing special to say. On the other hand, he is much in favour of systematic instruction in diseases of children, either in special hospitals, or else in wards in the general hospital assigned solely to children. Ignorance of the acute diseases of children, and the exanthemata, may prove fatal to a young doctor just starting in practice, and only children's hospitals can remedy it. The examination and treatment of children involve a number of small technicalities which there is not much opportunity of learning in a general medical clinic. The teaching of mental diseases, Billroth thinks, should be limited in the case of the ordinary student to giving a general idea of their nature, and especially of their relation to medical science as a whole. Special knowledge can always be

acquired later on by those who desire it, by working in a large asylum. Skin diseases should only be separated from general medicine and surgery, if at all, where the number of patients affected with them is large. Diseases of the ear Professor Billroth would hand over, where the material was only small, to the eye surgeon; but he is distinctly of opinion that the attention of the student should be more directly called to this subject than has hitherto been the case. Diseases of the throat and electro-therapeutics should be taught in connexion with the medical clinic. Professor Billroth's remarks on the teaching of hygiene and forensic medicine are scarcely satisfactory, according to our English notions. He has very little sympathy, if we understand him aright, with the sanitary enthusiasm of modern times, regarding the health of the individual as much more dependent "on hereditary influences than on other social conditions." He considers that the student has enough to do during his period of education to make himself master of the diseases of individuals, and has no time to interest himself with the diseases of the community; he must learn all that later on. He should therefore only be required to go into practice with a general notion of the meaning of the terms "forensic medicine," "hygiene," and "sanitary police," and in no case should his time for other studies be much encroached on by compulsory attendance at lectures on these subjects.

(To be continued.)

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, November 7.

THE OPENING OF THE SESSION IN EDINBURGH: PRINCIPAL SIR ALEXANDER GRANT'S ADDRESS.

THE Winter Session of the University of Edinburgh was formally opened on Tuesday, October 31, by the Principal, Sir Alexander Grant, who delivered the customary address to the students in the Free Church Assembly Hall. There was a good attendance of students and their friends. The meeting was characterised by the usual amount of noise.

The learned Principal opened his remarks with a reference to the vacancies which had been caused in the Senatus Academicus—one by the death, and another by the resignation of a professor.

"The memory of Dr. Laycock, our late Professor of the Practice of Physic, deserves," he said, "to be honoured by us on account of the scientific and literary activity of his life, and his unflagging diligence in research and writing. For many years he had to contend with the disadvantages of delicate health and an enfeebled body; yet, in spite of this, he produced a long array of contributions to medical, physiological, and psychological science. In teaching the practice of physic to his class he gave especial prominence to a branch of his subject in which he himself felt an absorbing interest—namely, the theory of the treatment of mental disorders; and in following out this branch he made himself widely and deeply learned in the works of other writers, and at the same time amassed a great number of original observations on the cases which came under his notice. The chief field of his inquiries lay in the mysterious border region between mind and matter; but while approaching the questions of mental pathology mainly from the physical side, he never degenerated into materialism. Indeed, he exhibited an extreme fondness for speculations of a metaphysical kind, and his principal work, entitled 'Mind and Brain, or the Correlations of Consciousness and Organisation,' contains the attempt to found something like an entire system of philosophy. This work is allowed by the critics to convey a great mass of information, and to be full of ingenuity. But it is not on the success of its more general scope that Professor Laycock's services depend. It is rather as an active, acute, and ingenious observer and suggester of particular points that he has promoted the growth of science. Thus, for instance, his remarks on the Reflex Function of the Brain, which were published thirty-six years ago, formed an era in psychological medicine, by introducing a line of inquiry which has been much followed up since. As a teacher he has ably prepared many generations of students for the treatment of the saddest of human afflictions, while through the agency of his pupils he has done much to improve the management of asylums for the insane throughout the country. Now that he has passed away, let us pay him that tribute of heartfelt respect which in a university is due to one who has toiled to extend so far as in him lay the boundaries of knowledge."

He welcomed Dr. Grainger Stewart as the newly elected Professor of the Practice of Physic.

Referring to the honour which the gracious Sovereign of these realms has conferred upon the University in the persons of Sir Wyville Thomson and Sir Herbert Oakley, he said: "The public recognition of the scientific merits of our Professor of Zoology, and of his ability in conducting the great expedition of the *Challenger*, and the mark of Royal appreciation which has been set upon the genius and taste of our Professor of Music, are both of them very gratifying events."

He next drew attention to the near approach of the tercentenary of the University. "Turning to more general reflections, there are two ideas which cannot but be present at this time to the mind of one who is taken up with all that concerns our academical position and progress; and these two ideas are—the near approach of our tercentenary, and the sitting of a Commission to inquire into the condition of the Universities of of Scotland. The first of these two circumstances naturally suggests thoughts of the historical past; the second suggests speculations on the possibilities of the future. I do not propose, however, on the present occasion to expatiate in either of these directions. At some time before 1882 is gone by it will be proper to take stock of the work done by the University of Edinburgh during the first 300 years of its existence, to trace its growth from century to century, to cite its great names, to recall its services to the cause of order and liberty both in Church and State, and to estimate the part which it has taken at various periods in keeping alive, and handing on, and kindling to fresh brightness, the torch of knowledge. Besides specifying its direct contributions to the advancement of theology, philosophy, pure and applied science, medicine, law, and philology, it will be proper to take into account its widespread and often unacknowledged influence on the professions, and on the education of the country. At the same time, he who attempts this task must not forget or leave without mention the difficulties with which the University of Edinburgh has had to contend in effecting such results as it has been able to achieve—difficulties arising from its humble beginning and lack of sufficient means, and sometimes from excusable errors on the part of its rulers, and sometimes from external circumstances over which the University itself had no control. He who draws out the historical retrospect of the University of Edinburgh will not only be able to point to the things which have helped on and have retarded its progress, but also he will be able truly and confidently to say in the name of the University to the Scottish nation, 'Here is the talent which in 1582 thou gavest me, and behold it is five talents.' He will show that this latest born University of Scotland, the child of the Reformation, has been true to its origin and to the modern spirit; and he will justly urge in its behalf that what it has been able to do for Scotland constitutes a claim upon the sympathy and consideration of the people; that, having been faithful in small matters, it deserves to have greater opportunities entrusted to it; and that it deserves, at all events, to have those deficiencies and obstacles under which it still labours so far as possible removed.

"The existence at this moment of the Royal Universities Commission naturally suggests hope that many benefits may be procured for this University on the recommendation of high authorities whose judgment must have weight with any Government. But it is useless to imagine—it is out of the question to expect—that all our material wants will or can be supplied out of the public exchequer. We may reasonably anticipate that the grant of money annually voted to us by Parliament will be to some extent augmented, and that in special matters beside special aid will be given from the public funds. But there are many things which, if not actual necessities of existence, it is very desirable for us to have, and which, according to English principles of State economy, can only come to us from private liberality. Our first and greatest necessity is additional buildings. This want has been so often dilated upon that I need not restate the case. In a word, we absolutely require many additional class-rooms and far better accommodation for scientific teaching; and we must have our own hall for examinations and degrees and occasions like the present. But the cost of providing such buildings in the centre of a metropolitan city is enormous, and we find that what we require cannot be accomplished under a quarter of a million

of pounds sterling. Towards this we have got about £80,000 of private contributions, or say one-third of the whole amount. We do not yet know what the Treasury will do for us, because, though we have received a generally encouraging answer from the Prime Minister, yet you will still easily understand that during the last few months there was no moment when it would have been opportune to press the Chancellor of the Exchequer on the subject, in the face of a depressed state of trade, a harvest scarcely up to average, and the dreaded phantom of a European war still frowning out of the clouds on the Eastern horizon. Though our projected buildings have strong claims already acknowledged by the Government, yet we can hardly expect that the Government will defray more than half of their entire cost, and thus there will be left at least £40,000 required for this purpose, and which can only be supplied by private contributions and personal bequests. There is no doubt that a university is a very expensive article, and in proposing to put a university into the highest state of modern efficiency one has to think in large sums. But expenditure upon it is highly reproductive: and this is felt and understood in America, where of late quite princely donations have been bestowed by wealthy citizens upon the colleges and universities of the country. I will just mention one instance of this. The College of Princeton, in New Jersey, which is attended by about 450 students, is now presided over by our worthy countryman Dr. M'Cosh, whose philosophical writings many of you may know. Well, he has been so successful in advocating the wants of his College that he has collected in a few years by private subscriptions no less than two millions of dollars, or about £370,000, out of which he has built new class-rooms, lodgings for students, a museum, a library, and a reading-room, together with other improvements in the collegiate establishment. But if all these things be done for the comparatively small College of Princeton, shall they not be done also for the University of Edinburgh?"

The learned Principal urged strongly the desirability of supplying the demand for encouragement for learning. "We have heard much lately of the 'endowment of research,' and I was delighted to read the remarks on this subject made by Dr. Andrews, as President of the British Association. He deprecated the notion that research should be separated from teaching, or that the mind of the discoverer in any branch of science should work in isolation, deprived of the sympathy of disciples, and the stimulus of communion with the fresh flower of the land. I venture to think that research in all branches, not only of science, but also of literature, will be best promoted, not by founding appointments in which no teaching is expected, but by emancipating the professor of each subject from all that is rudimentary and mechanical in the sphere of teaching. And such an emancipation would be provided by the organisation of a tutorial or sub-professorial system. One other requirement I must mention, and that is the need of additional professorships."

New professorships are, he thinks, much needed. "In the meantime it is surely permissible to anticipate that advantages of different kinds will result to us, in common with the other universities of Scotland, from the inquiries and investigations of the Royal Commission. I look upon this Commission as most happily constituted and favourably situated for producing valuable results of a practical character. Though called a Commission of Inquiry, it stands in a quite different position from the Commission of 1826, which had a boundless ocean of university questions open before it upon which to report, while each question was complicated by considerable differences of usage in the four different universities of Scotland. The present Commission has a far more definite and restricted field. The Act of 1858, enlightened by the previous inquiries, gave a general and uniform settlement to the four universities, and appointed Commissioners to draw up into ordinances the university system of the country. The ordinances thus framed have been in operation for some sixteen years, and under them the universities, as a rule, have prospered greatly. The same Commissioners have now been reappointed, with some valuable additions to their number, to supplement and carry on their former work, and to inquire and report how far in certain particular points the existing ordinances are capable of improvement by expansion or modification. All the experience upon these points which the last sixteen years can furnish, as well as the new ideas upon the questions of higher instruction which have risen up in the minds of a generation singularly interested in educational topics, will have been fully represented by the numerous competent witnesses to whom the Commission, with great diligence and assiduity, have been listening."

The inaugural address at the Edinburgh Extramural School of Medicine was delivered by Dr. Wyllie. He chose his subject from the history of medicine, confining his attention to a few points which were of special importance in their relations to the development of medicine. Before entering on his subject he paid a tribute to the memory of Dr. Warburton Beghie, who was, a few years ago, one of the most distinguished lecturers in the medical school. He traced the history of medicine down from the earliest ages, showing how the sciences founded on anatomy had grown until at many points they had reached the level of the art of medicine, and had proved of great value in facilitating diagnosis. They had even gone further, and had been the means of suggesting many important methods of treatment; for the nature of a disease being known, the treatment was in some cases suggested in natural sequence. He congratulated the students upon the circumstance that they were about to enter upon the study of medicine at a time when it had reached an advanced stage of development, and could offer a rich store of practical experience. Dr. Wyllie, in closing, alluded to the changes which had taken place in the teaching staff since they last met, these including the loss of two of the most brilliant and successful of their lecturers—viz., Dr. M'Kendrick, who had been appointed Professor of Physiology in the University of Glasgow; and Dr. Grainger Stewart, who had been elected Professor of the Practice of Physic in the University of Edinburgh. He was sure, however, that the students would join with him in congratulating Dr. M'Kendrick and Dr. Stewart on the high positions which they had attained, and wishing them every success in their new spheres of duty.

Dr. Andrew Smart, F.R.C.P.E., has been appointed Lecturer on the Institutes of Medicine at the School of Medicine, Surgeons' Hall, Edinburgh, in the room of Dr. M'Kendrick.

In all probability there will again be a considerable increase in the number of medical students attending the Edinburgh University, as compared with last year. The numbers of the students who have matriculated up to this date are higher in all the faculties than at the same date last year. In medicine there is an increase of forty. The actual increase for the year, however, cannot be ascertained until the matriculation roll shall have been closed, about the end of this month.

GENERAL CORRESPONDENCE.

OPERATIONS IN THE EDINBURGH ROYAL INFIRMARY.

Letter from Professor Spence.

[To the Editor of the Medical Times and Gazette.]

Sir,—I find that in my Statistical Report, recently published in your journal, I have omitted to acknowledge the services of the gentlemen who acted as my house-surgeons during the period embraced in it—viz., Messrs. J. H. Scott, T. F. Spence, and Garson. To these gentlemen I am chiefly indebted for the material on which the Report is founded.

I am, &c., James Spence.

21A, Ainslie-place, Edinburgh, November 7.

Two papers read by Captain J. S. Hay (the former in June last before the Geographical Society, and the latter before the British Association at Glasgow), on "The District of Akem, in West Africa," attracted considerable attention and discussion in scientific circles, owing to a statement they contained respecting a peculiar conformation of the cheek-bones, resembling horns, among a portion of the male population. This statement, while it awakened much interest, was met generally with incredulity at the time. Captain Hay, who has recently returned to the Gold Coast, has just sent to England two photographs of one of these "horned men," and the original is now on his way to this country. The photographs have been pronounced by the highest scientific authorities to be "most curious and interesting." It is probable that a third paper, entering more fully into this peculiarity, will shortly be read, on Captain Hay's behalf, before the Anthropological Society.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 27.

Sir W. JENNER, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

FATAL CASE OF GALL-STONES.

DR. DALY read a paper on this case, in which the question of a surgical operation for the removal of the stones had been raised during the life of the patient. Mr. Maunder had, however, declined to operate when called to the case for this purpose, as he was unable himself to feel a stone in the gall-bladder, as others had done previously. The patient, a lady, thirty-eight years of age, had been for nearly two years under Dr. Daly's care, suffering the most dreadful pain from biliary colic, and having a very severe attack of pain about every fortnight. At one hour she would be perfectly well, then violent pain would come on suddenly, followed in some hours by jaundice, chalk-like motions, and urine full of bile. The patient would not at first have morphia hypodermically; and in some attacks required as much as fifteen grains of opium; sometimes she had chloroform, taking more than an ounce of that anæsthetic, as well as large doses of chloral hydrate. Diarrhœa was an almost constant symptom between the attacks of hepatic colic, and was little, if at all, relieved by treatment; bismuth, creasote, pulv. kino co., ext. belæ liquid, all failed. The patient's sufferings increased; her aspect became very suspicious of malignant disease; and there was much exhaustion after the attacks, requiring plenty of champagne and brandy. Dr. Herbert Davies saw her in consultation; and, later on, Dr. Murchison and Dr. Hilton Fagge. Dr. Murchison suggested that the motions should be passed through a muslin sieve. As no gall-stone had ever been discovered, although every motion was most carefully examined after each attack, Dr. Murchison had no doubt as to the diagnosis; but thought that probably there was only one stone, too large to pass, which, of course, would explain why no gall-stone could be discovered in the evacuations. He also thought he could feel the stone in the distended gall-bladder; and this was done again frequently afterwards, the patient occasionally being able to feel it distinctly herself, and others did so also. Dr. Murchison advised her to have the morphia hypodermically instead of the opium, and she consented; and in future could not bear the least delay in having the injection when the pain came on. At first, half a grain of morphia immediately subdued the pain; but this had soon to be increased to a grain, and finally to a grain and a half, repeated three or four times during twenty-four hours. Between the attacks she had occasionally an ephemeral febricula, the temperature rising to 104°, and the next day being normal, but she had no rigor at any time. The patient was a lady of great intelligence, and was well acquainted with the nature of her disease, having herself read up the subject; and she expressed a strong wish to see a hospital surgeon, that he might determine whether there was any possibility of removing the stone by operation. Mr. Maunder was consulted; and he said he saw no reason, having regard to the sufferings of the lady, if she fully understood the great risk, and her husband and family were willing, why it might not be justifiable, after the manner of gastro-enterotomy, to cut down on the gall-bladder, secure it to the side, and, after adhesion had taken place, open the bladder and remove the gall-stone. Mr. Maunder, however, being unable to satisfy himself that he could feel a stone in the gall-bladder, declined to operate; but he was prepared to do so if he himself could feel the stone. It was never felt afterwards. The progress of the case now became rapid; the exhaustion increased; and the mouth became aphthous. A fluctuating swelling was noticed below the margin of the ribs on the right side. Although the patient was fast sinking, she wished the swelling to be opened; so the aspirator was used, and fourteen ounces of pus were removed. Next day it had filled again; and two days afterwards the patient died. The post-mortem examination was made forty-eight hours after death. Dr. Hilton Fagge was present. The abdomen and thorax only were examined. The body was extremely emaciated and intensely jaundiced. The liver and adjacent structures were removed *en masse*. The gall-bladder was closely adherent to the under surface of the liver. At first sight it was very like a nodule of cancer; on cutting into it, it was found tightly contracted round, and closely united to, a globular stone, three-quarters of an inch in diameter; so firm, indeed, were the adhesions, that the shrivelled remains of the gall-bladder could only with difficulty be picked off with a knife. The cystic duct was of the natural size; the hepatic duct dilated to the size of the thumb. The common duct was enormously dilated, and contained a stone rather larger than that in the gall-bladder, and having a certain range of movement. On cutting into the substance of the liver, the mouths of several large bile-ducts were seen; besides these, and especially towards the inferior portion of the right lobe, there were numerous small abscesses, evidently of not very recent origin, and having tolerably thick and well-defined cyst-walls. No communication could be traced between these and the bile-ducts. Dr. Hilton Fagge estimated that there must have been more than thirty of these small abscesses. Occupying the inferior margin of the liver, and covered externally by only a thin layer of hepatic substance, was a large abscess (that which had been aspirated during life) containing several ounces of fetid pus. The kidneys were healthy. There was no trace of malignant disease, but a few nodules of obsolescent tubercle were found at the apex of the left lung.

Dr. CAYLEY had seen a case where enlarged bile-ducts had been taken for abscesses, and where, by rupture of one of these into the peritoneum, death had followed.

In reply to the President, Dr. DALY said that nearly nine months had elapsed after he was able to feel the gall-stone before the patient was seen by Mr. Maunder.

Mr. MAUNDER said while the case under consideration, so graphically reported by Dr. Daly, would, he hoped, be fully discussed by the physicians, yet he would state how he came to entertain the question of operative interference. He proposed to himself the theory—that a gall-stone was pushed out of the gall-bladder into the common bile-duct, and gave rise to jaundice and hepatic colic; and that presently this stone regurgitated into the gall-bladder, and the previous symptoms disappeared. Having had great success in the performance of gastro-enterotomy (the making of an artificial anus through the peritoneum), the result, as he believed, of attention to special details in operating—such as the stitching of a knuckle of bowel by its peritoneal coat closely to the wound in the abdominal wall before opening the intestine; and allowing nothing, not even the point of a director, to enter the peritoneal cavity,—he proposed to make a similar attempt on the gall-bladder. On the dead subject he found, having exposed the gall-bladder by an incision in the abdominal wall over it, that he could pick up with his finger and thumb the peritoneal coat alone of this receptacle (just in the same way as one can pick up a hernial sac and let the contents slip away), and stitch it to the wound. Provided, then, that on seeing the patient he could feel the gall-bladder, he was prepared to repeat the operation on the living subject. He proposed, having fastened the gall-bladder to the wound, so to leave it for three days, that adhesion might take place before opening it, in order to prevent the passage of bile into the peritoneal cavity.

Dr. BROADBENT said that the operation would have done no good except the second stone, which seemed to be the cause of the pain and obstruction, had been reached. He had recently received a larger gall-stone, which seemed to have been broken in two, and passed per rectum. It was composed of cholesterine, and covered with bile-pigment. The jaundice diminished after the passage of the calculus.

Sir WILLIAM JENNER pointed out that one of the gall-stones shown by Dr. Daly had two facets; there must thus have been three originally, though only two were found after death. Larger gall-stones than these had been passed naturally. The pain might have been caused by the spasm of the muscular fibres of the gall-bladder. He was also afraid that a point raised by Dr. Broadbent, whether gall-stones ever regurgitated into the gall-bladder, must still remain doubtful.

EMPYEMA, IN WHICH THE WASHING OUT OF THE PLEURAL CAVITY WAS FOLLOWED BY FATAL CONVULSIONS.

Dr. CAYLEY detailed this case. The patient was a man, aged thirty-six, who was admitted into the Middlesex Hospital five weeks after being attacked by right pleurisy. On admission, there was extensive effusion and great dyspnœa. Three days after his admission, his chest was punctured below the angle of the scapula, and twenty-three ounces of serum were drawn off by the aspirator. This gave great relief, but did not diminish the dulness in front and in the axilla, thus proving

that the fluid was contained in different loculi shut off by adhesions. Four days afterwards the chest was punctured again near the former puncture, and also in the fifth interspace, a little outside the vertical mammary line, and six ounces of bloody serum were obtained by each puncture. There still continued to be dulness and absence of expansion in front of the axilla below the level of the nipple, showing that a third cavity filled with fluid was present. The patient's dyspnœa was much relieved, but he became hectic, and lost flesh and strength. Eight days afterwards, the physical signs remaining unaltered, the chest was punctured in the sixth interspace at the anterior border of the axilla, and twelve ounces of fetid pus were withdrawn. The cavity was now washed out daily with a weak solution of iodine, and half an ounce of equal parts of tincture of iodine and water, for which the undiluted tincture was afterwards substituted, was injected and left. Under this treatment, which had to be interrupted for a few days on account of the formation of a superficial abscess on the chest-wall, great improvement took place; the patient lost his hectic, gained flesh and strength; the discharge diminished and became quite free from fetor. On the tenth repetition of the operation, however, while rather a larger quantity than usual of the dilute solution of iodine (half an ounce of the tincture to a pint of warm water) was being injected, the patient suddenly became deadly pale, his pulse slow, breathing gasping, and pupils dilated. Those symptoms were immediately succeeded by rigidity of the muscles and general convulsions. The pulse and breathing now became extremely rapid; the temperature ran up to 107° in the axilla; he remained profoundly comatose, and died in sixteen hours. Nothing was found on post-mortem examination, to account for the symptoms; there was neither thrombosis of the pulmonary veins nor embolism of the brain. Dr. Cayley then referred to three similar cases which had occurred in France; one proved fatal in six hours; in another, the convulsions soon passed off, but, on again washing out the pleura, they recurred and ended fatally; in the third case, they passed off, the treatment of the empyema was resumed, and a cure effected. In neither of the two fatal cases was any embolism or thrombosis discovered. Whether these convulsions were reflex or due to an embolism which had escaped detection could not yet be decided. That embolism was liable to occur during pleurisy, both after paracentesis and where no operation had been performed, was proved by many cases on record, to some of which he referred. The practical lessons were to perform paracentesis early where there is much effusion, and not allow the lung to be compressed so long as to undergo the formation of thrombi in the pulmonary veins; and, where it becomes necessary to wash out the pleural cavity, to use great caution in injecting—these convulsions having in every case come on while the fluid was being injected, and not while it was being withdrawn; and, in two cases at least, rather a larger quantity than usual was being used. The nature of the fluid used seemed to be without influence. In one case, it was a weak solution of iodine; in a second, warm water, to which a little alcohol had been added; in a third, a solution of phenic acid; in a fourth, warm water only. In all the cases the operation had previously been performed many times with impunity; in one, daily for three months.

Death after Aspiration for Pleuritic Effusion.

Dr. W. H. Broadbent read notes of a case of effusion into the left pleural cavity, in which, after paracentesis and aspiration of eighty ounces of serum, sudden death, apparently by syncope, took place. The patient, a shoemaker, aged sixty-two, was admitted January 21, 1876, into St. Mary's Hospital, complaining of cough with free expectoration, shortness of breath, and paroxysmal attacks of dyspnœa. The usual physical signs of considerable effusion into the pleural cavity on the left side were present; and aspiration was practised by Mr. Sworder, the resident medical officer, in Dr. Broadbent's presence, on the 26th, about 2 p.m. Eighty ounces of fluid were removed, without pain or any tendency to faint. No powerful suction was employed, and it was considered more prudent, on account of the patient's age and the attacks of dyspnœa to which he had been subject, not to attempt to empty the chest completely. The heart returned very nearly to its normal situation. The patient felt relieved, and was in excellent spirits up to 5 p.m., about which time he had tea. Half an hour later he was found to be dead. The cause of death was apparently syncope from failure of the heart's action. The heart was large and flaccid, but not in any respect seriously diseased. There was no thrombosis of the vessels of the lung which had been compressed, nor embolism of the heart or cerebral arteries.

Dr. T. Williams mentioned the case of a child who had empyema with rigors, and a daily variation of temperature from 100° to 103° Fahr. The pus was drawn off, a drainage-tube introduced, and the cavity washed out. The tube was worn for some months, and the child's lung had expanded nearly to the full size, when she was seized with insensibility and spasm of the side. After various changes she sank from coma. There was no post-mortem. Embolism could not account for such a death.

In reply to Sir William Jenner, Dr. Cayley said the pulmonary artery was not quite full of clot. Death had occurred during the injection itself.

Dr. H. Weber said that long before paracentesis became common such deaths occurred when the patients seemed doing well. He himself had had four such—two in adults, two in children. In two cases embolism of the pulmonary and cerebral arteries was found. In one the right heart was full of clot; in the other there were vegetations on the aortic valves. In these cases the heart was weakened, and he did not think that any blame could be thrown on the thoracentesis.

Mr. Myers mentioned the case of a man who, in trying to commit suicide, shot himself through the chest. The left pleura filled with blood, which became putrid, and was withdrawn. The bleeding came on again, and the same process was repeated five times, until at last he sank from exhaustion.

Mr. B. Carter mentioned the case of a young woman who was shot in the back. The pleura was filled with blood. This was withdrawn, and a drainage-tube introduced. The patient became epileptic and maniacal. She recovered from this, and, after reintroduction of the drainage-tube, from the empyema.

Dr. Goodhart referred to a case where, after removal of recent pleural effusion, the patient, a young man, died with cerebral symptoms when the empyema had got quite well.

Mr. Henry Morris remarked that Dr. Cayley's case was the more important of the two in any attempt to settle the question of the part played by thoracentesis and the washing-out process in causing serious or fatal complications. No conclusion ought yet to be drawn from cases of sudden death (simply), to the disparagement of these operations. Sudden death had occurred just prior to thoracentesis, as in the case of a young physician quoted by Trousseau; and afterwards, from causes independent both of the disease and of the operation, as in a case of fatal hæmorrhage from ulcer of the stomach. Nor was there any uniformity in the relative time of death, nor in the mode of death, nor in the post-mortem states after the operations. Fatty degeneration of the heart, clots in the heart and large vessels, œdema of the lungs, and cerebral anæmia, as well as embolisms of the cerebral arteries, have all been found in the recorded cases of sudden death after thoracentesis. No one of these conditions has, however, been present in each case; while each has been found in cases of sudden death in pleurisy when no operation whatever had been performed. Of the two theories mentioned by Dr. Cayley, Mr. Morris preferred that of reflex action, and he mentioned two cases in some way favouring it, in which paralysis of motion of both limbs on the affected side had followed some days after the washing-out of the empyemic cavity. This theory affected the various surgical methods of treatment similarly, for the pain of successive punctures was as likely as the contact of the injected fluid with the pleura to excite the action. Possibly it would be well in some cases of pleuritic effusion to refrain from further operations, when it was found, after once tapping, that the lung could not expand, especially if the effusion was due to tubercle. In using drainage-tubes in empyema it would be found impossible, except when the lung was collapsed, to pass a tube through one intercostal space and out at another without running great risk of injuring the lung, yet this method is described as an alternative for a single free incision.

In reply to some remarks by Mr. Mahomed, Dr. Cayley said that no air was found in the pleura in his case.

Dr. Powell thought it very important to know the pressure of the fluid sent into the chest. To obviate any great pressure he made use of a syphon arrangement.

Dr. Coupland thought that the cases similar to Dr. Cayley's yet on record were insufficient to furnish a true guide. The patient in the case referred to was highly nervous. There was no trace of embolism in the body.

NEW INVENTIONS AND IMPROVEMENTS.

HAY'S LEMONADE, GINGER-BEER, AND MINERAL WATERS.

THACKERAY in "Vanity Fair" gives us a vivid description of the morning after a night spent at Vauxhall in drinking rack-punch. The only solace the unfortunate sufferer from headache had to comfort him was small beer—for in those times, says the author, soda-water was not yet invented. Certain it is that since the time of their introduction there are few articles which have come more rapidly into general use than aërated waters. There is only one other example which strikes us as at all parallel to the rapid growth in public favour of aërated waters, and that is what is now familiarly known as "bitter beer," but which used to be called India Pale Ale.

Some of the most recent samples of aërated waters submitted to us have been sent by Mr. Hay, a chemist, of Hull. They are of unusual excellence, and well worthy of the notice of the public. Just as there is nothing better of its kind than a good aërated water, so there is nothing worse than the commoner kinds. Some of the cheaper waters manufactured in London are simply detestable. To begin with, the water employed as the basis is often drawn from cisterns which are never cleaned out, which receive all the filth imported in the foul river-water of winter, and which become hotbeds of putrefaction in summer. Next, the gas employed is generally impure, prepared from impure materials, and itself imperfectly washed. All these things have led of recent years to a larger and larger consumption of natural mineral waters of various kinds, sometimes as produced naturally, sometimes with additional impregnation with carbonic acid, or in the form of lemonade. From all these defects of material impurity or imperfect preparation, Hay's waters are, as far as we can ascertain, perfectly free. And if we put them to the coarse and simple, but most satisfactory, test of liking, those who have tried them here in London have liked them much. The ginger-beer, we should say, is manufactured from the oil of ginger only; the resin, which is somewhat nauseous, is altogether rejected. This mode of manufacture gives the ginger-beer a rather cloudy appearance, but that is, under the circumstances, unavoidable.

SALICYLIC SOAP.

MESSRS. TIDMAN AND SON (Wilson-street, Finsbury, London) have succeeded in producing a salicylic soap which appears to possess many very useful and commendable properties. Dr. H. C. Bartlett and Mr. Charles H. Piesse (the Public Analyst for the Strand district) certify that the soap contains a considerable proportion of salicylic acid, so combined that none of its antiseptic properties are lost; and it is well calculated, we think, from the experience we have had of its qualities, to be of good service in some skin diseases—as, for instance, in the dry and scaly stage of eczema; in cases of disagreeable perspiration; and in giving tone, when moderately used, to tender and irritable skins. It certainly "lathers" well, and is an "easy" soap to use.

SANITARY EUCALYPTUS OIL SOAP.

WE have also received from Messrs. Whitaker and Grossmith (Fore-street, London) a sample of a very agreeable soap, in which is combined with the other necessary agents the oil distilled from the leaves of the *Eucalyptus globulus*. The pleasant aromatic odour of the oil is unmistakably evident in the soap, which is certainly a refreshing and elegant addition to the toilet apparatus; and we need not add that the perfume or odour of the eucalyptus leaves is believed by many persons to possess valuable sanitary properties. We must add, however, that the soap seems rather a soft, and therefore wasteful one.

MEDICATED GELATINE LAMELS, AND LAMELLÆ CANTHARIDIS.

MESSRS. SAVORY AND MOORE (New Bond-street) have continued to bring out new examples of their patented gelatine lamels. We have received from them some specimens of medicated gelatine lamels for internal use; which consist of thin and pliable sheets, divided accurately by raised lines into squares; and each square contains a dose of the medicine with which the sheet has been saturated. In using them, the required dose—part of a square, or one or more squares, according to the dose prescribed—is cut off, floated on a little water, and swallowed quickly. Taken thus, the lamels are all but tasteless, and no doubt most people will much prefer them to the ordinary forms of medicine; while the practitioner will find them very portable and handy. They do away with the trouble of dispensing, and they are cleanly and elegant in appearance.

Another preparation of this kind—the Blistering Gelatine—affords a ready and cleanly mode of raising a blister. It is used just in the same way as a piece of ordinary plaster. The skin is slightly moistened, if necessary, and the gelatine sheet applied to the part. The gelatine offers no resistance to the vesicating action of the cantharides, and in no way interferes with the after-dressing of the blister. It is an ingenious, elegant, and convenient substitute for the ordinary methods of blistering.

SYRUP OF HYDRIODATE OF QUININE.

THIS preparation, which is recommended as a remedy for neuralgia, nervous headache, and other nervous disorders, is a thin, colourless syrup, with a decidedly bitter taste. It is a genuine preparation, and will, we believe, be found to be a useful and serviceable remedy. It is prepared by Messrs. Colk and Williams, Bishop's-road, Hyde-park.

MEDICAL NEWS.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examinations during the recent sittings of the examiners:—

Anderson, Peter, Perth.
Bastable, John B. L., Kanturk.
Butters, Isaiah George, Devonport.
Cullimore, John R., Wexford.
Dalziel, William, South Shields.
Dixon, Francis, Nottinghamshire.
Evans, Samuel Edwin, Limerick.
Farmar, Edward Dorset, Plymouth.
Fitzpatrick, Alfred E., Liverpool.
Forjett, Ernest Houston, Bombay.
Gordon, James Alex., Belfast.
Hampson, Samuel, Dukinfield.
Larcher, Valbert, Mauritius.
M'Mahon, Fredk. D. S., St. Vincent.
O'Callaghan, M. Q., Cnty. Limerick.
Smart, Robert Wilson, Aberdeen.
Stowell, William H., City of Wells.
Wylie, H., Kincardine-on-Forth.

The following gentlemen passed their final examinations, and were admitted L.R.C.P. Edin. and L.R.C.S. Edin.:—

Aylward, Ernest, Brede, Sussex.
Brown, Alfred Beaver, Manchester.
Carden, John Condell, Tipperary.
Chaundy, Raymond B., Oxford.
Christie, Joseph Wm., Stirling.
Clement, Sydney F., Shrewsbury.
Cotton, James Henry, Canada.
Coxhead, John, Maddan, Jamaica.
Crossit, Richard, County Derry.
Daly, James C., County Limerick.
Ellis, William, Gascoigne, Nottinghamshire.
Fenwick, Charles, Stoke, Devonport.
Harris, Alfred Edwin, Cork.
Holloway, George, Wednesbury.
James, H. G., Newport, Tipperary.
Jefferson, James Graham, Lisburn.
Middleton, Thomas T., Teesdale.
Mumford, W. E., St. Kitts, W.I.
Oliver, John Richard, Woolwich.
Pearson, Alfred Wm., Brierley-hill.
Reckitt, Edward Bass, Wainfleet.
Studdert, John M., County Clare.
Tate, Arthur Littlewood, Rochdale.
Trimble, Robert John, Canada.
Watson, James, Lanarkshire.
White, Arthur, Barnsley.
White, James, County Clare.
Worswick, Fredk. H., Manchester.
Wyer, Charles Erskine, Peebles.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Court of Examiners on the 7th inst., and when eligible will be admitted to the pass examination:—

Cronk, Herbert G., B.A. Cantab., of St. Bartholomew'sHospital.
Dickinson, George D., of the Edinburgh School.
Forde, Maurice, of the Dublin School.
Garstang, T. W. H., of St. Bartholomew's Hospital.
Greenway, Alexander S., of the Edinburgh School.
Jones, Arthur, of the Liverpool School.
Knapp, Edward M., of the Bristol School.
Lyle, Samuel H., of the Liverpool School.
McReddie, George D., of the Calcutta School.
Masani, Hormasji D., of the Bombay School.
Palm, William S., of the Edinburgh School.
Schokman, George P., of the Calcutta School.
Smith, William H., of the Birmingham School.
Ward, George S., of King's College.
Warlikar, Damodar P., of the Bombay School.
Walker, Charles E., of the Edinburgh School.
Weston, S. T. D., of the Birmingham School.
Whitehouse, John, of the Birmingham School.

The following gentlemen passed on the 8th inst., viz.:—

Appleton, Thomas A., of St. George's Hospital.
Ayres, Alfred R. A., of the London Hospital.
Bowman, Richard, of St. Mary's Hospital.
Buck, John S., of University College.
Buckle, John, of St. Bartholomew's Hospital.
Cocksedge, Charles E., of the London Hospital.
Dobb, James, of the Manchester School.

Evans, James W., of University College.
Ewbank, Henry, of University College.
Garland, George H., of St. Thomas's Hospital.
Harrison, James, of St. Bartholomew's Hospital.
Harwood, John G., of St. Bartholomew's Hospital.
Havens, Edward J., of the London Hospital.
Jerani, James W., of St. Bartholomew's Hospital.
MacDonnell, Richard L., of the Toronto School.
McGachen, Frederick W. D., of the London Hospital.
Powell, John J., of St. Thomas's Hospital.
Ward, William T., of the Toronto School.

Fourteen candidates out of the fifty examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months. It is stated that at the ensuing annual election of this Board all the members of it will offer themselves for re-election with the exception of Mr. Luther Holden, of St. Bartholomew's Hospital, and Mr. John Cooper Forster, of Guy's Hospital, two gentlemen whom the Board can ill afford to lose, and whose retirement will be much regretted.

The following were the questions on Anatomy and Physiology submitted to the candidates on this occasion, who were required to answer four, including one of the first two:—1. State the facts and experiments which prove the existence of motor, sensory, and vaso-motor nerves. 2. Describe the mechanism and movements of respiration; and name the chief muscles and nerves concerned in the process. 3. Describe the os calcis and its articulations. Mention the muscles attached to it. 4. Give the dissection requisite to expose the brachialis anticus; and mention the parts in relation with it. 5. Describe the formation of the superficial and deep palmar arches; their respective branches, and the dissection required to display them. 6. Describe the course and relations of the colon, including the cæcum and sigmoid flexure, and the arteries by which it is supplied.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their first professional examinations during the October sittings of the Examiners:—

Hodgson, Wm. Bacon, Middlesex.
Noad, Hartley James, Surrey.
Sellers, John William, Rochdale.
Stewart, William John, America.

The following gentlemen passed their final examinations, and were admitted Licentiates of the College:—

Drummond, Thomas, Edinburgh.
Duncan, William, Aberdeen.
Graham, Alexander, Tobermory.
Gray, Thomas, Liverpool.
Kay, A. Goodwyn, Landown, India.
Taylor, William Bond, Bury, Lancashire.
Thatcher, Chas. Henry, Edinburgh.
Willis, George Owen, Monmouth.
Wilson, Charles, Irvine.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 3:—

Congreve, George Thomas, Coombe Lodge, Peckham.
Ling, Chas. Arthur Squire, Gorleston, Suffolk.
Heelas, James, Fellows-road, South Hampstead.
Richardson, Thos. Arthur, Newport, Pembrokeshire.

The following gentlemen also on the same day passed their primary professional examinations:—

Bellaby, Frederic, Middlesex Hospital.
Hall, James Lees, St. Thomas's Hospital.
Read, Edward Inskip, London Hospital.
Stuart, Henry Ogilvy, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BOOTHROYD, JOSEPH S., M.B., C.M.—Assistant-Surgeon to the Newcastle-on-Tyne Dispensary.

CLARKE, J. LOCKHART, M.D., F.R.S.—Consulting Physician to the Chelsea Hospital for Women, King's-road, London, S.W.

EVANS, T. M., M.R.C.S., L.S.A.—Honorary Assistant-Surgeon to the General Infirmary, Hull.

LAMB, GEORGE, L.R.C.P. Lond., M.R.C.S., L.S.A.—Honorary Assistant-Surgeon to the General Infirmary, Hull.

LEFTWICH, RALPH WINNINGTON, M.D.—Assistant-Physician to the East London Hospital for Children.

NICHOLSON, R. H. B., M.R.C.S., L.S.A.—Honorary Assistant-Surgeon to the General Infirmary, Hull.

PARKER, ROBERT WILLIAM, M.R.C.S. Eng.—Assistant-Surgeon to the East London Children's Hospital.

SHEILDS, JOHN, M.B., C.M. Edin.—House-Surgeon to the General Infirmary, Hull, *vice* Henry Thompson, appointed Honorary Assistant-Surgeon.

SMITH, JOHN PERCIVAL, L.R.C.P. and L.R.C.S. Edin.—Medical Officer to the Mutford and Lothingland Incorporation.

TAYLOR, WILLIAM BOND, L.R.C.P. and L.R.C.S. Edin.—Workhouse Medical Officer to Bury Union, *vice* Daniel Taylor, deceased.

THOMPSON, HENRY, L.R.C.P. Lond., M.R.C.S., L.S.A.—Honorary Assistant-Surgeon to the General Infirmary, Hull.

VENN, ALBERT JOHN, M.D.—Assistant-Physician to the Victoria Hospital for Children, Chelsea, *vice* Dr. Ridge Jones, elected Physician.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff Surgeon Belgrave Ninnis, M.D., to be Fleet Surgeon in her Majesty's Fleet; Surgeons Edward Lawton Moss, M.D., and Richard William Coppinger, M.D., to be Staff Surgeons in her Majesty's Fleet.

WAR OFFICE.—Her Majesty has been graciously pleased to approve of Surgeon-Major Francis Stephen Bennet François de Chaumont, M.D., being appointed Professor of Military Hygiene at the Army Medical School at Netley.

BIRTHS.

GANDY.—On October 31, at The Hill Top, Gipsy-hill, the wife of William Gandy, M.R.C.S., of a daughter.

HARMAN.—On November 4, at 25, Gresham-road, Brixton, the wife of John Harman, M.R.C.S.E., of a daughter.

THOMPSON.—On November 6, at 3, Upper George-street, Bryanstone-square, W., the wife of E. Symes Thompson, M.D., F.R.C.P., of a son.

MARRIAGES.

ELLIOTT—HELLARD.—On November 2, at St. Thomas's parish church, Portsmouth, Ernest Elliott, M.D., of Hillside, Purbrook, to Elizabeth, eldest daughter of Charles Bettesworth Hellard, Esq., solicitor, Portsmouth.

DEATHS.

CARTER, JANE MARGARET, wife of John Carter, M.R.C.S., late of Hagley-road, Edgbaston, Birmingham, on October 20.

FOX, ELLEN ELIZABETH, wife of E. F. Fox, M.R.C.S.E., at Kensington House, Brislington, near Bristol, on October 29, aged 43.

HALL, AMY LOUISA, wife of Geoffry C. Hall, L.R.C.P. Edin., Indian Medical Service, at Mainpuri, North-West Provinces of India, on September 30, aged 24.

HALL, JOHN CHARLES, M.D., at Surrey House, Sheffield, on October 26, in his 60th year.

SMYTH, ELLEN ISABELLA, fifth surviving daughter of Luke D. Smyth, M.D., at 83, South-hill-park, Hampstead, on November 3, aged 15.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

HACKNEY UNION.—Medical Officer. Candidates must possess the qualifications required by the Consolidated Orders of the Poor-law Board and Local Government Board. Applications, in writing, accompanied by testimonials as to character and ability, and evidence of qualifications, to John Godwin, Clerk's Office, Hackney Union, Homerton, on or before November 14.

NORTH RIDING OF YORKSHIRE LUNATIC ASYLUM, CLIFTON, YORK.—Assistant Medical Officer. Candidates must possess a double qualification, and be duly registered. Applications, with testimonials, to the Medical Superintendent, on or before November 18.

WESTERN INFIRMARY OF GLASGOW.—Superintendent. Applications, with testimonials, to Henry Johnston, Secretary, 30, Gordon-street, Glasgow, on or before December 1.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Preston Union.—The Fourth District is vacant; area 500; population 17,900; salary £70 per annum.

Hailsham Union.—Mr. E. T. C. Ellis has resigned the Third (A) District; area 7970; population 2044; salary £44 per annum.

IT has been resolved, at a meeting in Aberdeen, to establish a school of agriculture and chemistry, at which farmers in the North of Scotland may acquire a scientific knowledge of the principles of agriculture and an acquaintance with the sciences bearing upon it.

ANTI-RHEUMATIC POMADE.—Dr. Guéneau de Mussy recommends the following pomade to be applied three or four times a day to joints that are very painful from acute rheumatism:—Extract of belladonna four, extract of henbane six, extract of opium two, and lard fifty parts.—*Union Méd.*, October 31.

A VERY elegant timepiece, set in ebony, was last week presented to Mr. E. S. Medcalf, late House-Surgeon of the Hove Dispensary, "as a token of esteem and appreciation of his valuable services during his connexion with the Dispensary." The testimonial was subscribed for by 310 persons, who adopted this means of expressing their approbation of the manner in which Mr. Medcalf had carried out his duties.

ATROPINE ENEMATA IN CYSTITIS.—Dr. Simple states, in the *Virginian Medical Monthly*, that he has treated many cases of cystitis with success by administering in enemata from forty to sixty minims of a solution of sulphate of atropia (one grain to eight ounces of water), to which is added sufficient carbolic acid to prevent the formation of organic matter and the deposit of the atropia. The dose is added to half an ounce of water, and administered twice in the twenty-four hours. It uniformly and immediately arrests the frequent strangury and painful micturition, gradually checks the mucous and sanguineous discharges, and relieves the suprapubic pain with the cystic inflammation. When the urine is alkaline, Mettauer's nitro-muriatic acid is given to correct it; and when it is so acid as to irritate, the bicarbonate of potash or subnitrate of bismuth may be given, especially the latter, because of its tonic effects and its soothing influence on the mucous surfaces of the urinary organs. When constipation is present, which is frequently the case, it must be met by means of the German pulv. glycirrhizæ co. or other aperients, until the effect of the atropia passes away, which generally occurs soon.—*New York Medical Journal*, September.

PERMANENT EPIDEMIC HOSPITAL AT ABERDEEN.—Extensive buildings are now in course of erection by the Aberdeen Local Authority for the accommodation of small-pox, cholera, and fever patients in the event of an epidemic breaking out in the city. The site is over four acres in extent, and the hospital premises consist of eight buildings, all of which are constructed of concrete. The fever wards are 70 feet long and 24 feet wide. The height from floor to ceiling is 15 feet, and the rooms are exceedingly well lighted and ventilated. The wards will contain 12 beds, which will give 140 feet of floor space and 2000 cubic feet of air space to each bed. The total number of patients who could thus be accommodated with ease is therefore only 48, but on an emergency there might be room for at least another dozen. Two pavilions will be used for small-pox or cholera patients, one being set apart for males and the other for females, and the remaining two will be kept as typhus or scarlatina wards. There is a dead-house within the grounds, divided into three compartments—one to be used as a dissecting-room, and the other two as small-pox and fever dead-houses—while there are also a number of out-houses. Every accommodation is provided within the hospital for the staff, servants, nurses, and other officials. It is anticipated that the total cost will be £15,000.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Nurse.—Miss M. Drummond's story, entitled "A Study from Life," is written in aid of the Westminster Home for Training Nurses—the memorial to the late Lady Augusta Stanley. It will very shortly be published.

'It's Impossible."—

"With caution judge of *possibility*;
Things thought unlikely, e'en impossible,
Experience often shows us to be true."—*Shakespeare.*

A Medical Practitioner.—Our Scandinavian brethren have an excellent system of registration of disease; and it is true that they receive liberal aid from the State in the advancement of medical science. The latter was exemplified by the State having contributed nearly 100,000 rix dollars to the expense of the new Pathologico-Anatomical Institution in Stockholm, and by the travelling stipends awarded, from time to time, to deserving young medical men, to facilitate the pursuit of their studies in the great Continental schools.

Patient Toil.—

"Men, my brothers; men, the workers; ever reaping something new,
That which they have done but earnest of the things that they shall do."

Two Students.—"The student of mental science," says Dr. Laycock, "if he would be a successful student, must concentrate his researches upon the laws of action of the brain and nervous system as they correlate the laws of thought and volition, and eschew all efforts to develope it by simple meditation on his own states of consciousness, or by the processes of the logical act, to the exclusion of observation and experimental research on the subject-matter of his science."

A Peeress.—The mortality among the children of peers in this country under five years of age, as quoted by the Registrar-General, is at the rate of 20·69 per 1000; among the Society of Friends, the children's death-rate is 27·87; the children of the clergy die at the rate of 30·27; in the country districts the death-rate under five years is 40·34; while in town districts it reached 80·13 per 1000.

Chemicus.—It is the opening sentence in M. Würtz's "History of Chemical Theory," which runs thus—"*Chemistry is a French science.*" It is as offensive as untrue, of course.

Vital Action.—Dr. Headland's words are—"We are led to infer that the influence of medicines must for the most part be vital in its nature—that it must be such as could only be exerted in the living body."

E. R.—Sir Walter Scott in his *Marmion* says:—

"Thence to St. Fillan's blessèd well,
Whose spring can frenzied dreams dispel,
And the crazed brain restore."

A Member of the B.M.A., Chichester.—The late Dr. Scott, of Portsmouth, a Fellow of the College of Surgeons, was the first person to perform œsophagotomy in this country. Mr. E. Cock, of Guy's Hospital, followed.

Mercantile Marine.—The egg of the great auk is extremely scarce, fetching thirty guineas and upwards at auction sales. The museum of the Royal College of Surgeons contains about half a dozen.

Variola.—On application to the Messrs. Lascelles, of Bunhill-row, they will supply you with plans of temporary hospitals for infectious diseases as supplied to the Local Board of Health, Ely, at the time of the late small-pox epidemic, and which we understand answered the purpose admirably. They can be readily put together by any intelligent workman.

T. St. G. B.—An excellent portrait of the late Mr. Campbell de Morgan was published by Mr. G. B. Black, of Regent-street.

Dr. R.—About the period mentioned by you it was customary to appoint a "stone cutter" to the metropolitan hospitals, who should cut also for hernia, but should not hold the appointment of surgeon to the hospital, nor, in fact, be denominated surgeon, but simply "stone cutter and rupture curer."

Mr. Smith.—The operation for popliteal aneurism was first performed by John Hunter in 1785. The preparation may be seen in the museum of the College of Surgeons.

T. Wilson.—Yes; we understand that the next meeting of the British Medical Association will be held in Manchester, and not in Cork, as suggested at the last meeting in Sheffield.

*** The following, which has heretofore only been delivered by hand, is worthy of a wider publication:—

"Dr. Chas. Low, Surgeon and Accoucheur (late House-Surgeon and Medical Assistant to the London Hospital), 20, Somerville-road, Queen's-road, Peckham, S.E.—Dr. Chas. Low, formerly House-Surgeon and Medical Assistant to the London Hospital, has commenced practice at 20, Somerville-road, Queen's-road, Peckham, where the latest and most skilful measures, such as those adopted by the leading professors in London, are used for the treatment of all diseases, at exceedingly low fees. Every complaint is thoroughly fathomed, and the constitution of each patient carefully examined and noted down in a book kept expressly for the purpose, so that all subsequent diseases may be more successfully treated by him than, perhaps, by one not possessing that knowledge. Dr. Low, from his long connexion with the Hospital, has acquired most valuable experience in the treatment of diseases of the heart and lungs; and he intends sparing no time, or withholding any medicine, however expensive, that will conduce to the speedy recovery of the patients. Special care is taken with children or with those seriously ill. Midwifery attended for moderate fees (10s.). Hours for Consultation.—Week Days: Morning from 8.30 to 11, afternoon from 2 to 3, evening from 6 to 9 o'clock. Sundays: Morning from 9 to 10, evening from 6 to 8 o'clock."

CARBOLIC ACID AS AN ANÆSTHETIC: A CAUTION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your issue of the 27th ult. you published a paragraph from another journal, recommending the local application of carbolic acid as an anæsthetic for the purpose of opening abscesses, or such-like minor operations; you also published something of the same kind some weeks since. Permit me to warn your readers against so using carbolic acid. I tried it on myself—not quite as you recommended it to be used, it is true,—but the action of carbolic acid on the skin would be the same, I take it, under all circumstances; and on me it so destroyed the skin that, where it went, a raw surface of the most painful kind quickly resulted from its contact—a surface as raw as if melted sealing-wax had been run over the skin; and that lasted me for a month. About a fortnight has elapsed since it healed, and the cicatrix is now hard, white, irritable, and sometimes painful.

I am, etc.,
A VICTIM.

Sussex, November, 1876.

PHILANTHROPY: BRITISH SUBJECTS IN PARIS.

A recent act of philanthropy—having especial regard to British subjects in Paris who stand in need of medical assistance and a home—deserves our notice. A few years since the brothers Galignani built and endowed the hospital for receiving British subjects requiring medical aid and a home in times of sickness and distress. Mr. William Galignani—the surviving brother—has now generously presented the building to the Mission Home and Christian Association, established some time since by Miss Leigh, which has afforded a free asylum for English women and children who are temporarily unable to support themselves in Paris.

INTRAVENOUS INJECTION OF AMMONIA IN SNAKE-POISONING.

Mr. Vincent Richards, of Bengal, author of "The Literature of Snake-Poisoning for the past Two Centuries," and a member of the Commission on Snake-Poisoning, reviews in the *Melbourne Daily Telegraph* the recent discussion at the Medical Society of Victoria on the question of snake-poisoning. Mr. Richards has no faith whatever in the intravenous injection of ammonia, and designates it "as arrant a piece of quackery as ever was propagated." Of Professor Halford he says, "His attempts to clear himself are perhaps honest, but they prove beyond doubt that he has much to learn regarding snake-poisoning before his opinions on the subject will be entitled to much respect." This language is not particularly courteous, but Mr. Richards doubtless thinks that he is entitled to use strong language, after Professor Halford had insinuated that the report of the Indian Commission had its origin in darkness.

COMMUNICATIONS have been received from—

The Secretary of the Naval Medical Supplemental Fund, London; Dr. Tidy, London; Mr. W. J. Capel, Lambeth; The Registrar of Apothecaries' Hall, London; Dr. Charles Cuffe, Woolwich; Mr. S. M. Bradley, Manchester; Dr. Alexander Buchanan, Glasgow; Mr. J. M. Stone, London; Dr. James Baas, Liverpool; The Secretary of the Royal Institution, London; Messrs. Hewlett and Son, London; Mr. German Reed, London; Messrs. Henry Watson and Co., London; Dr. Hitchcock, Greenwich; Mrs. F. M. Hay, Isle of Wight; Dr. J. Milner Fothergill, London; Dr. Barrenaidge, Edinburgh; Dr. Corfield, London; Mr. James Spence, Edinburgh; The Secretary of the Royal College of Surgeons, Edinburgh; The Secretary of the Medical Microscopical Society, London; Mr. Poole, London; Mr. C. F. Maunder, London; Dr. Julius Althaus, London; Mr. B. R. Wheatley, London; Mr. R. J. Godlee, London; Dr. Druitt, London; Mr. John Chatto, London; Dr. Barlow, London; Mr. C. R. Francis, Sutton; Mr. Cullingworth, Manchester.

BOOKS AND PAMPHLETS RECEIVED—

Robert Bartholow, M.A., M.D., A Practical Treatise on Materia Medica and Therapeutics—F. B. Sanborn, The Public Charities of Massachusetts during the Century ending January 1, 1876—J. Alfred Wanklyn and Ernest Theophron Chapman, Water Analysis: a Practical Treatise on the Examination of Potable Water—Joseph Hands, M.R.C.S., Vaccination and its Opponents—A. D'Espine et C. Picot, Manual Pratique des Maladies de l'Enfance—L. Duncan Bulkley, A.M., M.D., The Use and Value of Arsenic in the Treatment of Diseases of the Skin—M. Foster, M.D., and J. N. Langley, B.A., A Course of Elementary Practical Physiology—John Cleland, M.D., F.R.S., A Directory for the Dissection of the Human Body—George Harley, M.D., F.R.S., Histological Demonstrations—J. Milner Fothergill, M.D., The Practitioner's Handbook of Treatment—T. Maclagan, M.D., The Germ Theory applied to the Explanation of the Phenomena of Disease.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—New York Druggists' Advertiser—Practitioner—Monthly Microscopical Journal—Edinburgh Medical Journal—Obstetrical Journal of Great Britain and Ireland—Whitehall Review—Spiritualist—Indian Medical Gazette—Monthly Magazine of Pharmacy, Chemistry, Medicine, etc.—Buxton Advertiser—American Supplement to the Obstetrical Journal of Great Britain and Ireland.

APPOINTMENTS FOR THE WEEK.

November 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

13. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Three Cases of Subcutaneous Osteotomy (communicated): two performed by Dr. John Ashhurst, and one by Dr. Ewing Mears, New York. Dr. Edwards Crisp, "Croupal Membrane." Dr. Dick, "On Division of Urethral Structures by Cutting."

14. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Sir James Paget (President), "On a Form of Chronic Inflammation of Bones (Osteitis Deformans)," etc.

15. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Meteorological Society (25, Great George-street, Westminster), 7 p.m. Meeting.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harvrian Society, 8 p.m. Dr. Dowse, "On the Value of Jaborandi and Gelseminum Sempervirens as Therapeutic Agents."

17. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Medical Microscopical Society, 8 p.m. Mr. C. H. Golding-Bird, "On Rodent Ulcer."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 4, 1876.

BIRTHS.

Births of Boys, 1334; Girls, 1279; Total, 2613.
Average of 10 corresponding years 1866-75, 2306·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	732	671	1403
Average of the ten years 1866-75	749·5	715·6	1465·1
Average corrected to increased population ...	...	...	1568
Deaths of people aged 80 and upwards ...	...	...	49

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	...	2	...	...	...	5	1	1
North	751729	10	3	7	2	2	...	5	...	3
Central ...	334369	...	...	1	...	2	...	1	1	5
East	639111	3	6	12	...	5	...	2	...	14
South	967692	6	9	13	1	5	...	7	...	8
Total	3254260	21	18	35	3	14	...	20	2	31

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·081 in.
Mean temperature	44·1°
Highest point of thermometer	55·7°
Lowest point of thermometer	30·8°
Mean dew-point temperature	38·4°
General direction of wind	Variable.
Whole amount of rain in the week	0·20 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 4, 1876, in the following large Towns:—

Borough, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Nov. 4.	Deaths Registered during the week ending Nov. 4.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2613	1403	55·7	30·8	44·1	6·73	0·20	0·51
Brighton	100632	42·7	63	39	55·0	31·5	43·9	6·61	0·09	0·23
Portsmouth ...	124867	27·8	79	46	55·7	32·8	44·7	7·06	0·00	0·00
Norwich	83430	11·2	56	39	53·0	35·0	44·6	7·01	0·19	0·48
Plymouth	72230	51·8	39	35	58·0	28·5	44·5	6·95	0·00	0·00
Bristol	199539	44·8	142	76	59·4	27·5	43·3	6·28	0·08	0·20
Wolverhampton ...	72549	21·4	54	40	53·7	28·8	42·7	5·95	0·58	1·47
Birmingham ...	371839	44·3	293	133	55·0	30·8	44·8	7·12	0·53	1·35
Leicester	113581	35·5	87	55	54·0	33·0	44·0	6·67	0·53	1·35
Nottingham ...	93627	46·9	78	37	55·2	28·9	43·3	6·28	0·46	1·17
Liverpool	521544	100·1	406	210	54·0	36·0	46·2	7·89	0·37	0·94
Manchester ...	357917	83·4	253	167	55·0	28·0	43·0	6·11	0·50	1·27
Salford	138425	26·8	130	105	54·5	27·5	44·0	6·67	0·44	1·12
Oldham	88609	19·0	68	47	...	...	...	...	...	...
Bradford	173723	24·1	122	70	53·2	34·2	45·0	7·22	0·12	0·30
Leeds	291580	13·5	204	146	55·0	34·0	45·0	7·22	0·07	0·18
Sheffield	274914	14·0	253	138	60·0	34·5	45·6	7·56	0·29	0·74
Hull	136933	37·7	111	49	56·0	32·0	43·8	6·56	0·16	0·41
Sunderland ...	108343	32·8	73	34	55·9	36·0	46·0	7·78	0·01	0·03
Newcastle-on-Tyne	139929	26·1	119	63	...	...	...	...	...	...
Edinburgh	215146	51·3	146	71	...	...	...	...	...	...
Glasgow	545144	90·4	429	223	53·2	31·8	45·0	7·22	0·15	0·38
Dublin	314666	31·3	171	118	59·0	26·1	45·2	7·33	0·31	0·79
Total of 23 Towns in United Kingdm	8028595	37·7	5989	3374	60·0	26·1	44·4	6·89	0·25	0·63

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·08 in. The lowest reading was 29·99 in. on Monday afternoon, and the highest 30·21 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XI.

DEATH BY HANGING.

(*Concluded from page 536.*)

This brings us, in the next place, to the third of the inquiries opening up to the medical jurist in the investigation of cases of death by hanging—viz.,

3. *The question*, closely allied to that last discussed, *whether the hanging*, supposing it proved, *had been the result of accident*, of *suicide*, or of *homicide?*

The decision of this question will depend almost wholly, in most instances, on *circumstantial evidence*. The circumstances, however, will not unfrequently be such as will *come properly within the cognisance of the medical jurist*, and not a few of them will be of a character of which *he alone can be the best able to appreciate the value and applicability*.

(1.) Little attention has been paid by medical writers to the possible occurrence of *accidental hanging*. It should be known, however, that instances of this kind are on record. We have already had occasion to refer to one case given on the authority of Lord Bacon (page 11); another is furnished by Dr. Gordon Smith (page 236); a third by Dr. Taylor ("Manual," page 173); and Mr. Watson alludes to it as having "often been the result of experiments amongst boys and others," though without adducing any other instance than the one recorded by Dr. Smith (page 140). The discrimination of accidental from suicidal or homicidal hanging must rest in every case on circumstantial evidence.

(2.) The point of greatest importance for the decision of the medical examiner will be to determine whether the hanging has been the result of suicide or of homicide; in other words, whether death by hanging has been the act of the person himself, or that of some other. The *presumption* in every case will be that the hanging has been the act of *the person himself;* and it will require strong grounds to justify the opinion that murder has been committed in this way. In fact, nothing is more rare than the occurrence, in practice, of homicidal hanging. We must, however, admit that an individual may have been murdered by hanging, and "the circumstances which will justify the medical jurist in making this admission are the following:—first, where the person hanged is feeble, and the murderer is a strong, healthy man;" "secondly, where the person hanged, although usually strong and vigorous, is at the time in a state of intoxication, stupefied by narcotics, asleep, or exhausted by his attempts to defend himself; and, thirdly, murder may be committed by hanging when many are combined against the individual."—(Taylor, page 174.) The possibility of one person hanging another during sleep is shown by a case which was tried in Edinburgh in 1827, where "a woman tied a ligature round the neck of her husband while he was asleep, and then pulled him up."—(Watson, page 140.) "With these exceptions, then, the practitioner will be correct in deciding, in a suspected case, in favour of the presumption of suicide," when no marks of violence are present to indicate that a severe struggle has taken place before death, or that severe injuries have been inflicted on the person. For "unless the person" had laboured "under intoxication or great bodily weakness" at the time, it is not to be expected that he would have resigned himself to his fate, and allowed "himself to be murdered without offering" the strongest "resistance."—(Taylor, page 174.)

"The presence of marks of violence, then, on the body of a person hanged is important," and their "situation, extent, and direction" should be accurately studied, determining whether they are such as could only have been produced during life, and also the probability of their being accidental or not. It should be borne in mind that a suicide might have inflicted some injuries on himself with the view of thus taking his own life, and, not succeeding in these attempts, might have finally had recourse to hanging. A case in point occurred here some years ago. A weaver in Gordon-street cut his throat with a razor, and made a large wound, which filled with blood a chamber-pot in his room. After this he went into an outhouse and suspended himself.

A case precisely similar is recorded by Mr. Taylor (page 175). It should also be kept in view that marks of violence on the body of a hanged person may have been the result of accident, as by the party having thrown himself off articles of furniture, or striking against bodies in his vicinity during the last convulsive struggle, or from the fall of the body by the breaking of the rope.

A considerable degree of importance has been attached by several medical writers to the situation, degree of obliquity, and number of turns of the cord around the neck, as diagnostic of the mode of death by hanging. Thus it has been said that "if the mark be *circular*, and placed at the lower part of the neck, it is an equivocal proof of murder."—(Taylor, page 176.) Others, who have not gone the same length, have yet stated that it affords "strong presumption of that crime" when the ligature is found at the lower part of the neck, and its position is circular and not oblique.—(Devergie, vol. ii. page 416). "But it is absurd to suppose that this want of obliquity in the impression" of the cord "can afford any evidence in favour of the act having been *homicidal*. Its form will depend, in a great degree, upon the fact of the body" having been "supported or not, for it is the weight of the body which causes its obliquity. It will also depend on the manner in which the cord is adjusted." Orfila records one case in point, and I shall have an opportunity of adducing two other instances when we come to death by *strangulation*, when this point will be further examined.

"Equally ill-founded is the assertion that the existence of two impressions on the neck—the one circular, the other oblique—affords positive proof of homicide." "One of the first cases reported by Esquirol is that of a female lunatic, who committed suicide by hanging herself, and on whose neck two impressions were seen—the one circular, the other oblique. These appear to have arisen from the circumstance of the cord having been twice passed round the neck, and the body being at the same time partially supported."—(Taylor, pages 176-7).

The presumption is in favour of homicide when the injuries produced by the cord are considerable, such as severe contusion, laceration of muscles, crushing of the larynx or trachea, and fracture of the vertebræ, provided the body is not corpulent and the fall has not been great. In ninety-nine out of every hundred cases of *suicidal suspension* no considerable alteration of the tissues is observed. This is accounted for by the fact that life is speedily extinguished in these cases, and that a very slight weight attached to the ligature suffices to bring on speedy insensibility. Thus, in a person whose body I had an opportunity of examining a few years ago, it was discovered that his toes rested on the ground after death, and the nail by which he had suspended himself was so loosely fixed in the wall that a very small additional weight would have loosened it; indeed, it could not have borne the whole weight of his body.

In another case, which occurred here in gaol, the person had attached his neckcloth to the bars of his window, and when found dead his knees were within an inch or two of the ground, and his toes touching the floor. He had rested his knees on a stool while fixing the ligature, which he had pushed away when all was prepared; and so little struggle had followed that a Bible was found still between his knees as it had been placed there by him before death.

In a third case, in Marischal-street, Aberdeen, a young woman who had been in a despending state for some days was found dead in bed one morning, sitting in a reclining posture with a ligature attached to the top frame of the bed. All that had been required to effect her purpose of suicide had been to lean back after the cord had been fixed. Two young girls who were in bed with her had not been awakened by the transaction, so quietly must it have been effected.

Excepting the impression of the ligature—slight in the first case,—no marks of injury of the neck existed in the above cases. It should not be forgotten, however, that the same absence of the prominent signs of hanging may be wanting in *homicidal cases;* as when the person has been hanged in a state of intoxication or stupefaction, or when from feebleness he has been unable to make resistance or to struggle against his assailants.

"In all doubtful cases" the examiner "should not lose sight of moral and circumstantial evidence." He "should ascertain whether the individual had been previously disposed to commit suicide or not"; he "should observe whether the doors or

windows of the apartment" had been secured on the outside or inside; whether the dress of the deceased was at all torn or discomposed, or the hair dishevelled; lastly, whether the rope or ligature corresponded to the impression seen around the neck. These points fall, it is true, more within the province of the officers of justice than that of the practitioner; but the latter is generally the first who is called to see the deceased, and therefore, unless such facts were noticed by him on his visit, they might "otherwise often remain altogether unknown."—(Taylor, page 178.)

We conclude this subject with a few remarks on the best method of conducting the

Medico-Legal Inspection in Death by Hanging.—Before proceeding to the dissection of the body in cases of this sort, the medical inspector should examine the linen, to discover if any spermatic or other stains be present, which, if found, he should describe in detail.

If *the ligature* has been previously removed it should be asked for and described, comparing it with the impression on the neck, to see if it corresponds or otherwise. If the cord has been allowed to remain around the neck, its position should be accurately studied before it is disturbed. Attention should be then turned to the appearance of the face, whether expressive of suffering or otherwise, whether injected or pale, whether swollen or not: to the mouth, whether there be foam about the lips, or this be wanting: to the tongue, whether it project beyond the teeth, or be drawn back in the mouth; if projecting, whether it has or has not escaped injury from the teeth; its colour, whether natural or injected: and, lastly, to the state of the eyes, whether natural, or staring or projecting. The neck should next be accurately examined, with a view to the appearances already described, such as the groove formed by the ligature, the colour of the borders of the groove, the state of the integuments at the bottom of the furrow, the parchment-like appearance (if present), as also any marks of excoriations or ecchymoses, whether produced by the ligature or by previous manual attempts at strangulation. The depth and extent of the groove should also be noted, as well as its direction on the neck; whether double or single; and any impression which may have been left by the knot. It should also be ascertained if the head is firm on the neck, or is unusually movable on it. The hands should be inspected, to learn the position of the fingers, and the palms, in case of any impression left on them by the nails. The penis should be compressed, to force out any spermatic fluid which may have existed at the extremity of the urethra.

In proceeding to *the dissection*, the chief consideration ought to be directed to the examination of the neck. For this purpose two circular incisions should be made, one an inch *above*, and the other at the same distance *below*, the groove. These should be connected by a third vertical one at the back of the neck, dissecting away the skin from behind forwards. In this way the silvery or dry yellow line in the cellular tissue will come into view, as well as any coagula which may exist in that tissue or in the thickness of the skin. The cellular substance being then carefully removed, the muscles should be exposed one by one, observing if they exhibit the mark of the ligature, or any rent, or clot in their interior. By dividing the superficial muscles at their origin, and dissecting them off from below upwards, the carotid artery may be brought into view, as well as the superficial nerves of the neck; and any injury inflicted on these last will be easily perceived, as also any ecchymoses on the outside of the carotid at the point corresponding with the groove, or any rupture of its inner or middle coats at the same point. The larynx, trachea, and os hyoides should next be examined, to ascertain if these have suffered compression, displacement, or fracture. The examiner should look into the interior of the pharynx, larynx, and trachea, to search for any trace of frothy or bloody mucus which may be discoverable there. The points of importance after these are the distribution of the blood in the heart's cavities and the large vessels; the state of the lungs, stomach, liver, and spleen, as to vascular fulness or the reverse; and the presence or absence of food and drink in the stomach. He should examine the vessels of the head, and the vascularity of the brain. Lastly, he should never neglect the careful dissection of the back of the neck, noting if the muscles are entire, if there be effusion of blood amongst the muscles, ligaments, or bones, and if there be any trace of injury of the ligaments of the vertebræ, fractures of their laminæ or processes, or if the spinal cord has suffered, or if blood has been effused outside or inside its theca.—(Devergie, vol. i. page 277.)

LECTURES ON THROAT DISEASES

(WITH ADDITIONAL NOTES),

DELIVERED AT THE LONDON HOSPITAL MEDICAL COLLEGE DURING THE SUMMER SESSION, 1876.

By MORELL MACKENZIE, M.D. Lond.

(Reported by Dr. Gordon Holmes.)

PARALYSIS OF THE ŒSOPHAGUS.

Gentlemen,—The subject which I have to bring under your notice is one of considerable interest, though fortunately it is not of very common occurrence. It was early recognised by the fathers of medicine, and Galen describes it most aptly as *Gulæ imbecillitas*. In its simple uncomplicated form it belongs to that large class of functional affections which Dr. Marshall Hall first pointed out as being due to the irritation of centripetal nerve-fibres. Dr. Brown-Séquard has further elucidated this difficult line of inquiry by calling attention to the altered condition of the blood, which, alone or in combination with some kind of irritation, gives rise to those varied manifestations of disease having no further entity than appertains to loss or impairment of function.

I shall describe the disease in the systematic manner which I adopted in speaking of cancer of the œsophagus, but I shall take the opportunity of bringing under your notice patients whose cases will make my remarks more objective—and, I hope, more interesting.

Etiology.—Paralysis of the œsophagus may be a local affection, or it may be due to central causes. Local paralysis generally occurs in persons of feeble muscular power; hence we meet it more often among women than men, more often among the old than the young. When due to central disease, it may be one of the symptoms of labio-glosso-pharyngeal paralysis or progressive muscular atrophy, or it may occur in general paralysis of the insane. In fevers the affection is probably due to the general disturbance of the nervous system, the sensibility of the gullet being diminished, and the reflex action of the muscles becoming impossible. This condition is also seen in approaching dissolution. The disease sometimes arises in the course of, or as a sequel to, diphtheria and syphilis, and I have met with two cases in which it was complicated by, and probably due to, lead-poisoning. It has been known to arise from the use of lead gargles.(a) In these cases it is difficult to tell how far the nerves and how far the muscles are implicated. I have seen three cases in which the affection was clearly rheumatic. The dysphagia was in two of them associated with slight articular inflammation, and in the other with sharp muscular pains in the loins. This disease is rarely met with in hysteria, though spasm is so common in that condition.

Symptoms.—When the gullet is paralysed, it is only natural that its essential function should be impaired. Hence dysphagia is the ever-present symptom of the disease. In all cases of paralytic dysphagia the patient endeavours to wash down his food with drink. In *local paralysis*, confined to the œsophagus, the most characteristic symptom is the extreme slowness of the act of deglutition, and an inability to take solids. Liquids generally go down with ease, and there is no salivation. In *central paralysis*, on the other hand, there is constant salivation, and, the sensibility of the larynx being impaired, food often passes down into the larynx, and gives rise to inflammation of the air-passages and lungs. Regurgitation is always absent.

The bougie can be passed without encountering the slightest resistance, and its introduction does not call forth nausea and reflex movements as in health and in most morbid conditions of the tube.

It is from auscultation, however, that the most valuable information is obtained. The normal œsophageal sound is greatly altered or altogether lost, and the whole act is observed to be greatly lengthened. Hamburger points out that the morsel loses its inverted egg form, and assumes a funnel shape. I have never, however, been able to verify this refinement. In extreme cases there is no longer any sound like that of a defined body of fluid passing downwards, and all that is heard is the rush of a long and more or less thin stream. This downward rush will be much more audible if the pharynx does not participate in the lesion, the bolus being then thrust with greater force into the œsophagus; and, on listening

(a) "Dict. de Médecine," Velpeau, 1840, vol. xxi.

with the free ear, there will be heard what has been designated as "deglutitio senora." If the pharynx be paralysed, there will be wanting the loud gurgle, or glou-glou, which is heard here in health, but the œsophageal sound will be stronger.

In local paralysis the patient is generally weak and often thin, sometimes extremely emaciated; in central paralysis the patient is feeble and depressed, but emaciation is not a marked symptom. These, however, are differences in degree which depend on the intensity rather than on the course of the disease.

The course and termination of the disease vary according to its nature. In pure local paralysis the progress is generally very slow, and I have known cases remain almost *in statu quo* for fifteen or twenty years. But both in paralysis and spasm the long-continued use of liquids ultimately leads to a gradual contraction of the whole œsophagus, and probably of the whole gastro-intestinal canal. The isthmus faucium generally can be seen to be narrowed, and I have at present a patient under my care whose mouth has become so reduced in size that it only measures one inch and an eighth in length, and a quarter of an inch in width, when widely opened. This patient has suffered for sixteen years, and for the last five years has lived entirely on corn flour and tea, with a little beef-tea once a week. At night she takes two or three teaspoonfuls of whisky-and-water. This patient requires half an hour to swallow a small teacupful of corn flour. This, however, is a very extreme case. Commonly it is only the gullet which suffers. When the affection is one of the many phenomena of bulbar paralysis, the dysphagia generally increases in spite of all treatment, and is one of the conditions which hasten the fatal issue.

Diagnosis.—It is most important to distinguish between paralysis and spasm. In the former the dysphagia is constant; in the latter it varies. In paralysis there is no regurgitation; in spasm it is often very marked. The auscultatory signs are also quite different; for whilst in paralysis we hear only a confused gurgling noise, in spasm we have the sharp click, sometimes in one part and sometimes in another. Again, whilst paralysis more frequently affects the old and feeble, spasm is more often met with in the case of the young and hysterical. Cancer, like paralysis, is a disease which occurs in the decline of life, but the comparatively rapid progress of malignant disease soon sets the question of diagnosis at rest. In the early stages of paralysis, the very slow, almost imperceptible, inception of the dysphagia is very characteristic; whilst in cancer the outbreak of the symptoms is comparatively sudden. A bougie can always be passed in cases of paralysis, but where the disease is of very long standing it may not be possible to pass a large instrument on account of general contraction of the gullet. In the later stages of malignant disease the much greater degree of dysphagia and the invariable salivation serve to distinguish it from paralysis. In the early stages of paralysis it is not always easy to distinguish between local and central disease, but a careful examination of the muscles receiving their nerve-supply from the trunks which take origin from the medulla and upper spinal region will generally set the question at rest. Salivation is also soon established in all cases of central paralysis, whilst it is never present in uncomplicated local paralysis.

Pathology.—In local paralysis the disease may consist of simple atrophy of the constrictor muscles—in some cases, probably, amounting to fatty degeneration. It need scarcely be remarked that when food enters the œsophagus it does not descend by simple gravitation, but is grasped by successive portions of the gullet and forced downwards. Hence any weakness of the muscles gives rise to proportionate loss of power, and a corresponding amount of dysphagia. In central disease (using the term in a general sense in contradistinction to simple muscular weakness) the morbid condition may consist in some abnormality of the trunks or branches of the vagus and its accessory nerve—such as may be produced by the pressure of a tumour, or by lead-poisoning; or there may be some change at the roots of the vagus in the medulla oblongata, or in the upper part of the spinal cord—the result of hæmorrhage, growth, sclerosis, or some minute alteration inappreciable by our present methods of research. Montant(b) mentions a case in which the symptoms were caused by a hydatid at the base of the brain.

Prognosis.—This of course depends on whether the disease be local or central. In the simple local paralysis due to muscular weakness the prognosis is always favourable. Long-standing cases can generally be benefited, and those of shorter duration can be cured. The condition, however, by increasing the debility which itself is the cause of the disease, often reduces the patient so much that she is apt to succumb to a slight inflammatory attack of an internal organ, from which a stronger person would easily recover. In cases of diphtheria, lead-poisoning, and rheumatism the prognosis is very favourable; but when the œsophageal paralysis is the result of progressive muscular atrophy, general paralysis of the insane, or labio-glosso-pharyngeal paralysis, the prospect must always be most unfavourable.

Treatment.—In the graver forms of paralysis, of the progressive character, little can be done in the way of treatment, but in the simple local cases a cure can generally be effected with perseverance. Attention must be paid to the general health. Nervine tonics, such as strychnia, ergotine, and atropine, are often of advantage. Iron is also frequently beneficial. The patient requires a nourishing and stimulating diet, and should be advised to commence each meat meal with a glass of wine, port or sherry. In the same way condiments should always be freely taken. The patient should be encouraged as far as possible to eat solids, and not to masticate too finely. The coarser and more piquant kinds of food are more likely to stimulate the constrictors to reflex action, whilst soft insipid food has the opposite effect. With the same object in view, a benzoic acid lozenge of the Throat Hospital Pharmacopœia taken five minutes before eating will often prove most serviceable. The most important treatment, however, consists in faradism.

The positive pole being placed by means of the necklet in contact with the spinous processes of the upper cervical vertebræ, the negative pole is applied to the interior of the œsophagus by means of the œsophageal rheophore. This instrument should be used at least daily; if possible, several times in the day—that is, before each meal. On each occasion the rheophore should be introduced three or four times, and retained *in situ* a few seconds whilst a succession of shocks are passed. The treatment generally requires to be continued for several weeks, but after the first week or two the applications need not be made so often. In the case of glosso-pharyngeal paralysis the nutrition and power of the muscles of deglutition may to some extent be retained by electricity. Here I generally employ both faradism and galvanism. Monro(c) has reported some cases in which external electricity has been found serviceable; and the same author mentions a remarkable instance of a man who for eighteen years pushed his food down the gullet with a whalebone style. Baster de Zélande(d has also recorded a case in which a girl, who for fourteen months had pushed her food down in this way, ultimately recovered her power of swallowing.

These cases furnish an indication for valuable palliative treatment when more radical measures fail. Before dismissing the subject I may remark that a few cases of what may be called acute paralysis of the œsophagus are to be found in medical literature. I have never met with any such cases but from the details of those reported I imagine that a simple expectant method would have resulted in cure. Desault(e) relates a case of a man whom he cured by feeding with a tube; and Sédillot(f) mentions an instance of a young woman whose power of swallowing was completely restored by blisters to the neck, ammonia liniment, and gargling and swallowing mustard-and-water.

(b) *Ibid.*

(c) "De Dysphagia," Monro. Edinburgh, 1797.
(d) "Obs. rares de Méd.," trad. par Planqué, t. ii., p. 269.
(e) "Œuvres Chirurg.," Paris, 1801, t. ii., p. 291.
(f) "Recueil Period.," t. xl., p. 181.

Population of Italy in 1875.—The total number of *births* in 1875 was 1,035,377, of which 533,511 were boys and 501,866 girls. Of the 533,511 boys, 496,758 were legitimate, 22,483 illegitimate, and 14,270 "exposed." Of the 501,866 girls, 466,566 were legitimate, 21,159 illegitimate, and 14,141 "exposed." The *deaths* amounted to 843,161, of which 431,756 were males and 411,405 females. Of the males, 294,765 were celibates and 95,011 married; and of the females, 261,141 were celibates and 70,862 married. There were 29,830 infants born dead, viz., 16,917 males and 12,913 females: 15,419 of the former were legitimate and 1210 illegitimate; and 11,695 of the latter were legitimate, 956 illegitimate, and 262 "exposed." The excess of the births over the deaths during the year was 192,416. In December, 1875, the population of Italy amounted to 27,482,174.—*Union Méd.*, November 11.

ORIGINAL COMMUNICATIONS.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
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(*Continued from page* 539.)

I now proceed to discuss the following questions:—

I. Is the proportion in which nervous diseases occur a steady one, and subject to certain definite laws, to which there are not any, or only apparent, exceptions; or does it vary perceptibly from time to time?

II. What rank do these diseases occupy amongst the more destructive maladies to which mankind is subject?

III. Do the *several* diseases of the nervous system bear a certain definite proportion to the sum total of these maladies, or are they subject to considerable fluctuations? and have, in particular, paralysis and insanity, as is commonly asserted, increased perceptibly within the last decennia?

IV. Are nervous diseases more frequent in large towns than in the country; and is there any influence of race or climate?

V. Has sex any influence on the mortality from nervous diseases?

VI. Are the production and fatality of nervous diseases perceptibly influenced by age?

VII. What is the proportion of deaths from delirium tremens in the different counties of England and Wales?

I. *Is the proportion in which nervous diseases occur a steady one, and subject to certain definite laws, to which there are not any, or only apparent, exceptions; or does it vary perceptibly from time to time?*

TABLE I.

Showing the Deaths from Nervous Diseases in England and Wales, and their proportion to Population and General Mortality.

	Deaths from Nervous Diseases.	Population.	Death rate of N.D. in 10,000.	Deaths from all Causes.	Percentage.
1838-42	209,923	78,601,866	26	1,734,561	12·10
1843-46	Vacat.	...	...	...	...
1847 51	239,881	87,773,002	27	2,025,647	11·84
1852-56	258,221	93,085,296	28	2,082,346	12·40
1857-61	271,997	98,436,535	27	2,168,087	12·54
1862-66	293,175	103,863,878	28	2,397,532	12·23
1867-71	308,900	110,232,620	28	2,476,733	12·48

Mean Percentage of six Lustra 12·26.

The answer to this question is given by Table I., which shows at a glance the deaths that have been registered in England and Wales from 1838 to 1871, with the exception of the four years from 1843 to 1846, for which there is no information.

The number of years actually noted amounts therefore to thirty, which I have tabulated, not singly, which might have been confusing, but by periods of five years, or lustra, which affords a clearer and easier survey over the whole. Side by side with the numbers of deaths which took place from nervous diseases during these six lustra, I have placed the numbers of the population of the kingdom, and the general mortality from all causes during the same period; for if only the deaths from nervous maladies had been tabulated, an erroneous impression that they had considerably increased might have been conveyed. Indeed, the table shows that in the first lustrum above 200,000, and in the last above 300,000, deaths occurred from these diseases; and that during the intervening lustra a steady and gradual rise in the numbers had taken place. But an actual increase of such mortality could only be taken as proved thereby if the population of the country had remained stationary during that period.

It is well known that the population of France has remained more or less stationary for a number of years past; but in this country the number of inhabitants has steadily risen, there having been in 1871 seven millions more people than there were in 1838. It was therefore necessary to calculate the death-rate for nervous diseases according to the numbers of inhabitants; and Table I. shows that this has varied from 26 to 28 for 10,000 people during six lustra, which gives a tolerably steady rate at which nervous diseases prove fatal to the English nation. Such a mode of calculation, however, does not give such accurate results as may be obtained if we compare the mortality from nervous diseases with the general mortality from all causes, as is done in the further portions of the table.

A census takes place only once in every ten years, and the population of the intervening years has therefore to be found by computation, which can never be absolutely correct. Computation cannot, for instance, take into proper account the incidental agencies of emigration and immigration, which we know to be liable to considerable fluctuations, as they are greatly dependent upon certain political and social circumstances, which, in the nature of things, are constantly changing.

If, on the contrary, we compare the deaths from nervous diseases with the deaths from all causes, we deal only with a number of separate facts, each of which has been definitely ascertained, and from which computation is altogether excluded. It is therefore evident that this latter mode of calculation offers considerable advantages over the former one.

Now, the percentages registered on Table I. are seen to be remarkably steady and uniform, the mean average for thirty years being 12·26, and the greatest discrepancy from the mean being 0·42—that is, less than one-half per cent. for six lustra. These numbers show that the proportion in which nervous diseases prove destructive of human life is a very definite one, and subject to a certain law from which there are not any, or

only apparent, deviations. Admitting that there is such a law, we could not expect that the proportion of deaths from these complaints should be absolutely identical from one lustrum to another in twenty millions of people, because there is always a variety of modifying influences at work which have to be taken into consideration. In a nation which peoples almost all the habitable regions of the globe, and is, as it were, constantly on the move, both outward and homeward, the habitual operation of such a law must always to some slight extent be interfered with. Thus, men suffering from nervous diseases come home from the colonies either for medical advice or from a wish to die in their native land; or they leave this country in search of health abroad, where perhaps they find a grave.

Again, zymotic diseases, which occur not at a steady rate, but in waves, interfere with the operation of this law, inasmuch as they carry off persons who might, but for their intercession, have died of nervous diseases, and, according to their degree of intensity, either swell or reduce the entire mortality of the period. A remarkable instance of this is given by the cholera epidemic of 1849, which altered for that year the habitual death-rate of all other diseases, and particularly that of nervous maladies. In that year the habitual death-rate from these complaints reached an absolute minimum of 10·80, while it was 11·64 in the year before, and 12·88 in the year after. This interference of Asiatic cholera in 1849 has caused the death-rate of the second lustrum of the table to be the lowest of all: and but for this accidental disturbance the mortality from nervous diseases would have shown even greater uniformity than is actually the case; for if we leave out the second lustrum as an abnormal one, the mean average for the remaining five becomes 12·35, and the greatest discrepancy from the mean is reduced from 0·42 to 0·25 per cent.

A final reason why the proportion of deaths from nervous diseases must vary to a slight extent is the vicissitudes of registration. Even if we allow for a high degree of skilled diagnosis and conscientiousness in filling up the certificates on the part of the medical practitioners of the country, there may, in a number of cases, be different views as to the complaint which actually gave rise to death. Thus, paralysis is not unfrequently complicated with Bright's disease and dropsy; and one practitioner might register the former, and another the latter, as the cause of death. Bronchitis will sometimes carry off persons after an attack of cerebral hæmorrhage, and either one or the other of these complaints may then be registered. I have already mentioned that there is reason to believe that during the first few years in which registration of the causes of death took place, such vicissitudes have been particularly active; and it is an interesting circumstance that if we leave out not only the second lustrum on account of its having been disturbed by cholera, but also the first for faults in registration, the death-rate for nervous diseases becomes still more uniform, as for the twenty years from 1852 to 1871 the greatest discrepancy is found to be only 0·18, instead of 0·25 for five, and 0·42 for the six lustra. After taking into account the influence of these and other circumstances combined, it becomes quite evident that slight variations in the registered mortality from nervous affections cannot alter the general law, which decrees that a certain definite proportion of the population of the kingdom—viz., about 12 per cent. of those who die—is annually cut off by nervous diseases.

The common assertion, that nervous diseases have considerably increased during the last decennia, is therefore shown to be incorrect.

II. The second question which I have brought forward is this:—*What rank do nervous diseases occupy amongst the more destructive distempers to which mankind is liable?*

TABLE II.

Showing the Comparative Mortality from Zymotic, Tubercular, Nervous and Respiratory Diseases.

	Zymotic Diseases.	Per-centage.	Tubercular Diseases.	Per-centage.	Nervous Diseases.	Per-centage.	Respiratory Diseases.	Per-centage.
1838-42	347,158	20·04	347,738	20 C8	209,923	12·10	148,084	8·54
1843-46	Vacat.	...	...	...	...	...	...	...
1847-51	498,532	24·63	313,651	15·50	239,881	11·84	233,045	11·50
1852-56	454,231	21·85	335,275	16·10	258,221	12·40	272,970	13·15
1857-61	471,865	21·80	331,181	15·29	271,997	12·54	316,407	14·59
1862-66	560,015	23·36	347,611	14·51	293,175	12·23	357,422	14·92
1867-71	562,487	22·72	350,719	14·16	308,900	12·48	379,694	15·33
Mean Percentage of six Lustra . . .		22·90		15 94		12 26		13·00

The answer to this is given by Table II., which shows the numbers of the population that have been carried off during six lustra by the four most important classes of maladies which appear in the Registrar-General's Reports, viz., zymotic, tubercular, nervous, and respiratory diseases. All the other classes—viz., old age, diseases of the organs of digestion, circulation, locomotion, and integumentary system, child-birth, premature birth and debility, atrophy, diseases of the genito-urinary organs, and external causes—furnish much lower quota to the general mortality, and it therefore did not appear to me worth while to include them in the list.

Table II. shows that *zymotic diseases*, under which head the Registrar-General comprises the eruptive fevers, whooping-cough, croup, thrush, diarrhœa, dysentery and cholera influenza, purpura and scurvy, ague, remittent and infantile fevers, typhus, typhoid, puerperal, and rheumatic fevers, erysipelas, syphilis, noma, and hydrophobia, rank first amongst the agencies destructive of human life, and that their fatality is subject to considerable fluctuations. The highest point was reached in 1849, when Asiatic cholera ravaged these shores. The number of deaths from these diseases amounted to 137,769 in that year, and they contributed not less than 30 per cent. to the general mortality. The mortality of the entire second lustrum amounted to 21·63, and this proportion

has never again been attained. The mean average of the mortality from zymotic diseases for six lustra is seen to be 22·90—that is, more than 10 per cent. higher than that for nervous diseases.

The next great class—viz., *tubercular affections*—comprise in the Registrar-General's Reports scrofula, tabes mesenterica, phthisis, and hydrocephalus. The mortality from these distempers has not been nearly so steady as that from nervous diseases, for they are seen to have considerably diminished of late years. The difference between the first and second lustrum is indeed so great that the question arises whether difference of registration may not have caused it, and whether certain affections of the respiratory organs were not, when registration was first commenced, put down as tubercular, while they were later on registered under the heading of respiratory diseases. This supposition derives considerable support from the circumstance that a rise, almost approaching in suddenness to the fall of tubercular diseases, is seen to have taken place from the first to the second lustrum in the class of respiratory diseases. Nevertheless, it is quite evident from the table that tubercular affections have steadily decreased of late years; and this is probably in a great measure owing to the increased prosperity of the nation, and perhaps also to some extent to improved modes of treating these diseases. Tubercular affections are less destructive than the zymotic, the mean being 15·94 against 22·90; but more so than nervous diseases, the mean of which is 12·26.

Diseases of the respiratory organs are seen to be decidedly on the increase, even if we allow a certain margin for difference in registration; and as amongst these diseases bronchitis has particularly increased, the great rise of the manufacturing industry in the country has probably been the cause of it. Bronchitis is chiefly produced by the inhalation of mechanical irritants contained in the atmosphere; and while new manufactures are constantly springing up, only little has been done to remedy the evils of smoky towns, dusty workshops, and badly-ventilated mines. Thus it has come to pass that, while in the first lustrum respiratory diseases occupied the fourth place amongst destructive distempers, they have in the present time risen to the second rank, the percentage of the last lustrum being 15·33, against 14·16 for tubercular, and 12·48 for nervous affections.

Diseases of the nervous system are therefore seen to occupy the fourth rank amongst the maladies destructive of human life.

(To be continued.)

CASE OF TRIPLETS WITH A FOURTH (BLIGHTED) FŒTUS.

By DAVID EDGAR FLINN, L.K. & Q.C.P.I., L.R.C.S.I.

The following case has occurred in my practice during the past week, and, as it may be interesting to the profession, or some compiler of obstetric memoranda, I beg you will kindly allow it to appear in your journal.

About 9 a.m. on the morning of August 25 I was summoned to attend the wife of a collier in the village of Brownhills. About an hour and a half after my arrival at the house she was delivered of a full-grown male child, the presentation of which was "breech." Some twenty minutes or more after its expulsion I made an examination, and found, on running my finger along the cord, a large rounded tense mass, which proved to be the membranes of another fœtus. I waited for some time to see if the uterus would resume its action. After the expiration of about two hours I decided on rupturing the membranes, and in twenty-five minutes afterwards a second male child, considerably smaller than the first, was born; this presentation was "pedal." Upon placing my hand on the abdomen after this second birth, I found the uterus very little reduced in size. I made another examination, and found the membranes of a third fœtus presenting. These I speedily ruptured, and another fully developed male child (the largest of the three) was immediately born. This presentation was also "breech." In about ten minutes after the expulsion of the third child the patient had a strong labour pain, and a fœtus (presumably about three or four months) was expelled. There were two placentæ, and on examining them I found that the cords of the second and third children, as well as that of the blighted fœtus, were attached to one placenta, and that of the first to the other placenta.

The mother (who is about thirty-two years of age, and who, strange to say, has twice been delivered of twins) and the three infant male children are doing well.

Brownhills, Staffordshire.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NATIONAL HOSPITAL FOR EPILEPTIC AND PARALYSED.

CARIES OF DORSAL SPINE—PARAPLEGIA—DEATH—POST-MORTEM.

(Under the care of Dr. RAMSKILL.)

[For notes of this case we are indebted to Dr. W. A. Sturge, Resident Medical Officer.]

We reported on November 4 a case of recovery from paraplegia with dorsal spine disease, under the care of Dr. Gowers. The following case, also of paraplegia and caries of the spine, is of great value on account of the information afforded by the post-mortem of the manner in which paraplegia is produced in such conditions. This case illustrates in so many ways M. Charcot's views on slow compression of the spinal cord, that we have prefaced it by a summary of his principal conclusions(a) in so far as they relate to caries of the spine. M. Charcot shows that the affection of the spinal cord cannot depend simply on the direct pressure of the displaced vertebræ for three reasons:—1. The paraplegia may entirely disappear, whilst the angular curvature remains identically the same. (*Vide* Dr. Gowers' case, November 4.) 2. Paraplegia may occur in Pott's disease without the least trace of deformity. (*Vide* early history of succeeding case.) 3. There may be extreme angular curvature without any affection whatever of the spinal cord. The usual mode by which pressure is affected, according to Michaud's researches, which are quoted by Charcot, is as follows:—A caseous abscess having formed between and around any given carious vertebræ, ulcerates through the posterior vertebral ligament. At length the pus comes into contact with the anterior surface of the dura mater, which subsequently inflames in its own peculiar way. An external caseous pachymeningitis is set up, in which the outer layers of the dura mater vegetate and proliferate, whilst the middle and inner layers remain often quite free. The inflammatory products dissolve these superficial layers, and, preserving a certain cohesion, ultimately form a fungoid mass which is really the agent of the compression. Inflammation is propagated in the dura mater from before backwards, but it is rare that this fungoid mass forms a complete ring round the cord. The effects of slow compression on the cord are summarised as transverse myelitis with ascending and descending sclerosis.

C. K., aged seventeen, was admitted into the National Hospital for Paralysis and Epilepsy on October 13, 1876. There was nothing noteworthy in the family history—no history of consumption. He has several brothers and sisters living and healthy, one only having died in early childhood. Patient worked as a sorter in the Post-office, and was in good health till eighteen months before admission, when his present illness began. He is said to have caught cold by bathing in cold weather while he was hot, and the very same day he complained of numbness in the legs and a sensation like cramp. From this time the legs became gradually weak and the numbness increased; and by last Christmas he was unable to stand, and could not feel the prick of a pin in the legs. His mother first noticed that the back was curved about five months after the onset of the paralysis. He has not at any time complained of pain in the spine, but has had a feeling "as though his bones were pressing into his lungs."

On admission, patient is intensely emaciated and anæmic. The emaciation is seen everywhere, but appears to be most marked in the legs, where there is little but the bones and the skin covering them—the greatest circumference of his calves being only six inches and a half. There is a curvature in the upper and middle dorsal regions of the spine, involving about seven or eight vertebræ. There is moderate excurvation, but

(a) Charcot, "Leçons sur les Maladies des Système Nerveux." Deuxième fascicule: "De la Compression lente de la Moelle Epinière."

very marked lateral deviation, the convexity being to the left. Patient has almost completely lost power over the legs; he is quite unable to stand, but can draw the legs up in bed. Sensation appears to be entirely lost, but the boy's mental condition is so dull that it is difficult to test him with accuracy. No increase of reflex action; electric irritability of muscles retained. Complete loss of control over bowels and bladder; motions and urine passed in the bed; no retention. Urine clear, free from albumen. The other organs of his body are apparently healthy. There is a bedsore—probably from neglect—over the centre of the spinal column, through which the spines of the ninth and tenth dorsal vertebræ protrude.

After admission the patient gradually became weaker. The temperature varied between 99° and 102°, the pulse being very rapid—from 130 to 160 per minute; but there was no fresh noteworthy symptom, and he died on October 28, apparently from exhaustion.

Post-Mortem, twenty-seven hours after Death.—On removing the integuments over the spinal column, the spine and arch of the ninth dorsal vertebra were found to be surrounded by a caseous mass, the bone being bare and carious beneath. There are two antero-posterior curves in the dorsal region—the angle of one corresponding to the sixth, and of the other to the tenth dorsal vertebra, the part between being straight,—whilst the whole dorsal region forms a lateral curve convex to the left, there being a corresponding lateral curve with convexity to the right in the lumbar region. On opening the canal there is no evidence of direct pressure from bone, but there is opposite the ninth spine a quantity of hard inflammatory material. This ceases above the level of the ninth vertebra, but from the upper border of the seventh to as high as the second dorsal vertebra the cord is again invested by it. The material is greyish-yellow, and is firmly adherent to the dura mater on one side and to the osseous canal on the other. It is thicker and extends further along the cord anteriorly than posteriorly. On opening the dura mater a large quantity of turbid fluid escaped. After the cord had been removed there was found to be a considerable projection of the body of the tenth dorsal vertebra backwards, whilst that of the ninth was depressed. The bodies of the vertebræ from the eighth to the twelfth were covered with cheesy matter, some of which adhered to the cord after it was removed, and beneath this the vertebræ were found carious and exposed, the posterior ligament having given way. After the thorax had been opened and the organs removed, a large collection of creamy pus was found lying in front and at the sides of the vertebral column. The pus was contained in a sac with a very thick and tough wall, which effectually separated it from the thoracic viscera. The sac extended from the fourth to the tenth dorsal vertebra. Fronts of vertebræ extremely carious; several small loose pieces of bone. Many intervertebral discs destroyed. On examining the cord, the dura mater was found unduly adherent to pia mater at the part where along the outer surface there had been found the inflammatory deposit. The cord on section was found to be pulpy opposite the seat of the inflammatory deposit, and below this the white matter was soft and the grey substance unduly red.

Remarks.—It is common enough for cases of Pott's disease to be brought to a hospital with no sign except excurvation of the spine. In such cases, if the mothers' accounts are to be believed, there have been no symptoms to indicate the existence of what must have been extensive and long-continued disease of the vertebræ. In the case now reported the first recorded symptom was paraplegia after bathing; but, although excurvation was not noticed till five months afterwards, we are justified in believing that at the time of the onset of the paraplegia there was disease of the vertebræ. It is quite certain that the paraplegia did not result from the pressure by displaced bones; for even at the post-mortem eighteen months afterwards this was clear. It is probable that the onset of the paraplegia was due to an acute inflammatory extension from the bones and ligaments to the cord and its membranes, determined by the chill taken in bathing. If the mechanism of the production of the paralysis had been only that described by M. Charcot, then the motor symptoms would have preceded the sensory by a long interval—the usual case. In the patient, C. K., there was impaired sensation—*i.e.*, damage to grey matter—from the first. Hence at the onset there was probably acute congestion of the cord in the dorsal region. But the post-mortem showed that sooner or later the conditions described by M. Charcot had occurred: caseous pachymeningitis had led to gradual compression of the cord. It is worthy of note that this patient, in spite of having a large collection of caseous pus, did not become infected with general tuberculosis.

WESTMINSTER HOSPITAL.

ŒDEMA GLOTTIDIS FROM DRINKING BOILING WATER—TRACHEOTOMY—RECOVERY.

(Under the care of Dr. FINCHAM.)

[For notes of this case we are indebted to Mr. Howard Cane, L.R.C.P., House-Physician.]

James M., a healthy boy, aged five, was admitted into Westminster Hospital on September 30, at 3.30 p.m. Two hours before, he had sucked some boiling water from the kettle on the hob.

On admission, the boy's lips were blanched and blistered, his tongue was swollen, and the uvula and tonsils were also swollen—the former looking watery and semi-transparent from the exudation of serum into its tissues. At that time his breathing was tranquil, but it gradually became stridulous. By 7.30 it was markedly so, and there was then retraction of the lower regions of the thorax and decided dyspnœa. At eight o'clock he had a sudden accession of dyspnœa. He jumped up, grasped his neck, gasped for breath, and became quite tallowy in colour. In this emergency tracheotomy was immediately called for, and as there was no time to send for the surgeon, the operation was performed by Mr. Cane. Boy chloroformed. Incision about two inches. Isthmus of thyroid probably divided. Spouting from one small artery secured by bull-dog forceps; subsequently the vessel twisted, and gave no trouble. There was also very slight venous bleeding, but nothing which required ligature. Bivalve tube used, and a fenestrated inner tube. The boy's distress was immediately relieved. He was placed in a separate ward; a blanket awning was placed over the upper part of his bed, and vigorous steaming was kept up. He slept well. Some frothy mucus escaped from the tube during the night.

October 1.—Respiration natural. Frothy mucus still escapes from the tube. Temperature 101°; pulse 120. He has swallowed some iced milk and sucked a little ice. Tongue and fauces not so swollen as yesterday.

2nd.—Tracheal wound satisfactory. Tongue less swollen. Large white patches of shedding epithelium appearing on it. Temperature, morning 100·2°, evening 100·5°. Has had one ounce of brandy in twenty-four hours, in addition to iced milk and beef-tea.

3rd.—Whilst the inner tube was removed for cleansing, and some fresh tapes were about to be applied to the bivalve outer tube, the latter was suddenly coughed out, and the boy had severe dyspnœa. Quiet again after reintroduction.

10th.—Tracheal wound, etc., satisfactory. Tube corked to-day for the first time. There was a little noise, but no distress and no recession. For the last three days temperature has been 99°. Boy's tongue and fauces are quite healthy now; he is looking pale and wasted, though he continues to take his food well. Steaming continued, but curtain removed.

14th.—Tube finally removed.

From this time the boy became rapidly convalescent. The external and tracheal wounds healed without any trouble.

Remarks.—From the swelling of the fauces and the destruction of epithelium of the tongue, there is no reason to doubt that the boy did get some hot water into the back of his mouth. The strider and dyspnœa, which were very carefully watched for, and which became marked five hours after the accident, were probably due to œdema of the arytæno-epiglottidean folds. This œdema might have been caused by extension from that of the fauces; but, coming on so soon, was more likely due to contact of hot water actually swallowed. It is instructive to notice that at no period in this case was any membranous exudation formed. Mr. R. W. Parker has shown (a) in a summary of such cases that membranous exudation is by no means a common phenomenon in scalds of the glottis; and he has raised the question whether the occurrence of membrane is not due to the entrance of the specific diphtheritic poison over and above the inflammation following the scald. The boy's life was doubtless saved by the promptitude with which tracheotomy was performed. With a mechanical

(a) Clinical Society: "Scald of the Glottis with Membranous Exudation." 1875.

obstruction—which, practically, this amounted to—emetics would have been perfectly useless; and probably leeches, scarification, and ice-bags to the neck, would have been inadequate. The operation showed what surgeons are now familiar with—that the fear of cutting through the isthmus of the thyroid is a bugbear. The result was so satisfactory that it seems almost ungracious to ask whether the tube could not have been removed sooner, and so prevent the risk (especially with a bivalve) of ulceration of the trachea. The question of vigorous steaming is still a disputed point in the after-treatment of tracheotomy. Sir William Jenner believes in gently steaming the room, but not steaming the bed. It is certain that tracheotomy cases have made capital recoveries without any steaming at all, especially where there has been no membranous exudation. But if there is membrane formed, steaming probably promotes a mucous discharge, and facilitates the removal of the membrane

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Medical Times and Gazette.

SATURDAY, NOVEMBER 18, 1876.

THE GLASGOW AND ABERDEEN ELECTION.

Before going to press last week this contest had to all intents and purposes been settled; but as we were wishful not to raise hopes which might still be possibly blighted, we refrained from mentioning the subject. On Friday the poll officially closed at four o'clock, though before that time both parties had practically exhausted the voting-papers they had to tender. In fact, so far as Mr. Kirkwood was concerned, the election in Aberdeen was finished long before, but in Glasgow the contest was much more close. We should be the last to say a word against the claims of Mr. Kirkwood as a candidate for the University of Glasgow provided the members of that University chose to adopt him. According to his partisans—and we are not inclined to dispute their assertions—Mr. Kirkwood deserved a seat as a recompense for his services to the University of Glasgow. But to recompense a man at your own cost, and at that of your neighbour, are two very different things. As we pointed out some time ago, it was not a wise act to bring forward a man too intimately connected with one university, inasmuch as this was likely to excite rancour in the minds of the members of another university whose interests were not identical with those of the university to which the candidate belonged. Again, as we pointed out, for a man to come before a university constituency with a purely political programme was decidedly unwise. Mr. Kirkwood, all through his electoral campaign, seems to have laboured under the disadvantage of ill-health. Apparently this prevented him from personally making those statements of his views as regards medical matters which were omitted from his address. When drawn out of him by correspondents, his statements of opinion were made with a bad grace; and as a natural consequence of all this, the medical vote has been almost dead against Mr. Kirkwood, and in favour of Mr. Watson. We have said that Mr. Kirkwood's ill-health was a disadvantage to him, but if we are to believe certain reports this was hardly the case. Certainly his appearance in Aberdeen did not do his cause much good, and through that speech alone, if many votes were not lost to him, it was because many men voted strictly for their party, irrespective of personal feeling. Nor was it on the part of Mr. Kirkwood alone that mistakes were made. The account given in a Glasgow newspaper of a speech made by one of his adherents as to the manner in which Mr. Kirkwood's candidature came about was naïve in the extreme. This gentleman, if we are rightly informed—and we lie open to correction,—told how the Liberals sought high and sought low for a suitable candidate, but could find none, until, at last, Mr. Kirkwood proposed of his own accord to contest the seat. How this contest was carried on we will not say, but it will give some indication of the thorough organisation of the Liberal party when we mention that in some instances their communications were persistently sent to addresses which would have been correct ten years ago, but which a look at any directory would have shown to be altogether incorrect at the present date.

But all these bungling manœuvres will not account for a majority of upwards of 600 on the side of Mr. Watson in a constituency of about 5000, many of whom are absent from the country, and consequently are non-voters. There is something deeper and stronger than all this, and we believe it is in great part political feeling. This is the first great election which has taken place since the Turkish Atrocity agitation, and many men we know took a far keener interest in the election on account of their desire to support the Government than they otherwise would have done. The constituency consists of men who have had a university education—men who are not likely to be carried away by mere clamour, but who are capable of judging for themselves. Their opinion does not represent the opinions of a small localised community, but is that of men dwelling throughout the length and breadth of the land. It is in this way that the return of Mr. Watson is not only a matter for congratulation to himself, but also to the Government, of which he is a member.

SKILLED NURSING FOR THE SICK POOR.

The out-patient practice of our large metropolitan hospitals is every year becoming more and more extensive. This is, no doubt, due to the great care, skill, and attention which are brought to bear on those who flock to the out-patient departments for help: aspirants to the higher appointments of our hospitals here find a congenial field of observation, and, prompted strongly by their humanity, and partly by the desire to let nothing "good" slip them, they go into their cases and follow them up with an assiduity which was in former years almost unknown. Now, as the surgeons and physicians who see these out-patients have for the most part had, with more or less responsibility, the care of some in-patients, and at all events have opportunities for observing

the in-patients under their senior colleagues, they involuntarily contrast the condition of the one class with that of the other. In the hospital all is quiet, clean, and cheerful: the patients are looked after by skilled and careful nurses, who do their work well, because it is not only a duty, but at the same time a congenial occupation and a pleasure. Outside there is neither order, quiet, cleanliness, nor skill; and those instructions, the carrying out of which is often essential to the successful issue of a disease, are only too frequently neglected, from either sheer ignorance or unconscious indifference. Hence a growing feeling that something ought to be done in this direction. This feeling is not in any way confined to the medical staffs of the hospitals, thought it no doubt originated indirectly from them. Moreover, there was formerly a feeling, not indeed of antagonism, but of distrust and want of confidence, between the medical and the nursing staffs, which, thanks to the better organisation and higher training of the latter, has now entirely passed away. It is, very largely at least, through the clearing away of these early difficulties that the nursing of hospitals by sisterhoods has come to be so generally adopted; and it is the direct result of these improvements that attempts are now successfully being made to nurse out-patients. The task is, no doubt, a very large and a very difficult one. There are yet many prejudices to overcome, and it may be found that they are not altogether confined to the patients. There are old practitioners who have "got on" without such help for years past, who would most certainly resent *any* and *every* interference. These difficulties have all been foreseen by those who have favoured a movement of late set on foot for the purpose of establishing a nursing association. We have been led to the preceding remarks by the perusal of the "First Annual Report of the Metropolitan and National Nursing Association,"(a) which was sent to us a short time ago. The Association is the outcome of the feeling, to which we have referred, that something ought to be done for the sick poor in their own homes. It has for its object the training of nurses, whose duty shall be to visit from house to house, and perform such offices as they can; to see, moreover, that the orders and instructions of the medical attendant are properly carried out. They will not take the place, in any degree, of the medical man, but will co-operate with him, and work essentially under his instructions. The plan of the work is, in fact, as follows:—"The Superintendent, personally or through the Secretary, puts herself into communication with the parish doctor and other medical men practising among the poor, and residing within a reasonable distance, the Poor-law authorities, the clergy, district visitors, sisterhoods, Bible-readers, and mission women, as well as with the Charity Organisation Society, the Society for the Relief of Distress, and other persons and societies working among the poor. Applications for nursing service, when received at the Home, are at once entered in a register; and in the first instance, if possible, the case is visited by the Superintendent, who (if it is, in her opinion, a proper nursing case) assigns the patient to a nurse and gives her directions." It will be obvious that the above rules are framed with a view to work harmoniously with all existing societies, with local authorities, and with the medical men of the district. Under such circumstances the Association is sure to succeed. Its object is one which involuntarily appeals to the kindliest feelings of human nature, and its successful attainment will add a new inducement to Poor-law medical officers, and to those whose practice lies among the poor, to redouble their efforts, because they will feel that their labours are no longer in vain. The National Association is fortunate in having as its head and chief a lady whose name is well known, and whose skill and wonderful nursing aptitudes are a "household word." Miss Florence Lees is eminently adapted for the post she holds; her natural gifts have been schooled by severe and prolonged training. Conspicuous even among the foremost, her name and kindness remain cherished by many a poor German soldier who owes his life to her devotion and skill during the brilliant but disastrous war of 1870-71.

There are also many other societies and sisterhoods doing an immense amount of good among the poor of this great metropolis; and it is to be regretted that their work is not more generally known and appreciated. Among others are the Sisters of St. Albans, who, in one of the poorest districts about Clerkenwell, are indefatigable in their attentions to the sick and needy. In Shoreditch, too, the Sisters of the Poor have done and are doing an immense amount of good work, and yet so quietly and unobtrusively that few outside their district are aware of it. In the neighbourhood of the London Docks the Sisters of St. Peter are working hard where help, and such help, is sorely needed. And many more working bravely and well might be mentioned.

To each and to all we say "Persevere." It is here, we think, that women with means or leisure may pre-eminently find a suitable outlet for their surplus energies; it is here that woman's gentleness and woman's devotion will find an endless field for work, its highest appreciation, and its fittest reward; and this reward will be directly proportionate to the tact and wisdom which are brought to bear. The earlier difficulties of the sisterhoods in their hospital appointments were one and all directly due to a want of tact, and to the desire to intermeddle in matters which did not come within their knowledge or capabilities. Their present success is now directly due to higher training and to better self-government. Tact and considerateness will be the more needed among the poor, who at home are just as jealous of intrusion or interference, even when they are sick and starving, as would be the nobleman in his mansion. We venture to impress on the promoters of these various societies this important fact: we advise them to use the greatest forbearance in the inquisitorial part of their duties. It is, no doubt, necessary to know something of the earnings of a family, something of their character and occupation; but one must never forget that these are matters which we instinctively keep to ourselves, and on which, when questioned by strangers—even though the strangers come to us as friends and with the purest motives of philanthropy,—we feel averse to enter. This circumspection will be quite as necessary in the discharge of their more strictly nursing duties; the changes which are absolutely needed in the household and its management must be made gradually; they should come as suggestions at first, and be carried out by degrees. Above all, we hope Miss Lees will not endeavour to enforce anything like military discipline. Her very title, "Superintendent-General," rather suggests this. We would advise a more simple and more homely one, and one which would be more in accordance with her own feelings and ambition, and with those of her distinguished relative, Miss Nightingale. Neither in the homes of her nurses nor in the houses of her sick charges will military discipline avail. If such discipline be needed to keep order among the nurses, we should say they are not fitted for, or adapted to, their work. If required among the poor, it would indicate a want of appreciation of the services rendered, which would be absolutely fatal to future success. In short, success will depend, not on skill alone in nursing-work, but very largely on the amount of wisdom and consideration for others with which the work is attempted and done. In proportion as these principles actuate all concerned, and as the gentleness which wins is employed, rather than the discipline which compels obedience, will be both the real and the apparent success of an institution which has our heartiest approval and support.

(a) "First Annual Report of the Metropolitan and National Nursing Association for providing Trained Nurses for the Sick Poor,"—Chief Offices, 23, Bloomsbury-square, W.C.

THE SURGERY OF THE NERVOUS SYSTEM.

It is not unlikely that even if the *art* of surgery has reached something like the nearest approach to perfection of which it is capable, there is one direction in which we may hope to see considerable improvement. The surgery of the nervous system, if such a term be allowable, is at present obviously far from satisfactory. We are almost powerless in dealing with that most pitiable, but unfortunately too common, affection known as bulbous nerves, and have often to confess that our resources are exhausted by an obstinate neuralgia in one of the extremities, while many patients in whom a nerve has been accidentally divided are denied any attempt at relief from the surgeon. It is all the more gratifying, therefore, to see that surgeons are turning their attention in that direction. Last year we recorded a case in which removal of a portion of the small sciatic nerve not only relieved the pain of a number of small neuromata in connexion with it, but actually caused the disappearance of the tumours. In some of the late numbers of the *Centralblatt für Chirurgie* have been two interesting articles, which perhaps indicate the direction in which we may look for advance. In No. 40, October 7, Dr. Paul Vogt, of Greifswald, describes a case of tetanus, in which the pulling of the nerves above the seat of injury seems to have caused a really remarkable cure. A man of sixty-three years of age had his hand crushed by the fall of a stone, which wounded it both in front and behind. The wound on the palm had healed, and that on the dorsum was granulating healthily, when, fifteen days afterwards, trismus set in, and was followed by all the symptoms of very severe tetanus, so that eight days after its commencement there were attacks of the most powerful opisthotonos, and tonic spasm of the lower extremities, as well as intercurrent clonic contractions. There was nothing unhealthy about the scar or wound, and no tenderness in arm or forearm, but great pain was caused by pressure on the brachial plexus. For these reasons, as well as because the age of the patient contraindicated amputation, and because neurectomy must have been practised both on the median and radial nerves, Dr. Vogt determined to loosen the soft parts in the proximity of the two wounds, and to cut down on the brachial plexus and pull it. The large cords were found to be very red. They were separated up as far as the intervertebral foramina, and pulled energetically in both directions. When the patient awoke from the chloroform the tetanus had disappeared. Slight spasm occurred on two occasions afterwards—once during vomiting, and once during defæcation,—but practically a little stiffness of the jaws and considerable weakness were the only remains of the affection. There was no impairment of motion or sensation in the arm, but a slight pricking occurred from time to time.

The other case occurred to Braun, of Heidelberg, and is taken from the *Deutsche Zeitschr. für Prakt. Med.*, No. 25. A peasant, twenty years of age, sustained a wound in the left arm from a table-knife, which divided both the median and ulnar nerves. Ten months afterwards, knots as large as cherry-stones were to be felt beneath the scar, while the hand was cold, the skin thin, shining, and brownish-red, the nails thick, crumpled, cracked and furrowed, and the muscles supplied by the two nerves atrophied and paralysed. The operation consisted in cutting down on the nerves, then, after freshening the ends, sewing them together with silk and catgut: two stitches were placed in the median, three in the ulnar, and one in the internal cutaneous. There was considerable pain on the second day, a good deal of suppuration occurred; but at the end of a month healing was practically complete, though the silk sutures still held firmly, and these were not removed till the end of the sixth week. The progress towards a cure was as fellows:—At the end of a month no return of sensation or motion, but slightly of electric irritability. After six months the power of movement had returned, and after eighteen months the cure was practically complete, and the patient could fellow his employment perfectly well. Braun mentions a similar case under Langenbeck, in which the sciatic nerve was resected. In this instance, sensation, but not motion, had returned at the end of six weeks, though the operation was not performed till two years after the injury.

THE WEEK.

TOPICS OF THE DAY.

It is stated that the Metropolitan Board of Works is about to take immediate steps under the Artisans' Dwellings Act to improve the three selected areas in the parish of St. George the Martyr, Southwark, the effect of which will be the demolition of a large amount of buildings, including some of the most disreputable to be found in the metropolis. The areas comprise Mint-street, King-street, and Elizabeth-place. Mint-street area includes the notorious street of that name, associated with robberies and crimes of all sorts, which leads from the Borough to Southwark-bridge-road; and when this street is demolished it is proposed to widen the new street and Harrow-street to a minimum width of thirty feet, and to extend Little Lant-street of the same width into Mint-street, at a cost of over £25,000. In the King-street area are some parts of Flint-street, Gun-street, and Martin-street. Here, on this site, it is proposed to erect new buildings of four storeys, at a cost of some £6000. The area which includes the most disreputable class of property of any in the scheme is that of Elizabeth-place; it is situated off the Waterloo-road, between Tower-street, Duke-street, Webber-row, and Ann's-place. Here, again, it is proposed to erect blocks of buildings, but in this case of five storeys, at a considerable cost. When the Metropolitan Board have dealt with these three areas in the parish of St. George the Martyr, they will turn their attention to three other selected areas in Bermondsey.

The following is the award of medals for the present year by the Council of the Royal Society:—The Copley Medal to Professor Claude Bernard, For. Mem. R.S., for his numerous contributions to the science of physiology; a Royal Medal to Mr. William Froude, F.R.S., for his researches, both theoretical and experimental, on the behaviour of ships, their oscillations, their resistance, and their propulsion; a Royal Medal to Sir Wyville Thomson for his successful direction of the scientific investigations carried on by her Majesty's ship *Challenger;* the Rumford Medal to Mr. Pierre Jules César Janssen, For. Mem. R.S., for his numerous and important researches in the radiation and absorption of light, carried on chiefly by means of the spectroscope. The medals will be presented at the anniversary meeting of the Society on the 30th inst. It is hoped that the two eminent Frenchmen named in the foregoing list will be able to appear in person on the day appointed.

The followers of Sir Wilfrid Lawson will be considerably fortified in their opinions by a perusal of the undermentioned facts:—According to the Registrar-General's Returns for the year 1874 there was a material increase in that year in the number of deaths in England attributed to alcoholism. He gives the number (under the two divisions, delirum tremens and intemperance) in each year since 1847, and the list shows that the total never reached 1000, or even 900, until the two years of increased business, 1864 and 1865, which showed respectively 1059 and 1049 of such deaths. The number then declined until it was only 645 in 1870; it rose to 740 in 1871, fell to 713 in 1872, and increased again to 777 in 1873. But the number in the returns for 1874 is no less than 1053—viz., 810 males and 243 females, or 45 per million of the persons living. With regard to the distribution of the deaths, the

returns show that in Lancashire alone occurred no less than 286 of the whole 1053 deaths from alcoholism, or more than a fourth of the number in all England, and more than double the number of such deaths resulting in London from a similar cause. Of the whole 810 men who in all England died from this cause in 1874, there were 197 (nearly a fourth) under thirty-five years of age, and thirty-seven of these were under twenty-five, three of them being between fifteen and twenty years old at their death. Of the 243 women, there were forty-eight (or about a fifth) under thirty-five years of age, and seven of these were only between twenty and twenty-five years of age, when they drank themselves to death. These figures give no account of persons who succumb to various diseases owing to their having lost by intemperance the power to subdue such attacks.

The following case serves to illustrate the difficulties which have to be encountered in preventing the spread of epidemic diseases. Priscilla Lee, dressmaker, of 15, Gaywood-street, London-road, was summoned before the magistrate at the Southwark Police-court by Mr. Edwards, the Sanitary Inspector of St. George's District Board of Works, for knowingly letting a room in her house where small-pox had recently occurred, without disinfecting it. Mr. Henry Bateson, Medical Officer of Health, said his attention was called to the house on September 27 last, when he saw a boy suffering from small-pox. He directed Mr. Edwards to remove him to the Small-pox Hospital, and called the defendant's attention to the room, recommending her not to allow the place to be occupied until it had been disinfected and thoroughly purified. A day or two afterwards he visited the house, and found the room occupied by another family, and nothing had been done. Mr. Edwards said he received information that small-pox had broken out in the defendant's house. He proceeded there, and found a boy in bed suffering from the disease. His body was covered with wadding (used by the defendant in lining mantles), to keep him warm. In the room were two sewing-machines, and materials for making mantles and dresses. Rebecca Hyams deposed that on September 29 she hired the room in defendant's house. The landlady told witness there had been a little sickness, but said nothing of small-pox. She had a husband and five small children. The defendant said she had had the room cleaned, but considered that it did not require to be disinfected, as there was no small-pox in the place when she let the room to Mrs. Hyams. Mr. Partridge fined the defendant £5 and costs.

At a meeting of the Dublin Corporation, held last week, Mr. Byrne proposed the appointment of a deputation to the Lord-Lieutenant, to ask his Grace's intercession with the Government for the appointment of a sanitary magistrate for the city, in order to save the time of the sanitary staff, at the present moment so much wasted by long waiting at the various police-courts.

The *Manchester Guardian* announces that the Home Office is making very close inquiries into the condition, number, and extent of the burial-places of the kingdom. It has been found that a great number of the burial-places are in a very bad sanitary condition, and it is thought likely that the Government may deal next session with the burials question from a sanitary as well as from a religious point of view.

MORTALITY OF MADRAS PRESIDENCY, 1875.

From the report of Dr. King, the Acting Sanitary Commissioner of Madras, just received, it appears that during the year 1875 the mean strength of the British Army in the Presidency was 11,005; the total deaths were 163; the total number of admissions to hospital, 12,065. The diseases which caused the greatest number of admissions were venereal, simple continued fever, intermittent fever, hepatic affections, and dysentery. There were 23 cases of enteric fever, 7 of cholera, 3 of small-pox. Dysentery, hepatitis, and hepatic abscess were the most fatal diseases. The mean strength of the Native Army during the year was 30,747. Out of 25,180 troops at "stations," the admissions to hospital were 777·76 per 1000. Paludal fevers were, as usual, says Dr. King, the most important causes of sickness, and accounted for one-third of the admissions. There were 370 deaths out of the 30,747 troops, of which 37 were due to cholera. The civil population of the Presidency during 1875 was estimated at 30,278,903. Of births there were registered 638,771; of deaths, 641,260. This death-rate is 4 per 1000 higher than that of 1874. The extensive prevalence of cholera, says Dr. King, accounts in some degree for the higher mortality of 1875. Let us hope, he adds, that improved registration counts for something else. Out of the 641,260 deaths, cholera was the cause of 94,000 during the year. The disease became epidemic in the south-east in April, and, starting from the maritime southern districts of the Presidency, gradually advanced westward, north-westward, and northward. At the same time another cholera wave entered the Presidency from the north: but, singular to say, between the southern districts of the Presidency, which were ravaged, and the northern parts, where there was a mild epidemic, there was interposed the Vizagapatam district, in which no cholera appeared in 1875. Dr. King has no theories on the nature and propagation of cholera; he merely contributes facts. And here we have the fact of two epidemics, like conflagrations, each spreading over wide districts, evidently step by step, but leaving a wide interval between, which was invaded by neither of them. Granting that human intercourse is the great means of propagating cholera, it is not every epidemic wave which is capable of being so propagated. Small-pox caused 24,787 deaths in 1875. The mortality from "fevers" has been gradually rising since 1868. No less than 252,131 deaths from this cause occurred in 1875. Fever mortality rose to 17·6 per 1000 of the people in Curnool and Cuddapah. Deaths from snake-bite were reported from every district except the Neilgherry Hills; and deaths from wild beasts from every district except the Neilgherries and Tanjore. In 1875 the deaths from snakes in the whole Presidency were 2306, and 247 from wild beasts. Throughout this very able report the prominence of fevers is remarkable.

URBAN MORTALITY.

During the week ending Saturday, November 11, 2810 births and 1635 deaths were registered in London. Allowing for increase of population, the births exceeded by 339, and the deaths by 77, the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the three previous weeks had been equal to 18·3, 19·1, and 21 per 1000, further rose last week to 24·4. The 1635 deaths included 48 from small-pox, 19 from measles, 32 from scarlet fever, 8 from diphtheria, 22 from whooping-cough, 24 from different forms of fever, and 16 from diarrhœa; thus to the seven principal diseases of the zymotic class 169 deaths were referred, against 157 and 144 in the two preceding weeks. These 169 deaths were 90 below the corrected average number from the same diseases in the corresponding week of the last ten years, and were equal to an annual rate of 2·5 per 1000. The fatal cases of measles, scarlet fever, whooping-cough, fever, and diarrhœa were considerably below the corrected average weekly numbers. The 32 deaths from scarlet fever included 19 in East and South London; 4 occurred in Mile-end Old Town, 4 in Bow, and 7 in Lambeth, of which 3 were recorded in the Stockwell Fever Hospital. Of the 19 fatal cases of measles, 15 were registered in South London, of which 8 occurred in Southwark. Two deaths were referred to diphtheria in St. Olave (Southwark) sub-district; and of the 22

deaths from whooping-cough, 5 occurred in Paneras district. The 24 deaths referred to fever were 18 below the corrected average; 20 were certified as enteric or typhoid, 2 as typhus, and in two cases the form of fever was undistinguished in the medical certificate. The two fatal cases of typhus occurred in Devonshire-place (Marylebone), and in Albion-road, Hackney; two of enteric fever were registered both in Haggerston East and Battersea sub-districts. With reference to a fatal case of enteric fever in Sceptre-street, Mile-end, the medical attendant remarks upon the defective drains and the "abominable stench" arising therefrom. Two deaths from puerperal fever occurred on the 8th inst. in Southwark, and were certified by the same medical practitioner. To diseases of the respiratory organs 452 deaths were referred, against numbers increasing steadily from 191 to 333 in the six preceding weeks. Different forms of violence caused 64 deaths; 54 were the result of negligence or accident, including 23 from fractures and contusions, 10 from burns and scalds, and 13 of infants under one year of age from suffocation. Five deaths were caused by horses or vehicles in the streets. In the large public institutions 319 deaths were recorded, or 20 per cent. of the total deaths; of these 189 occurred in workhouse establishments, 122 in hospitals, and 8 in lunatic asylums.

THE ROYAL MEDICAL AND CHIRURGICAL AND CLINICAL SOCIETIES.

It is not very usual, even here in London, to have three Baronets, within the space of less than one week, enlightening us by their observations on obscure points in connexion with disease. Yet that is just what we have seen. On Friday last, Sir William Jenner, President of the Clinical Society, read a most careful and elaborate report on the case of a patient, the subject of the hæmorrhagic diathesis, who had just died from bleeding by the bowel while under his care in University College Hospital. From his extensive experience Sir William was able to add some extremely valuable and practical remarks on the subject. The most striking of these was the observation made that whilst iron seems to do no good internally, locally it is of the greatest value, and hardly ever fails in arresting the hæmorrhage. Another point was that spontaneous fits of hæmorrhage were most apt to occur when the patient was looking best, and that after the system had been relieved by this hæmorrhage almost any remedy would succeed in stopping the bleeding. In the case related ergotine had been used once without success. Altogether, the paper was one of the most valuable we have heard read at the Society.

At the Royal Medical and Chirurgical Society, the President, Sir James Paget, read on Tuesday an important communication on a form of disease heretofore scarcely recognised, or confounded with other maladies. This disease Sir James proposed to call "osteitis deformans." The process was essentially a slow one, giving rise to thickening of the bones, and in some situations to marked deformity. It had nothing to do with gout, rheumatism, or syphilis, and was essentially an inflammation, and not mere hypertrophy. It most closely resembled what was called rheumatic arthritis, more especially inasmuch as it might exist for a long time without injuring the general health. Three out of the five patients he had seen, the subjects of this malady, had died of cancer; but he did not think there was any essential connexion between the two diseases.

Sir William Gull recalled to mind a patient at Guy's who had been the subject of this malady. He died in a most extraordinary way, his ribs becoming so rigid that he was unable to breathe. The whole body was affected with the exception of a few bones. The phalanges were not affected, but the hyoid was. In fact, the whole subject wanted complete investigation.

By the way, is it in accordance with the ordinary rules of societies that a President's paper should be criticised, the President himself being in the chair? We do not mean, of course, that members present should not add to the completeness of the subject by narrating personal or indirect experience, but we should have thought that anything like criticism might, on such an occasion, have been omitted with advantage.

THE AMOUNT OF BLOOD REMAINING IN AMPUTATED LIMBS.

Professor Bruns has endeavoured to answer the two following questions as to the artificial anæmia of the human extremities produced by Esmarch's elastic bandage (*Virchow's Archiv*, lxvi.):—First. Is all the blood forced out of the extremities by the bandage, or how much remains behind in them? Secondly. How large is the quantity of blood that circulates in any given portion of the extremities? The experiments were made in five cases of amputation of the thigh, and in the following way:—After a few passive movements had been made with the limb, the thigh was suddenly very firmly bound round with a caoutchouc tube. During the amputation all the blood was carefully collected, and then as much blood as possible was forced out of the amputated leg by the pressure of an elastic band; this blood was collected, the vessels were washed out with a 2 per cent. solution of common salt; and lastly, the flesh of the limb was cut up and extracted for a day or two with the same solution. The amount of hæmoglobin in the blood having been accurately determined before the operation, the actual quantity of blood in the different liquids could be easily found out by a quantitative spectrum analysis. Professor Bruns then found that the elastic bandage did not completely expel the blood from the limb, but that (as the mean of his experiments) forty-one cubic centimetres of blood were left in the amputated leg, or, in other words, 70 per cent. of the blood had been driven out, while 30 per cent. remained behind. The answer to the second question mentioned above is not quite trustworthy nor complete, since the experiments were made in cases in which the limbs were diseased. Professor Bruns found that the amount of blood in the leg (*Unterschenkel*) was equal to about 3·8 per cent. of the limb; and this agrees with Dr. J. Ranke's experiments on animals, which showed that the quantity of blood in the limbs is much smaller in proportion to their weight than it would be if the blood were equally distributed throughout all parts of the body. Ranke, in fact, found that the amount of blood in the limbs represents 2·5 per cent. of their weight, instead of 5·6, the proportion representing a uniform distribution of blood throughout the body.

SMALL-POX IN HOMERTON.

Important reports were presented to the Hackney District Board of Works last week by Dr. Tripe, Medical Officer of Health, and by the Sanitary Committee. Mr. Tripe reported that the small-pox epidemic has assumed considerable magnitude in that parish, as within the last fortnight he had had notice of eighty-one cases and six deaths. An unusually large proportion of the cases had occurred among servants and other young persons above fifteen years of age, which undoubtedly pointed to the urgent necessity for revaccination. By far the largest proportion had occurred in Homerton, as happened in the epidemic of 1871-72. To show the rapidity with which the disease had spread, he mentioned that he knew of only five cases in September and forty-one in October, against sixty-two in the first ten days of this month. Notices had been issued to washerwomen and others, and useful information disseminated as to the steps to be taken for the removal of the sick. The Sanitary Committee reported forty-three new cases of small-pox during the week, and urged that further precautions should be taken for preventing the spread of the disease, recommending that they should be empowered to take such steps as they might consider to be necessary.

Dr. Tripe, in answer to questions, said there was no evidence to connect the existence of the Homerton Hospital with the prevalence of small-pox in that locality; for at the last epidemic, which was before the establishment of the hospital, the disease was most prevalent at Homerton. Its prevalence there was referable to the poorness of the neighbourhood, and the close and crowded state of the houses. In view of the gravity of the case, the Board authorised the adoption of any precautionary measures the sanitary authorities might deem desirable. Dr. Tripe has further communicated with the Islington authorities on the subject of the driver of the Islington ambulance having been seen to stop for drink at public-houses in Hackney on his way to and from the Homerton Hospital. The master of the workhouse stated in corroboration that the men in charge of the ambulance admitted that they had given the patients drink on their way to the Small-pox Hospital, but they had promised not to do so again. It would be well for the authorities to take measures to insure that this promise is faithfully kept.

EXPERIMENTS ON THE PERCEPTION OF MOTION.

THE *Centralblatt für Medizinische Wissenschaften* (No. 38, 1876) contains an account of some interesting experiments made by Professor W. Leube, of Erlangen, on the alterations of motor sensibility which occur in certain diseases of the nervous system. Thus, he finds that if a small stick be drawn along the surface of the body of patients with diminished cutaneous sensibility, but of unimpaired intellect, they either do not perceive the movement when their eyes are shut as a movement at all, or they perceive it as a simple punctiform contact, or else they have the perception of a movement with a wrong appreciation of its direction. The movement over the skin in Professor Leube's experiments was made by means of a piece of watch-spring with a knob at one end and a handle at the other, the use of the spring being to make the varying pressure of the instrument on the skin in different experiments more equal. The movement was made with the hand, and with an even, rapid touch. The back of the foot was the part invariably experimented on. Now, a healthy person distinguishes a stroke half a centimetre long with perfect certainty as movement, in contradistinction to a simple touch. On the other hand, ataxic patients are unable to tell whether a stroke five to six centimetres in length is attended with movement, or is simply a touch. Again, if strokes be made on the skin of a healthy person, alternately longitudinally and crosswise, the person is always able to distinguish the direction of the movement, provided the stroke has a certain length. This length is about five centimetres, the number of false determinations below this length increasing as the length diminishes. But patients whose sensation is impaired are often unable to say whether a stroke is made longways or crossways, even when its length exceeds five or six centimetres. Thus, an ataxic patient only perceived six out of sixteen longitudinal strokes as such, two she did not feel at all, and one she perceived as a point; the remaining seven she perceived as cross strokes, actually stating each time whether the stroke was made from within outwards or the opposite!

EAST LONDON HOSPITAL FOR CHILDREN.

THE new buildings of this Hospital in Shadwell were opened, for inspection by the friends and supporters of the charity, on Thursday last, the 16th inst. They consist of large and commodious wards, a special block for fever cases, and a laundry, together with the usual offices, built on the most modern and scientific plans, and will contain at least 100 beds. The Hospital will be formally opened as soon as the necessary funds for furnishing it have been procured, the Committee being determined not to anticipate subscriptions or run into debt. There is reason to hope that H.R.H. the Princess of Wales will be graciously pleased to open the new Hospital.

THE ESSENCE OF LISTER'S METHOD.

IN the course of a lecture on the value of Professor Lister's method, as evidenced by the results obtained in his clinic at Freiburg, Professor Czerny (*Berliner Klinische Wochenschrift*, No. 44, 1876) pointed out that his colleague, Dr. Hegar, had recently performed sixteen successful ovariotomies consecutively, without making use of Lister's method, in the exact sense of the word, at all. The conditions, however, under which he operated, and to which his success was mainly due (the other element being a careful selection of cases), really exemplified the truth of the principle on which Lister's method depends—namely, the exclusion of the unknown bodies which are suspended in the air, and which excite inflammation, if absorbed, by their contact with the wound, and proved that Lister's method, which is still expensive and complicated, may be materially simplified, without interfering with the basis on which it rests. Professor Hegar's plan was the following:—Before each operation the theatre and the room in which the patient was to stay after the operation were purified with sulphur, and the patient, the surgeon, and his assistants bathed from head to foot. All the spectators were bound by oath not to have entered a dissecting-room for eight days, nor to have visited any case of infectious disease, and to have thoroughly disinfected their clothes. Further, before each time of using, all the instruments and sponges were washed with pure chlorine water, the abdominal cavity and every suture were washed with chlorine water, and the wound in the abdominal walls was thickly covered with salicylic or carbolised wool.

ROYAL COLLEGE OF SURGEONS.

THE following Fellows of the College have been nominated to fill the office of Examiner in Anatomy and Physiology—viz., Messrs. W. M. Baker, of St. Bartholomew's Hospital; E. Bellamy, of the Charing-cross Hospital; A. E. Durham and H. G. Howse, of Guy's Hospital; S. Jones and F. Mason, of St. Thomas's Hospital; B. T. Lowne, of the Middlesex Hospital; and W. Rivington, of the London Hospital. The present members of the Board will offer themselves for re-election, with the exception of Messrs. Luther Holden and John Cooper Forster, who will retain their seats as Examiners in Surgery and Pathology. The resolution to present the gold medal of the College to Dr. Peacock, in acknowledgment of his very valuable and most acceptable present of nearly 200 pathological specimens to the museum, was unanimously confirmed at the last meeting of the Council. The presentation of this medal is a rare and justly valued honour. It has been voted on only five previous occasions, we believe, the recipients having been—in 1809, Professor James Wilson; in 1822, Mr. James Parkinson; in 1825, Mr. Joseph Swan; in 1834, Professor George Bennett; and in 1869, Mr. Lodewyk Crowther. We have reason to believe that the rumour that the Council rescinded the resolution passed at the previous meeting, altering the constitution and powers of the Committee of Reference under the amended Conjoint Scheme, is not quite correct. We understand that what really took place was that the resolution was not confirmed, but referred for reconsideration to a special meeting of the Council. It may perhaps, however, be held that, as the opposition was strong enough to thus refer the resolution, it will also be sufficiently strong to rescind it.

MEDICAL SOCIETY OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE first regular meeting of this Society took place on the evening of Wednesday, the 1st inst., in the new hall of the King and Queen's College of Physicians, Kildare-street, Dublin. The President (Dr. Samuel Gordon) occupied the chair, and opened the session with a few appropriate remarks. Two interesting communications were made by members. Dr.

Walter George Smith read a paper on some new tests for bile-pigment, the leading principle of which was the conversion of the bile-rubin into bile-verdin by oxidation. The test which he specially recommended for its simplicity and accuracy was the production of a beautiful emerald green, by allowing two or three drops of tincture of iodine cautiously to trickle down the side of an inclined test-tube containing a drachm of urine. Where the iodine meets the surface of the urine a bright emerald green zone of colour forms, should bile-pigment be present. This zone afterwards turns to a dusky brown. Previous boiling of the urine prevents this characteristic reaction. In a subsequent discussion Dr. Emerson Reynolds detailed experiments with the same object in view which he had made with other oxidising reagents, such as ferric chloride, ozonised ether, phosphatic solution of peroxide of lead, etc. Dr. Finny had tested the accuracy of the iodine test, and Dr. Foot alluded to the bearing of the experiments on the diagnosis of hæmatogenous and of hepatogenous jaundice. Dr. MacSwiney made a communication on syphilitic phthisis, illustrated by a clinical case, which he detailed at length. In the discussion, Dr. A. W. Foot said that, from a careful study of the present position of destructive diseases of the lung, he gathered that the tendency of opinion was towards holding the unity of phthisis as a disease, and not in favour of a multiplicity of forms of the affection. Though there might be twelve or fourteen varieties of phthisis, the reactionary opinion—on the Continent, at all events—was in favour of the unity of the disease. He would call Dr. MacSwiney's case one of "phthisis occurring in a syphilitic subject," rather than one of "syphilitic phthisis." After some further discussion the Society adjourned.

THE HEALTH REPORT ON ST. MARYLEBONE FOR OCTOBER LAST.

During the four weeks ending October 28 the number of births registered in the parish was 411; in the same period the number of deaths registered was 195. The consecutive weekly returns were 47, 47, 48, 53, which in the aggregate were equivalent to an annual death-rate of 15·91 per 1000 of the population, being about 1 per 1000 less than that of all London for the same period, and 6·21 per 1000 less than that of the parish during the corresponding month last year. In no period of equal duration for the last twenty years has the rate of mortality in Marylebone been so low, or diseases of the zymotic class so little prevalent; and if the health of a district may be estimated by its death-rate, Dr. Whitmore thinks St. Marylebone must be considered to have been as healthy during the whole of last month as many of the healthiest and most salubrious towns and districts in England. But this favourable state of things, Dr. Whitmore fears, is not likely to continue, for within the last ten days there has been a considerable decrease in the temperature, which will most assuredly be followed by an increase of sickness and mortality from respiratory diseases. It is satisfactory, also, to learn from this report that during the past quarter most articles of food and drink sold in the parish have been much less adulterated than formerly. In the article of milk, for instance, there was marked improvement; and when (Dr. Whitmore observes), by some stringent regulations, this necessary aliment of children can be sold without the fear or possibility of its becoming contaminated by germs of contagious and infectious diseases, or pollution of any kind, then one most important object towards the preservation of infant life will have been accomplished.

SMALL-POX IN LONDON.

The information given by the Registrar-General's Returns for last week shows that small-pox is now spreading more rapidly in the metropolis, and that the orders to provide increased hospital accommodation for small-pox have not been issued a day too soon. The deaths from small-pox, which had been 15 and 21 in the two previous weeks, further rose to 48 last week, which is the highest weekly number recorded since May, 1872. Of this number 21 were certified as unvaccinated cases, 15 (all of adults) as vaccinated, and in 12 cases the medical certificates did not furnish any information as to vaccination. Of the 48 fatal cases, 22 occurred in the two Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell, 3 in the Highgate Small-pox Hospital, and no less than 23 in private dwellings. Three of the hospital patients had been admitted from Acton, Forest-gate, and Berkhempstead, all outside registration London. Six of the small-pox patients had resided in Islington, 6 in Battersea, 4 in Hackney, 4 in Clapham, and 5 in the district of Lambeth. Excluding 2 hospital cases in which the residence was not stated, and the 3 extra-metropolitan cases, 4 belonged to the West, 11 to the North, 2 to the Central, 6 to the East, and 20 to the South groups of districts. The fatal prevalence of the disease again shows wider distribution. The two Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell contained 269 patients on Saturday last, against 177, 185, and 231 at the end of the three preceding weeks; 117 new cases were admitted during the week, against 43 and 101 in the two previous weeks.

THE PROPOSED INFIRMARY FOR THE SICK POOR OF MARYLEBONE.

Last week a deputation from the parish of St. Marylebone had an interview with the President of the Local Government Board respecting the proposed separate infirmary for the poor of Marylebone. Mr. Forsyth, M.P., said they did not consider the present provision for the sick was adequate, or a separate infirmary might not be advisable; but the Vestry held the views contained in a memorial from the Guardians to the Local Government Board in 1873, to the effect that a separate infirmary and separate site out of the parish would be costly to the ratepayers and inconvenient to the poor. Mr. Reed thought the proposed site in Ladbroke-road, Bayswater, which would cost a quarter of a million of money, would be inconvenient; whilst he was of opinion that a site could be had in Northumberland-street much more desirable; and they asked the Board to delay the scheme for a short time to see if this alternative site could be purchased. The President, in reply, said that nothing should be wanting on his part to reduce the burden of the rates; but in this case the necessity had been shown for a new infirmary, and the circumstances would not admit of getting adjoining property for this purpose. Should their suggestion of a new site turn out correct, he should certainly take it into consideration; but this necessary provision having been wanting so long, he could not long delay the getting of a new site.

A SPECIMEN OF AN "AMERICAN DIPLOMA."

Among the quack doctors who were recently prosecuted at the Manchester Police-court was a man named W. H. Woodhead, who, being in possession of a diploma said to have been granted by the Metropolitan College of New York, called himself "Dr." For the defence it was attempted to show that the diploma was a genuine one, and such as should entitle the defendant to practise in this country, although he is not on the Medical Register. The defendant's solicitor was anxious that the magistrate should not class his client, who was in possession of a genuine diploma obtained after study and examination, with the other unqualified persons who were summoned at the same time. To prove that the diploma was genuine the defendant's brother was called, who stated that the diploma was obtained from New York, through the "Medical Reform Association," after medical study and examination. In cross-examination this witness informed the Court that his brother studied at an "anatomical museum" in Liverpool, of which he himself

was the proprietor; and that he enjoyed the proud distinction of being the President of the "Medical Reform Association," which body had satisfied itself that the defendant was a fit and proper person on whom to confer the degree of Doctor of Medicine. The defence, although not wanting in force—of a kind,—was insufficient to satisfy Mr. Headlam, the sitting magistrate, that "Dr." Woodhead was entitled to the protection of the law, and he inflicted a penalty of £5. We are glad to hear that the Manchester police are determined to go on with the prosecution of the quacks who infest the city until they are all suppressed.

THE RELIEF OF SYMPATHETIC OPHTHALMIA.

CAN any more simple operation be substituted for excision of the ball in cases where a hopelessly diseased eye is unmistakably affecting its fellow by sympathy? One cannot help feeling that the *ultima ratio* involves to a certain extent the confession of defeat, and one is accordingly glad to welcome any advance of conservative surgery provided that its object is desirable, even though it be so comparatively trivial as the retention of a natural, though sightless eye, instead of a glass substitute. A. Boucheron has published a note in the *Gazette Médicale de Paris*, No. 37, 1876, which is extracted in the *Centralblatt für Chirurgie*, No. 44, in which he suggests that the mischief may be prevented by a division of the optic and ciliary nerves, the eye itself being still retained *in situ*. He describes a method of operation by which all the nerves may be divided with certainty, and records the effect of it upon dogs and rabbits. In the former, no opacity of the media occurred; the cornea remained insensible, but atrophic changes in it were the exception. The whole eye diminished slightly in size. In rabbits, on the other hand, trophic changes in the cornea were the rule. In badly nourished animals the eye atrophied painlessly. The author also mentions two cases in the human subject in which the nerves were separated from the globe without any resulting atrophy: one the result of a shot, and the other of an operation by Knapp, of New York. It is needless to dwell upon the advantages of such an operation if it be really successful, but if it should result in a shrunken and unsightly eye, the patient will be in a worse condition than if he were provided with a healthy stump, to which an artificial eye could be adjusted.

INOCULATION OF CANCER.

THE *Centralblatt für Chirurgie*, No. 45, gives a notice of some experiments by Nowinski, which it takes from a Russian paper, bearing upon this rather hackneyed subject. The result, however, has been more positive than that of the greater number of those with which we are acquainted, but in this instance, again, the number of failures is much larger than that of the successes. He made in all forty-two experiments. Twenty-seven of them were upon eight dogs, in which thin slices of medullary cancer were placed in incisions into the skin, which had already become inflamed. The remaining fifteen experiments were made upon six young dogs, but in these the wounds were recent. Two of the latter succeeded perfectly. In one the wound healed by first intention; in two weeks a tumour had formed as large as a pea which in two months ulcerated. After death, which occurred in five months, a recurrence as large as a hazel-nut was found in the axilla. The second dog died in a month and a half. A distinct medullary cancer was found at the seat of inoculation, but no recurrence had taken place. Any single case in which a successful implantation has been effected is of immense interest, as strengthening the hands of those who maintain that a cancer is always a local affection at its commencement; but, at the same time, it must be confessed that until some certain method of arriving at the result is discovered, the argument tells almost as strongly on one side of the question as on the other.

PROPAGATION OF PUERPERAL FEVER.

THE Registrar-General often means very much when he says very little. In his Return for the week ending November 11 he says, "Two deaths from puerperal fever occurred on the 8th inst. in Southwark, and were certified by the same medical practitioner." This implies the possibility that a practitioner attending one case had conveyed infection to another. But there are many other more agreeable modes of explaining the fact. The practitioner who signed the certificates may not have attended either patient during parturition.

IN MEMORIAM.

HENRY WILDBORE RUMSEY.

"DIED at Prestbury, Cheltenham, on October 23, Henry Wildbore Rumsey, M.D., F.R.S., aged sixty-seven."

So has passed away one of the most laborious and ill-rewarded labourers, who helped silently and slowly to bring about changes most important to the medical profession and to humanity at large.

During the last half-century and more there has been a steady conflict between two antagonistic principles, which we may call the Individual and the Socialistic. The old-established doctrine of Individualism is summed up in many a wise saw and quaint motto—"Every man for himself, and God for us all"; "Every man's house is his castle"; "Mind your own business, and leave other people's alone"; "*Caveat emptor*"; "A man has right to do what he likes with his own," and the like. On the contrary side are arrayed a series of dogmas, some simply Socialistic, as "*La propriété c'est le vol*," others Christian, as "Ye are all members of one body," but all insisting on the duties and privileges of civilised men as members of an organised community. Co-operation was upheld instead of competition. The interests of the individual were subordinated to those of the State. In fact, co-operation for the public good was taught, not as a mere act of voluntary charity, but as an imperative duty. It was in the midst of a coterie, who more or less called their opinions Christian Socialism, and who were deep admirers of Maurice, who preached active benevolence as a necessary part of orthodox faith, that the writer thirty years ago met with H. W. Rumsey. "Social organisation," the necessity of providing for the community rather than the individual, and the "fundamental errors in the state of society" were the key-notes of the conversation; and it was curious to see how the popular doctrine of "helping oneself," and aiming at rising above others—in fact, "competition"—was denounced as the source of evil, and co-operative effort spoken of as sound in philosophy and morality.

Never did Rumsey carry these doctrines to any pitch of extravagance, but the key-note of his labours may be described as "social organisation in medicine"; the employment of medical skill, not merely for the relief of individual suffering, but for the prevention of those conditions which militate against the health of communities; for extirpating disease by the roots, not merely plucking off a troublesome shoot.

To give a list of the branches of medical organisation at which he laboured would be include them all—benefit societies, provident dispensaries, Poor-law relief, registration of sickness and of death, and sanitary statistics. In reading any of his numerous essays, and especially the later ones, we feel, as Dr. Sibson well expressed it at the Dublin meeting of the British Medical Association in 1867, that he gives the results "not of a day's, or a week's, or a month's work, but almost of a lifetime of labour devoted to the subject."

Perhaps the ablest and most characteristic, and certainly the most condensed production of his pen, is a "Memorandum on State Medicine submitted to her Majesty's Ministers by a Deputation from the British Medical and Social Science Associations, April, 1868."

We can well imagine the contempt and alarm with which such a paper would be looked at by a common-place politician, by the coarse demagogue who flatters the "working-man," and by the perfumed dandy who represents "society." As Dr. Rumsey once said, State medicine was often treated in

England as a mere idea, a speculative theory, or at best a German innovation. "Any formal view of the subject was liable to be met by taunt and ridicule. Ablo critics told us that we might as well have a State astronomy, or a State chemistry; as those sciences live by their own wits, why, they say, should not medicine." This memorandum claims a "thorough, impartial, and comprehensive inquiry into the operation of the several laws, regulations, and customs under which members of the medical profession are employed constantly or occasionally in the towns and rural parishes of England, Scotland, and Ireland, or in some of them by different departments of Government, by public bodies, by local authorities, or in voluntary societies, or under which medical practitioners act as witnesses in courts of law and medico-legal inquiries, or otherwise." He then proceeds to enumerate nineteen heads of medical agency, including—(1) registration and inquiry concerning the cause of death; (2) medico-legal inquiries, post-mortem inquiries and analyses, etc.; (3) medical and scientific observations, including epidemiology, meteorology, epizootic and epiphytic diseases, etc.; (4) medico-sanitary inquiries; (5) burial-grounds, etc.; (6) practical advice to local authorities; (7) sanitary measures, vaccination, etc.; (8) workhouses, medical relief charities, etc.; (9) lunacy and lunatic asylums, etc.; (10) prisons; (11) schools; (12) unwholesome occupations; (13) analysis of food; (14) water-supply; (15) gas, smoke, and chemical works; (16) animals, slaughter-houses, etc.; (17) imported diseases, quarantine, etc.; (18) medico-legal certificates; (19) medical evidence in courts of law.

For carrying out the services which medicine may render to the State in all these several particulars Dr. Rumsey advocated a thorough staff of inspectors, organised on the basis of *district* or *local* organisation. He pointed out, in his address at Dublin, "the vast array of Government inspectors and sub-inspectors, all working separately, not in concert, not unfrequently treading on each other's heels on the same journey. Paupers, prisoners, and lunatics, workers in factories, in mines, and in sundry other industrial employments,—all are protected by their several inspecting staffs. There are also inspectors to see that the dead are safely interred, and others again to act in various departments." He strongly criticised the institution of vaccinating-inspectors as transgressing the bounds which he laid down very clearly between central and local action, and drew a vivid picture of a local and general staff of State medical officers, "the former closely observing, verifying, collecting, and revising his facts, making his examinations and reports, directing his subalterns, inspecting public institutions, and advising the magistrates and the executive bodies; each district superintendent aided and counselled by the circuit inspector, and communicating through him with the State."

When we consider that, as an essential preliminary to the working of an ideally perfect system of State medicine, an entire revision of boundaries and local areas coinciding with the natural river-systems is required, we see the magnitude and complexity of the arrangements which Dr. Rumsey had framed in his own mind.

The usual monthly meeting of the Port of London Sanitary Committee of the Corporation was held on the 7th inst., at Guildhall. The Port Medical Officer reported that 977 vessels had been inspected in the river and the docks during October, fifty of which required cleansing; that fourteen seamen had, from various causes, been referred to the *Dreadnought* hospital-ship at Greenwich; and that three parcels of clothing and one vessel had been fumigated and disinfected on account of the existence on board of infectious disease. At the early part of the month a vessel from Cadiz brought into the port a case of small-pox in the person of a distressed British seaman sent home by the Consul. The man was discovered by the Customs authorities at Gravesend, and was removed at once by Dr. Whitcombe to the Corporation's hospital-ship *Rhin*. On arrival in the London Docks the ship and effects were thoroughly fumigated by the inspectors of the Port Sanitary Authority. In consequence of the prevalence of small-pox in England and on the Continent, the Corporation have issued an official notice with a view to prevent its spread and importation. A copy of this has been given to the commanding officer of every vessel in the port, and sent also to the chief outport sanitary authorities in the kingdom.

FROM ABROAD.

Prevention of the Mortality of Young Infants.

Dr. Bouchut, of the Hôpital des Enfants, commenting (*Gaz. des Hôp.*, October 26) on the discussion which took place at the recent Brussels Congress, observes that too much stress was laid upon the statistics of this subject derived from the different countries of Europe. These he regards as almost valueless, owing to the want of similarity in the data whence they are compiled. At all events, he is certain that they attribute an exaggerated infantile mortality to France as compared with other countries. Uniformity of international statistical elements, in fact, seem as difficult of realisation as a uniformity of weights and measures, or of money, the registration of births not being effected in the same way in different countries. Thus, in England, still-born children, and those who die within the first month, are not registered, in order to avoid the expense of interment. With respect to infants who have lived, M. Bouchut is of course wrong, they being registered however early they may die; and the fact holds good that many fewer die during the first year here than in France. However, there can be no doubt that the statistics on the subject are very defective.

To come to the main point, how are we to prevent the great mortality which everywhere more or less prevails? This is caused chiefly by exposure to cold, and by indigestion, leading to chronic or acute enteritis, and to mesenteric disease—the latter being by far the more frequent of these two causes. Statistics may not prove this, but Dr. Bouchut's thirty years' experience at the Hôpital des Enfants has given him ample right to speak positively on the matter. Out of sixty children who may be brought any day for all kinds of disease, there will be a mean of ten suffering from acute or chronic enteritis, distended abdomen, or infantile cholera, and that all the year round, a little more in summer than in winter. It is much the same in private as in hospital practice, diarrhœa from indigestion being the chief disease of the early months. The ignorance of mothers with regard to the suckling of infants is much the same in the upper as in the poorer classes, the prevalent opinion being that there exists a relationship between the large quantity of aliment taken and the prosperity of the nursling. If we wish to arrest this mortality, we must impress upon young women that the breast is preferable to the sucking-bottle; and we must teach them how to bring up their infants, to watch the daily increase of their weight, and the quantity of milk consumed, how much should be taken at each meal and in the twenty-four hours, and the qualities which may render the milk of the mother, of the nurse, or of animals preferable.

During the first month an infant will take 650 grammes per diem, 750 the second month, 900 the third and fourth, and about a litre from the fifth month. It ought to take these quantities at six or eight times in the twenty-four hours, and it should not take feculents until the fifth month, the glandular structure of the intestines prior to this period being only imperfectly developed. When cow's milk has to be used to supplement that of the mother, it should be diluted with a third of boiled sugared water, this serving to warm the milk without heating it likewise. Milk exposed to the air sooner or later, according to the season, becomes loaded with organisms, which are apt to engender diarrhœa; and this is one reason why artificial suckling is so mischievous. In natural sucking none of these germs are carried into the system. The infant will take from 40 to 100 or 120 grammes of milk each sucking—*i.e.*, a mean of about 80 grammes; and by regular weighings we ascertain what quantity has really been taken. By weighing the infant, too, every ten days, we find out whether it is acquiring the physiological increase in weight—*i.e.*, from 250 to 300 grammes. Anything less than this indicates that the nurse, or the method of nursing, should be changed. Still greater is the necessity for the change if food of various kinds has been given, or if the sucking-bottle has been injudiciously employed. The balance is the only means of ascertaining the progress of growth of the infant, and all is subordinate to the results which it furnishes. Without this test all is uncertainty; and Dr. Bouchut employs it regularly in his private practice, also insisting upon its use by all nurses who take infants to nurse in the country away from their friends.

The great hope of arresting infant mortality rests in the instruction of mothers in all classes of society concerning the physiology of the growth of infants and the hygiene of suckling.

The Hypodermic Treatment of Syphilis.

On bringing this subject before the Vienna Medical Society (*Allg. Wien. Med. Zeit.*, October 24), Prof. Neumann, after giving an historical sketch of the methods of injection which have been employed, came to the conclusion that the mercurial albuminates and peptones are the preferable substances to employ. They also give rise to more or less reaction, but they never induce the abscesses and gangrene which are sometimes induced by other mercurial solutions. Much depends upon the vulnerability of the patient, the dexterity of the operator, and the cleanliness of the instruments he employs. To demonstrate the superiority of these means, we have only to inject in the same patient the mercurial albuminate or peptone, and an aqueous solution or the powder of the sublimate, or in combination with morphia; and we cannot remain an instant in doubt that, of all the solutions tried, the peptone of Prof. Bamberger causes by far the least pain and reaction, and if it is clear and without precipitate it never induces abscess. The injections should be made in the back, the lateral parts of the thorax, or the buttocks; but all the advantages will prove illusory if they are made in such other places as the upper extremities, the hands, or in indurated tissues. For the removal of the various syphilitic appearances, as many as from twenty to forty injections may be required. The maculated, papular, and squamous forms soonest disappear, while the small pustular syphilides and enlarged glands require a longer time. Psoriasis palmaris and plantaris readily yields. Affections of the mucous membrane require many injections, and the gummata offer much resistance. Prof. Neumann usually injects but once in the twenty-four hours, but in several cases he has done so twice a day without finding any accumulative action of the mercury, the only precaution against stomatitis taken being to keep the teeth well brushed and the mouth often washed out. In private practice injection is a very useful means of treatment in those cases in which inunction is indicated, as being far more convenient to the patients. The slight reaction which these peptone injections cause, the exact dosage of which they are susceptible, the small total quantity (upon an average 0·15 to 0·25 grammes) required to effect a cure, the sparing the stomach (a matter of much importance in enfeebled persons), the cleanliness that is rendered possible, the rare occurrence of stomatitis, and the rapidity with which a cure may be effected by large doses, commend themselves to the practitioner, while the rapid elimination of the mercury should diminish the fears of the opponents of its employment. If this should not be erected into an exclusive method of treating constitutional syphilis, yet as a powerful means of cure it will attain greater appreciation.

At the same meeting, Prof. Bamberger explained his reasons for substituting the mercurial peptone for the mercurial albuminates, and described his mode of preparing the former. The pepsin easily combines with the sublimate, and forms a definite preparation. Of this each drachm of water contains a centigramme; and this solution is completely transparent, and keeps for a long time unchanged. All trials hitherto made with it have been very satisfactory. Painless its injection is not, nor is that even of distilled water. It should be slowly performed, and the fluid then quickly diffused by pressure.

Prof. Thiry on Compression in Acute Orchitis.

In a recent clinical lecture on a well-marked case of acute blenorrhagic orchitis, Prof. Thiry observed (*Presse Méd. Belge*, No. 5) that, notwithstanding its origin, this must be looked upon as a case of simple acute inflammation, which it would seem rational and logical to treat by local bleeding, emollients, fomentations, and the like. But in point of fact we are in possession of a means of treatment far more powerful than this, viz., compression, which is too much lost sight of in favour of new modes of treatment which succeed each other day after day, and yet are devoid of the constant efficacy and the promptitude of action which characterise methodical compression. It may be objected that compression is resorted to, but is reserved for chronic cases, as it would be imprudent to employ it in those of an acute character. But here compression is of little importance and may be contra-indicated, while it is in acute and intense orchitis that its true triumphs are gained. The sufferings of the present patient are of exceptional severity, but that will not prevent his pains disappearing as if by enchantment solely under the use of a compressing bandage. The orchitis will indeed subside with rapidity proportionate to its acuteness, and a week will not be required to effect a cure. Nay, did circumstances require it, this patient might be enabled within forty-eight hours, if not sooner, to resume his occupation But this success can only be attained by the effectual application of the compressive bandage; and this will be easily accomplished if we bear in mind the objects we should have in view in effecting it. These are—(1) benumbing the local nervous sensibility, the general excessive sensibility becoming spontaneously calmed, as seen immediately after the application; (2) diminishing the afflux of arterial blood into the affected organ, by approximating the vascular parietes—the arterial afflux being always in direct proportion to the intensity of the pain; (3) repelling the venous blood and the products of exudation towards the centre of circulation; and (4) the immobilisation of the testis, and its protection from external agents.

In the present case there is a complication which many have considered as contraindicating the employment of compression — viz., an excessively painful *engorgement* of the spermatic vessels of the cord. But fortunately this is not the case, for the cord may be compressed at the same time as the testis, it only being necessary to combine a compressive spica bandage of the groin with the testicular bandage, so as to exert a uniform and simultaneous compression of the whole. In all the cases in which this practice has been resorted to, success has been most prompt and most decisive.

Methodical compression of the testis by means of the starch bandage was applied, combined with a spica of the groin enveloping almost all the abdomen, and acting directly on the cord by means of graduated compresses. The patient was then placed in a horizontal position, his head only being raised, and a pill was prescribed every three hours in aid of the anæsthetic effect of the bandage, composed of small doses of bromide of potass and opium. Scarcely had the bandage been applied, when the patient, who suffered much during its application, became entirely calm, and declared that he no longer felt any pain whatever. He enjoyed his first good night; and on the bandage being removed, on the second day, not only did all pain continue absent, but the swelling had much diminished and the redness had disappeared. The bandage was reapplied without causing any pain, and the patient was still kept in the horizontal position. On the fifth day a suspensory bandage was substituted for the compression, and four days later he was discharged, radically cured. Results of this treatment of a precisely similar character have been obtained by Prof. Thiry at the St. Pierre Hospital, Brussels, during the last thirty years—compression having been the sole measure directed against acute orchitis the consequence of urethritis, whatever has been the intensity of the phlegmasia, and that whether it has been simple, or complicated with fever, *engorgement* of the cord, or inflammation of the tunica vaginalis and scrotum. Prof. Thiry has made comparative trials of the various new modes of treatment that have been from time to time in vogue; but he has invariably come to the conclusion that compression is the most efficacious, the most simple, and the most expeditious procedure.

Local Treatment of Puerperal Fever.—Dr. Fritsch, of Halle, strongly recommends the injection of large quantities of a carbolic acid solution (2 or 3 per cent.), so as to thoroughly wash out the uterus and vagina, and to completely distend the latter. To this end he throws in two, and sometimes three litres—*i.e.*, from four to six pints,—the temperature of the water being at 25° R. (89° Fahr.). The uterus, after a thorough cleansing out, need not be injected oftener than three times in the twenty-four hours; and after three or four days this need not be continued, but the cleansing and distension of the vagina must be repeated much more frequently and persisted in for a much longer time. Under this treatment not only are the local lesions soon ameliorated, but the febrile action, as indicated by the temperature-curves, abates. Prof. Schröder, on the reading of the paper, mentioned that Dr. Hildebrandt employed for injecting the vagina a glass tube, about as thick as a finger, each patient being provided with her own, which is broken on her recovery.—*Allg. Wien. Med. Zeit.*, October 24.

REVIEWS.

Ueber das Lehren und Lernen der Medicinischen Wissenschaften an den Universitäten der Deutschen Nation, nebst allgemeinen Bemerkungen ueber Universitäten. Eine Culturhistorische Studie. Von Dr. Theodor Billroth. Wien.: Druck und Verlag von Carl Gerold's Sohn. 1876.

Teachers and Students of the Medical Sciences at the Universities of the German Nation, with some General Remarks on Universities. An Historico-Educational Study. By Professor Theodor Billroth. Vienna: Published by Charles Gerold, jun. 1876.

(*Concluded from page* 555.)

Reviewing medical education as a whole, the author points out, *inter alia*, a fact that is too often forgotten amongst ourselves—that the true aim of such education should be to form *scientific men*, and not merely to turn out routine practitioners. "Interest in scientific culture," he says, "is only acquired during student-life, and the bud of scientific genius is often roughly nipped by the too early development of scientific routine. The modern cry for practical knowledge and so-called practical education may, after all, be not without some attendant evils, especially if they leave the student, when he has passed his examinations, incapable of receiving new impressions or of looking at things with a scientific breadth of view. Medical routine can be acquired by the young doctor in a few months if he is well grounded in the principles of his profession. He may fail at first in the minutiæ of practice, and forget the appropriate treatment for some disease that he has diagnosed, but it is far better for him to do this than to be like some young doctors, who know everything and recognise everything without examination, who have six prescriptions in their head for every symptom, and who use them without consideration from the beginning to the end of their lives, insensible to all progress in their art, always convinced of the absolute correctness of their treatment, and supported by an unalterable feeling of self-satisfaction."

In the first half of his medical education the student ought not, Billroth thinks, to have to attend lectures and practical classes for more than twenty or five-and-twenty hours in the week. In the second half, when he has to do more with practical than with theoretical subjects, he may manage from thirty to five-and-thirty hours, or more. In England first and second year students are much harder worked, if they are conscientious. Anatomy, physiology, and chemistry, lectures in the morning, and dissection all the afternoon, with home-work at night, would startle a Heidelberg student, with his big dog, his little cap, his pipe, his duels, and his beer, or the numerous Vienna students who spend a pleasant afternoon in whist and billiards at the Café Schwab.

The third chapter is entitled "The Students and the Future Medical Man," and deals with the preliminary education of the medical student, and the examination system in general. A medical student cannot have too good a general education before entering on his special professional career. At school, in the ordinary sense of the word, he ought to acquire that habit of attention which is so necessary for the reception and comprehension of systematic lectures. Professor Billroth also regards the substratum of *classical education* which is laid at school as of the greatest value, and by no means to be done away with or supplanted. "The study of Greek and Latin not only forms a good mental training, but there is nothing so well fitted as the contents of the old classical historians and poets to give boys and young men elevated and ideal notions; moreover, without Greek and Latin any attempt to understand a nomenclature such as is employed in the natural sciences and in medicine is more or less hopeless." Mathematics, Professor Billroth does not regard as a necessary part of a medical student's previous education, except so far as they are necessary for the ordinary purposes of life. Not only is it impossible to give all medical students a thorough mathematical training, since in his experience a talent for mathematics is more rarely met with than any other kind of scientific ability, but, on the other hand, the comprehension of the natural sciences and of medicine in its scientific aspects is a process which is rendered much easier by a vivid imagination than by logical reasoning. "The finest development of sensory perceptions, acuteness in observation, the harmonious combination of mental images into lively pictures, and practice in the so-called inductive methods of reasoning, are the qualities which the teacher of the natural sciences and of medicine has to bring out in his pupils, and for which he requires that they shall have some previous general education." At school, the future medical student need not learn chemistry at all; his time will be better spent in learning physical geography, and so much of physics as is necessary for its comprehension, and history. Professor Billroth lays great stress on the latter subject. "In my notion of scientific activity," he says, "history and research are so indissolubly united that I cannot conceive the one at all without the other."

A large part of the present chapter deals with subjects of purely German interest, chiefly with regard to the development of the examination system in Austria and Germany. To those who are specially interested in medical education, and who can read German, we would recommend its perusal, if only for the curious extracts it contains from the Emperor Joseph's remarkable regulations for the better organisation of the Medical Faculty in 1786. We shall only here, however, call our readers' attention to some of Professor Billroth's own vigorous remarks which are scattered through the chapter. Thus, where he deals with examining from the examiner's point of view, and sums up his own experiences in that capacity, his opinion is worth noting—"that examining has always been the most difficult, and the only burdensome duty which my office as professor brings with it." And again—"The examiner who is not completely master of his special subject, and who has not often examined and acquired experience in the art and in estimating the different psychological peculiarities of the candidates, and who is not completely *au fait* in the style and the subject-matter of modern teaching and in the amount of knowledge which a student is capable of acquiring, *always examines too strictly*, and generally after a false system." With regard to the necessity for maintaining a high standard in examinations, he says that "at the end of his educational career the student ought to have reached the highest level of knowledge of the whole science of medicine and its sister sciences which the duration of his studies and his personal abilities render him capable of reaching. For most young people the time of their examination is that at which the highest intellectual point is attained which they can ever reach. Every generation ought to plant the steps of its progress (*Fortschrittsfüsse*) higher on the mountain than the former one. For example, were a young physician to be satisfied with the same amount of physiological knowledge which an old one still retains at the end of his career, the education of doctors would be ever sinking lower from one generation to another." As to the length of the period of special education which should be required of every medical student, Professor Billroth expresses himself strongly. He thinks that *five* years should be the minimum period (it is already so in Austria and Russia, but in Germany proper only four years is obligatory). To the objection that such a period makes the cost of medical education too great, and prevents the sons of poor persons from entering the profession, he replies—"I consider it my duty to warn everyone who has not a certain amount of private means, as well as of education, industry, and talent, not to enter upon the study of medicine. Whoever has not money enough to pay for his education and to support him in the early years of his practice, or else is endowed with a remarkable amount of indifference for the comforts of life, will find the study and the profession of medicine a source of perpetual misery to himself." In addition to excluding poor students, Billroth would refuse to allow anyone the right to practise until he had completed his twenty-fourth year. Without denying that it is possible to acquire enough knowledge to practise before that age, he thinks "that there can be few men who are quite fit to enter on a medical career before they are twenty-four,—putting aside the rather curious contradiction which is involved in allowing a man who is scarcely more than a minor in the eyes of the law to dispose of the health and the life of others while he can scarcely do what he likes with his own property." Professor Billroth is not one of those who regard the amount of knowledge which the modern medical student has to master for his examinations as so remarkably greater than that which the old physicians had to acquire. The students of the time of Galen, Avicenna, Paré, and others had to get up hundreds of prescriptions, theories, and quotations from old writers to prepare for their disputations; and it is easy to convince oneself, by reading a medical work of the fifteenth or sixteenth century, and observing the complicated symptomatology and extraordinary combinations of drugs which are there described, that the brains of the doctors of those days had

to contain and retain as much as, or perhaps more than, ours have now, though the kind of knowledge and the value of it was very different. After all, what makes a medical man successful in practice and beloved by his patients is, as the author points out, to a very slight degree a knowledge which can be brought to the test of a formal examination. "To detect and properly combine the symptoms of a disease, to separate what is important from what is unimportant, to decide when and how certain treatment should be used, depend quite as much on individual talent as on knowledge and experience. The way to deal with patients, to win their confidence, the art of listening to them (for the patient always wants to talk rather than to hear), of quieting their fears, of comforting them, or of directing their attention earnestly to important points, can neither be learnt from books nor made the subject of examination even at the bedside. The student must acquire what can be learnt of the above from the example of good teachers; and this makes it all-important that each student should go where he finds the kind of teacher with whom he has most sympathy. Professor Billroth reaffirms what so many persons must have noticed—that the student who fails under one teacher may succeed under another, —and that for this reason it may be expedient not to make it too difficult for students to change their school, and if they fail at one to try if they cannot succeed better at another. The end of this chapter is taken up with a discussion on the causes of the rise and fall of the numbers of students at the various German universities, which the author thinks mainly depend on alterations in the teaching staff, the best staff ultimately attracting the most students. Chapter iv. deals with the composition of this staff as it is, and as Professor Billroth thinks it ought to be. According to him a medical faculty should have *nine* professors in ordinary—of (1) anatomy; (2) physiology; (3) general pathology and pathological anatomy; (4) pharmacy and materia medica; (5) special pathology, with charge of the medical clinic; (6) surgery, with clinic attached; (7) diseases of the eye, with clinic; (8) obstetric medicine, with clinic; and (9) forensic medicine and hygiene. With the right men in the right place he deems this number sufficient. Extraordinary professors of other specialities are to be excluded from the power of voting, and the privileges of the nine. A man's weight and influence should depend on the value of the work he does.

Much of this chapter is taken up with discussions of purely German interest. The part, however, in which the author traces the historical development of the German and Austrian medical schools is of more general application, as the influence of other nations on German science is sketched out. Two points the author especially insists on as a result of his analysis: first, that it is only great investigators and men specially gifted as teachers who found great "schools"; their magnetic influence draws new talent to their side, "not always directly by their *vivâ voce* teaching, but often by the new ideas which they scatter through the literature, and which may not bear fruit till the second or third generation." The second point is, that to form the kind of material which a teaching staff should have, "the most distinguished men of science should be attracted to the universities or schools, and there allowed a fruitful soil (*Boden*) for their abilities in liberally furnished laboratories and other scientific endowments." Professor Billroth gives a very careful account of the professional salaries in all the German-speaking universities, whereby we see that they vary between 2400 marks (£120) as the minimum in Switzerland, to 8000 marks (£400) in Austria (Vienna). These sums may look paltry at the first glance, but we must remember that there are lots of men in London who teach, and have taught well, for the merest trifle, or even for nothing at all. Of clinical teaching this is eminently true. Those who like figures will also find statistics of the cost of medical education at the various German universities, allowing four years for its duration. Thus we find that, roughly speaking, a "doctor" costs eleven times as much to produce at Kiel as at Vienna, and five times as much at Innsbrück as at Vienna; or, in other words, that it is cheaper to have large universities or faculties than small. And yet in London, as a rule, the largest schools are the most expensive! Statistics are given of the yearly cost of all the museums, pathological, physiological, chemical, and other laboratories, and institutes in the German universities; and, taking the physiological laboratory at Leipzig, which is the most expensive of all, as an example, we may say that its total annual maintenance amounts only to 16,350 marks (£820).

The chapter ends with a comparison of the sums which are laid out on medico-scientific faculties in Germany, with those which are expended on its army; and we may well wonder what the world is coming to when such a poor country spends annually on an infantry regiment of three battalions—in all 1673 men—about 800,000 marks (£40,000), or half as much again as a medical faculty costs yearly to keep up. In spite of this, Professor Billroth, with all his enthusiasm for medical education, general education, and progress, like a true Prussian, supports the army through thick and thin. It is, he says, a powerful educational force, which increases patriotism and national spirit, which encourages industry and gives work to thousands, and lastly, prevents the ever-increasing development of individual rights and freedom from doing what else they too naturally must do—"Increase the strength of the strong, and aid in the repression of the weak"!

In Chapter V., in which the relationship of medical faculties to the other faculties of a university are discussed, Professor Billroth launches out into a most philosophical argument in dealing with this question, but it is impossible without more space than remains to us to follow him through it. One thing, however, strikes us as peculiar in the outcome of his remarks: that though he admits that the medical student has no time for learning anything but what is professional during his professional career, the medical faculty must remain bound up with the faculties of law, philosophy, etc., all the same. They must stay as they are. In the same way, though he argues that theology is no object of scientific study, since there is nothing new to be discovered in it, yet since the State ought to exercise control over the institutions in which ecclesiastics are educated, theology also must be taught now as ever in a university. Billroth's ideas of the influence of the State on education, and the dependence of all teaching on the central power, at the end of this chapter, are scarcely in harmony with his views further back on complete liberty of teaching. Perhaps we have mistaken the tenor of his thoughts, and if so we ask his pardon. We cannot help feeling, however, that the liberalism of the book is seriously marred at places by views of a very opposite character, a flagrant instance of which is the violent polemic against the Jews, which excited so much uproar at Vienna when the book appeared.

An appendix to Chapter V. contains an account of the general arrangement of the non-German medical faculties of the world. On the whole, Professor Billroth seems to think that the German system has little to borrow from outside. Of medical education in France he speaks in very contemptuous tones. The French student is too much looked after, too little permitted to do things for himself; his knowledge is put before him too much cut and dried, and he has too many examinations. In the lecture-room and clinical wards the French professors teach and operate with a sole view to effect—to startle the student, and "make him think how frightful is the gulf between him and them." In France the State does everything in controlling medical education; in England it does next to nothing. In England, Professor Billroth tells us, things are more as they were in the middle ages than in any other country! Custom and habit are the ruling powers which influence the stolid "Englander." Schoolmasters will blush to hear that English upper middle-class boys are almost as inferior to German boys in general knowledge as French boys are; but Professor Billroth forgets to tell us of the fearful cramming which German boys have to undergo—by order of the State! Professor Billroth's idea is that medicine cannot be learnt in its completeness at Oxford or Cambridge, because the necessary hospitals and clinics are wanting. He is in error. Both Oxford and Cambridge are provided with clinical hospitals; but the funds which might be used to endow a staff of professors is still applied to the "mediæval" use of endowing fat theological chairs. He has not heard of the system of "unattached students," which we trust will render the Universities more and more accessible to persons of slender means, especially medical students. We hope that the lower level of the profession has risen so much that it is nearer the upper level than the following sentence of Professor Billroth's might lead foreigners to imagine:—"The differences in military education between a general and a sergeant are not greater than the differences in scientific culture between the higher and lower grades of medical men in Great Britain." Professor Billroth is wrong when he speaks of "medical schools" which are also "licensing bodies," and he is wrong again when he asserts that "dissection and anatomical demonstrations on the dead body are excessively rare in England, such scarcely

occurring, except at post-mortems, just as in the middle ages"! Perhaps the next time he visits England, Professor Billroth will discover that dissection is as well and thoroughly taught to, and learnt by, the student as in Germany. When he says that bodies are scarce he is right, but abundant material does not make careful dissectors. We cannot admit that "the number of lectures is too small, and that the material is never made full use of." Surely a six months' course of lectures—an hour five times a week—is enough for any one subject treated systematically; and such courses are given in this country. One remark—the last we shall notice—is, however, unfortunately still too true, though every day is making it, we hope, less so: "Clinical instruction is very deficient, *because the teachers speak so little at the bedside.*" Alas! for the wasted hours of many of us, because our teachers, when we were students, "spoke so little"; because they rushed through the wards, with their followers eager to drink of the fountain of knowledge, but it was dry; because they came late and hurried early away with a glance at the patients, and their interest somewhere else, and left us to gain instruction as we could.

There are some admirable clinical teachers in London, but there are many more wanted. Let the younger men take Billroth's sentence to heart, and try to "speak" more, for the "way" will come, if there's only the will.

Theory of Medical Science: The Doctrine of an Inherent Power in Medicine a Fallacy. The Ultimate Special Properties of Vitality and the Laws of Vital Force Constitute the Fundamental Basis of Medical Philosophy and Science. By WILLIAM R. LUNHAM, M.D. Boston: James Campbell. 1876. Pp. 150.

THIS is a very closely argued book, and evidently the result of much deep thought. In a preliminary synopsis the author says that "the present basis of the theory of medical science is indoctrinated from TWO sources or powers, which are made responsible for the activities manifested by the human organisms in health and disease—namely, the presumed latent and inherent power in *materia medica* and *poisons*, and the inherent power of the organism, or vital power. The supposed power in materia medica and poisons is an error of gigantic magnitude, which has no place in nature, and is the greatest delusion of thought ever adopted by civilised humanity.

"The science of medicine," he says, "is based on only ONE source of power—namely, the VITAL POWER,—and a correct theory of vitality demonstrates the ideal delusion which has invested *materia medica* and *poisons* with active principles or inherent powers.

"The relation of *materia medica* and *poisons* to the human organism is not one of *power* but of *cause*."

The intention of the book is stated to be to produce a revolution in medical philosophy—not, if we understand aright, in *practice*, but in the explanation of that practice. It is very closely written, and may attract those readers who delight to dive into the foundations of belief.

Wine and its Counterfeits. By JAMES L. DENMAN. London: 20, Piccadilly. 1876. Pp. 60.

IN this little pamphlet the author gives a summary of the chief points made out as to the chemical and dietetic qualities of pure wine, and the tests by which it may be known. He denounces the spoiling of wine by adding to it brandy, and by depriving it of its natural acids, showing that a certain amount of tartaric acid is natural to wine, wholesome to the stomach, and the parent of those fragrant ethers which are the glory of old wine. Mr. Denman, it is well known, assigns a very high value to the Greek wines, and may be gratefully remembered as the wine merchant who brought the bright and exhilarating "St. Elie" to the notice of the English connoisseur of wine.

A MELANCHOLY occurrence is reported from Paisley. Dr. M. Brunton, House-Surgeon of Paisley Infirmary, who had been ill with fever in that institution for about a week, escaped from his bedroom whilst in a state of delirium on Tuesday last, climbed the wall enclosing the grounds, and was shortly after found drowned in the river Cart which runs close by. Deceased was appointed House-Surgeon to the Infirmary only three weeks ago.

GENERAL CORRESPONDENCE.

THE "HOUSE-SURGEON" TO THE LONDON HOSPITAL.

LETTER FROM MR. R. KERSHAW.

[To the Editor of the Medical Times and Gazette.]

SIR,—Referring to a paragraph in your issue of the 11th inst., apparently the copy of a handbill circulated by "Dr. Charles Low, surgeon, accoucheur, etc.," I ask the favour of a small space to say that a Mr. Charles Arthur Low entered the London Hospital as a medical student in October, 1870, and qualified, I believe, in 1874, but he never held the office of "House-Surgeon." His name does not appear in the "Medical Directory." I am, &c., R. KERSHAW, Sec.

London Hospital Medical College, November 14.

THE SCHOOL OF HOMŒOPATHY.

[To the Editor of the Medical Times and Gazette.]

SIR,—An attempt is now being made to get up a "School of Homœopathy," and I believe the movement has even been advertised in one of the "allopathic" medical journals. Well, I for one have no objection to their getting up as many schools as they like; but I think the public ought to be clearly told *what kind* of "homœopathy" is going to be taught in the new school.

In the *Monthly Homœopathic Review*, July, 1875, page 420, the following passage occurs:—"In November, 1874, I took the patient to Mr. ——, a well-known surgeon in our ranks, for the benefit of consultation. He cauterised the urethra with stick nitrate of silver. Unfortunately this procedure set up an acute cystitis, utterly uncontrollable by remedies. Incessant enuresis was superadded to the patient's sufferings, who from this time gravitated downwards till she finally sank on April 21, 1875."

The following interesting prescriptions by *professed* homœopaths have recently come under my knowledge, and form a supplement to those I published at page 515 of your journal for 1874, vol. ii.:—

1. Kali bromidum gr. clxxx., tinct. hyos. ʒ ij., aqua ad ℥vj.; ℥ss. every night at bedtime.

2. Unguent. zinci benzoat. ℥j., extr. bell. ʒ j.; the salve to be used after each action of the bowels.

3. Tinct. acenit. ℥l., tinct. nucis vom. ℥l., aqua chloroform. ad ℥vj.; one teaspoonful half-hourly for eight doses, then hourly. Hydrarg. subchlor. gr. j., extr. bell. gr. ¼, pil. coloc. co. gr. viij. [quantity of last ingredient doubtful]; ft. pil ij., h.s.s.

4. Recently a respectable married woman consulted me for tertiary syphilis. She had been the round of several of the professed homœopaths in Manchester and Liverpool. The following was their treatment:—No. 1. Sarsaparilla mixed with iodide of potassium, and cauterising of the throat with nitrate of silver. No. 2. Iodine purum gr. j., kali iodid. gr. x., aq. ℥viij.; a spoonful three times a day. No. 3. Ten drops of pure iodine to be injected per vaginam. No. 4. Liquor Donovanii ʒ ij., aquæ ℥iv.; a teaspoonful three times a day after meals. No. 5. Tinct. acon. ℥ss., tinct. capsici ʒj., chloroform. ʒ j., sp. vini rect. ℥ss.; to be applied on cotton-wool to the root of the painful teeth. No. 6. Potass. chloratis ʒ ss., acid. hydrochlor. gtt. xvj., aq. ℥ viij.; a dessertspoonful ter die.

5. Ammon. bromid. ʒ iv., potass. bromid. ʒ viij., aquæ ℥vj.; three teaspoonfuls every morning and one at night.

But the worst is to come. Not very many months ago a professed homœopathic physician was seriously ill. Another professed homœopath was called in, and ordered leeches, a blister, and twenty grains of bromide of potassium every two hours!

After all this peculiar "homœopathic" practice, we may fairly ask the promoters of the "School of Homœopathy" to inform us which homœopathy is to be taught there—that of Hahnemann, or that of the authors of the above prescriptions and their colleagues?

One word to the professed homœopaths. Some of them seem dying to be on friendly professional terms with that portion of the faculty from which they have separated themselves. I really do not see what good it could do them, as their diverse principles would always prevent their meeting in consultation with any benefit to the patient, except for diagnosis

or surgical operations. But if they so much desire it, they must be honest, and call a spade a spade, and not profess one thing and practise another. I never met an "allopath" who spoke disrespectfully of a true "homœopath," who really believed in and carried out the principles he professed; but their opinion of those whom Hahnemann himself denounced as "mongrels" is not very flattering.

I enclose my card. I am, &c., JUNIUS.

November 9.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 1.

WILLIAM OVEREND PRIESTLEY, M.D., President, in the Chair.

CÆSARIAN SECTION FOR CICATRICIAL OBLITERATION OF VAGINA.

DR. GALABIN showed the uterus and adjoining parts from a case he had operated upon. The patient had been left for two days in labour three years ago, and had had incontinence of urine since. The vagina had contracted so as scarcely to admit a No. 6 catheter. Cæsarian section was performed. Carbolised gut sutures were employed for the uterine wound. The uterus, however, could not be made to contract, and the patient expired before the abdominal wound was closed.

DR. MEADOWS thought there could be no doubt as to the propriety of the treatment adopted by Dr. Galabin, but he took exception to one point in the operation—viz., the employment of catgut sutures in the uterus. They had most signally failed in his own and Dr. Routh's experience. The interrupted current would probably have been most useful in restraining hæmorrhage and securing firm contraction of the uterus.

DR. ROGERS had seen two cases of Cæsarian section recover where no sutures had been employed for the uterine wound, the peritoneal cavity not being closed until firm contraction of the uterus had taken place. He had also seen two successful cases where silver wire sutures had been employed.

CASE OF EXTREME HYPOSPADIAS.

DR. COOPER ROSE exhibited drawings of a case existing in a boy aged fifteen, who had been baptised, brought up and educated at a public institution as a girl. He also showed some drawings, lent by Dr. Westmacott, of a somewhat similar malformation existing in a widower aged sixty.

SPECIMEN OF EXTRA-UTERINE FŒTATION.

DR. MEADOWS exhibited for Mr. Moore, of Moreton-in-Marsh, a specimen of the tubal variety, which had burst between the fourth and fifth months, the patient dying in about fifty hours. The Fallopian tube of the side affected joined the uterus at some distance from the fundus, and seemed to have been the cause of the abnormal gestation, by causing an obstruction to the passage of the ovum along the oviduct. He had observed the same thing in other cases.

THE PRESIDENT thought the specimen nearer the fourth than the fifth month.

DR. BRAXTON HICKS suggested that an extra-uterine fœtus was generally below the normal standard.

DR. HAYES thought a committee should be appointed to report upon the specimen.

CASE OF EXTRA-UTERINE GESTATION—REMOVAL OF LIVING FŒTUS BY ABDOMINAL SECTION—RECOVERY OF BOTH MOTHER AND CHILD.

DR. JESSOP, of Leeds, narrated the particulars of a case as above. The placenta was left untouched, the lower angle of the wound being left patulous, to allow of the *débris* being discharged. The child was as healthy, vigorous, and large as an average child born in the natural way. It survived eleven months, when it died of croup and inflammation of the lungs.

THE PRESIDENT remarked that, as far as his knowledge went, this was the first recorded instance of extra-uterine fœtation in Great Britain where both mother and child had been saved by abdominal section. Notwithstanding the good result obtained, it must not be taken as furnishing a precedent and justification for abdominal section in other cases of extra-uterine fœtation. In many instances the child died, became encysted, and was converted into an inert mass, which gradually diminished in size, and did not imperil the life, nor eventually seriously interfere with the comfort of the mother. The dangers of operating were greatly diminished by interfering at a late period, when the fœtus was dead and suppuration established.

DR. MEADOWS reminded the Society that some years ago he had advocated the very practice which this case now so triumphantly vindicated. He thought it our bounden duty to interfere and rescue the child from its perilous position. Statistics of operations hitherto seemed adverse to this, but the almost uniformly fatal character of the operation was traceable to the forcible removal of the placenta, which gave rise to most alarming and generally fatal hæmorrhage. He hoped Mr. Jessop's would be the starting point of a new practice. Indeed, he would go further, and express a hope that it would some day be regarded as sound practice in all cases where tubular pregnancy existed to open the abdomen, and treat the case as we would an ordinary ovarian tumour—viz., by removal.

DR. SNOW BECK remarked that the Fallopian tube was perfectly open to the passage of a small probe in the specimen Dr. Meadows had brought forward that evening.

DR. WYNN WILLIAMS observed that the tube passed through the muscular tissue obliquely.

MR. SPENCER WELLS asked for further details as to the provision for the escape of fluid from the peritoneal cavity after the operation. As long as the opening in the abdominal wall was free the patient did well, but as soon as the funis came away there were intervals of accumulating fluid, at times very fetid, with great pain and feverish attacks, followed by gushes of pent-up discharge and relief, until a fresh decomposition took place. Perhaps this might have been avoided by the use of a drainage-tube of glass or vulcanite, and the injection of some disinfecting fluid as carbolic acid or iodine. It was by attention to such details in after-treatment, as well as to improved methods of operating, that we might hope for very much better results now and hereafter than had previously followed gastrotomy in cases of extra-uterine fœtation.

DR. CLEVELAND inquired if he had understood correctly that the patient had been sustained for a month by nutrient enemata. He thought they might be more successfully resorted to than they had hitherto been.

DR. BRAXTON HICKS thought we should distinguish between this, an exceptional case, and those where the sac was ruptured and the cyst entire. The treatment was totally different where there was an amniotic sac; this should be stitched to the peritoneum, and the abdominal wound left open. Had the funis in this instance been cut off, and the wound closed, the placenta would probably have shrivelled up.

DR. JAMES EDMUNDS mentioned a case of Cæsarian section in which the placenta had been left in the uterus on account of a firm adhesion. The patient recovered.

DR. EDIS called attention to the statistics collected by Dr. Parry in his recent valuable monograph on extra-uterine pregnancy. He showed that in 500 cases, 248 women went to or beyond term. Of these 122 lived and 125 died, giving a mortality of 50·4 per cent. Of 60 cases operated on, 34 lived and 26 died, giving a mortality of 43·33 per cent. Of 188 cases reaching or passing beyond term and left to nature, 88 lived and 99 died, giving a mortality of 52·65 per cent.; whilst of 62 gastrotomies for the removal of extra-uterine children during or at the end of gestation, 30 lived and 32 died, a mortality of 51·61 per cent.—only 1 per cent. in favour of gastrotomy. Dr. Edis thought the time had come when we should reconsider the subject, and not be wholly influenced by the mere statistics of preceding operations, more especially when we considered the great advancement that had taken place in the diagnosis of these obscure cases, and the improved method of dealing with the placenta and the after-treatment generally. In a certain number of cases extraction per vaginam without opening the peritoneal cavity at all could be resorted to, and the risk to life thus materially lessened.

DR. PALFREY thought we were tied down by the tradition of our old teachers. In his own experience he had formerly been uniformly unsuccessful. The patients died from two causes—some were poisoned by opium, and others from too much stimulant. He considered it the duty of every man to operate for extra-uterine fœtation as soon as it had been clearly ascertained. The patient's life was in peril, and we were bound to rescue her from that peril if possible. He regarded the statistics of our forefathers as valueless in guiding us in the present day.

Dr. Aveling thought the position of the child in the abdominal cavity a subject of great interest. Floating freely as it did when alive, without the retaining influence of the uterus, he expected to find the head carried by its greater weight towards the pelvis; the opposite, however, was the case. This might be accounted for by the recumbent position which the woman had been obliged to maintain, and by the altered shape of the abdominal cavity caused by the filling up of the pelvis by the enlarged uterus and the placenta. The case, being so unusual, offered a good opportunity of testing the relative value of the gravitatory and reflex theories of fœtal position near the end of pregnancy.

Dr. Wiltshire thought Mr. Jessop ought to be congratulated on the success of his case, this being the first case in the literature of the English language where both mother and child had been saved. Keller, of Strasburg, had related nine cases, in which four of the mothers recovered and seven children, one being a case of twins. The diagnosis of these cases was very difficult, especially in the early months. In cases of Fallopian gestation we were apt to get rupture about the second month, when the cases were regarded as pelvic hæmatocele or cellulitis, there being a mass detected on one or other side of the pelvis, and the uterus enlarged. In the later months, even if fœtal movements were very distinct, the case was not necessarily one of extra-uterine gestation. A case occurred in Paris, which everyone who examined it thought to be extra-uterine, but the head presented, and the child was delivered naturally. In peritoneal cases we ought to operate, leaving the placenta untouched and allowing a free passage for the *débris*.

Dr. Wynn Williams alluded to the case of Dr. Greenhalgh's, where the case was diagnosed very early as one of extra-uterine fœtation, and the liquor amnii aspirated.

Dr. Jessop, in reply, said he was highly gratified at the reception his communication had met with. Nutrient enemata were relied upon wholly for the first few days. As to the insertion of a drainage-tube by the side of the umbilical cord, not knowing what would become of the placenta—whether it would remain attached to the pelvic tissues and become one with them, or atrophy, or dissolve and come away,—the tube was not employed, lest it should serve as an additional foreign body, and therefore an additional element of danger.

OBITUARY.

LADY BELL.

(*From a Correspondent.*)

We have to-day to chronicle the death of Lady Bell, widow of the late Sir Charles Bell, the physiologist, at the advanced age of nearly ninety. Lady Bell was the second daughter of Mr. Charles Shaw, of Ayr, and was married to Sir Charles, then Mr. Bell, in 1811. Marion Shaw in her early youth was famed through Ayrshire for her beauty—a beauty she retained through her long life, for few more beautiful or graceful women were to be seen than Lady Bell, even at an age when infirmity represents the strength of most mortals; but she seemed to flourish like a green bay-tree to extreme old age.

When she was married to Mr. Bell, he was struggling into fame as a lecturer on anatomy and surgery in London, and she contributed not a little to lighten the burdens incidental to a successful professional career by acting as his amanuensis for some of his early popular writings, and by making the enthusiastic physiologist's home bright and happy by her buoyant disposition and agreeable manners. It may be mentioned that his "Animal Mechanics," his "Anatomy of Expression," and the Bridgwater Treatise on "The Hand," went to the press mainly in her handwriting—and a clear and steady hand it was to the last. There are before us a few lines, on a copy of "The Hand," written in 1874, when Lady Bell was in her eighty-eighth year, without a shake or falter, and which might well pass for the holograph of a woman of middle age.

After a residence of some five-and-twenty years in London, Sir Charles was appointed Professor of Surgery in the University of Edinburgh. In Edinburgh, Lady Bell was famous for her elegant home and happy *réunions;* but her devoted husband was taken from her in 1842, and she returned to London, where she had made many friends in the scientific world during her former residence. Ordinary women who have been the helpmates of men distinguished in science or art are apt to fall into obscurity on becoming widows, either living on the memory of the past or dragging out what remains of life in patiently awaiting the future; but this was not the case with the venerable lady who has just departed from us. Her married life had brought her into community with all the scientific men of the day, and this society of the learned she cultivated during the thirty-four years of her widowhood, neither forgetting that she had, as the wife of one of its foremost rank, taken part in it, nor being forgotten by her late husband's former friends and fellow-workers. A great reader, a woman of keen perception, with a mind capable of entering into the controversies and topics of the day, she was able to count among the friends of her widowhood many known to fame in literature, in science, and in art. These friends reciprocated her friendship not only out of respect to the memory of her husband, but out of regard for herself; for, keeping pace as she did with the age, she was always able to discourse on the last novelty with each in his own peculiar province. Lady Bell was endowed with great conversational powers. She had a ready flow of thought, and clothed her ideas in ornate and precise language. Up to the date of her last illness, though within a few months of her ninetieth birthday, she read the *Times* daily, and nearly all the new books in science and light literature, and she often put her juniors to shame by acquaintance with new matter of which they had not heard. Her mental work was not confined to the perusal of the writings of others; she republished several of her husband's works, carried on an animated correspondence with a large circle of friends, wrote verses occasionally, and at the age of eighty-seven edited her husband's treatise on "The Hand."

She had a peculiar power of disconnecting herself from the passing troubles that beset everyday life—troubles that make up the daily life of most mortals, and disqualify them for the consideration of topics necessitating thought. She was not blessed with children, and this circumstance may have been one of the causes that enabled her to take so much more interest in the graver topics that engross mankind. Yet she was no advocate of the modern conception of woman's rights: she neither wished for her own presence nor that of any of her sex in our legislative or municipal assemblies. She regarded woman's proper mission as that of a reasoning helpmate to man; as no inferior to him, but as no supplanter of him. She was essentially feminine in her feelings and tastes; every hour of her life, her devotion to her husband while he lived, and her devotion to the perpetuation of his memory, demonstrated it. Altogether, she was a most attractive woman—not only from the power of mind God had continued in her at an age when most fall into imbecility, but from her liberality of views, her tolerance of the opinions of others opposed to her own, her agreeable manners, her vivacity, and her happy art of entering into the hopes, prospects, and aspirations of others who belong to the generation that succeeds her.

A Remarkable Case of Injury to the Head.—Dr. Barlach relates the case of a boy, twelve years old, over whose head the wheel of a waggon had passed, but who then got up and walked beside the horses. He did not suffer much pain, but felt faint, and as if something were projecting from the head. A cloth was wrapped round his head, and he was conveyed in a waggon to Dr. Barlach's residence, who saw him about an hour and a half after the accident. He was quite sensible, and had his face and head covered with dried blood. The head having been cleansed, under chloroform, it was found that the right half of the frontal bone had become separated from all its connexions, being held on to the left half only by the clotted blood and hair and some shreds of periosteum. The portion of bone measured nearly nine centimetres and a half. The dura mater was uninjured, but covered with blood, small stones, straw, etc. It is to be observed that during the inhalation of chloroform the pulsations of the brain became remarkably stronger, and all the vessels that were visible assumed a very dark appearance. The scalp was brought over the exposed parts, and the ensuing suppuration treated by drainage. Febrile action continued during the first two weeks, after which all did well, the lad having quite recovered by the end of January, the accident occurring in October. His intellectual faculties have undergone no alteration, and he suffers little inconvenience from the defect in his skull.—*Allg. Wien. Med. Zeitung*, September 26.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent Second M.B. Examination :—

SECOND M.B. EXAMINATION.

First Division.—Burton, Samuel Herbert, University College; Edwardes, Edward Joshua, St. Mary's Hospital; Ferrier, John Christian, Guy's Hospital; Fox, Thomas Colcott, University College; Hancock, John Gatchell, King's College; Harrison, Charles Edward, St. Bartholomew's Hospital; Hellier, John Benjamin, Leeds, and University College; Hunt, Joseph William, University College; Jones, Arthur Henry, Guy's Hospital; Kidd, Walter Aubrey, Guy's Hospital; Lamb, William Henry, Guy's Hospital; Pepper, Augustus Joseph, University College; Pinnell, Thomas Mark, University College.

Second Division.—Blake, Henry, St. George's Hospital; Boddy, Hugh Walter, Royal School of Medicine, Manchester; Briggs, Harry Beecham, King's College; Duke, Herbert, Guy's Hospital; Langley, John Geoffrey, University College; Parry, Thomas Sharp, University College; Pughe, Rhinallt Navalw ap Joan, Liverpool Royal Infirmary; Rogers, Thomas King, University College; Rossiter, George Frederick, St. Thomas's Hospital; Seward, William Joseph, University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 13th inst., viz. :—

Bain, David Stuart Erskine, L.S.A., Newbury, Berks.
Blaker, Thomas F. I., L.S.A., Brighton.
Coates, William H., Hackney-road.
Cree, Percy K., L.S.A., St. John's-park, N.
Grant, James Dundas, M.B. Edin., Edinburgh.
Hassall, John, M.B. Edin., Northwich.
Higgins, George Hodgson, L.R.C.P. Edin., Leeds.
Irwin, John Arthur, M.B. Dub., Manchester.
Jackson, Edwin, L.S.A., Whalley Range.
Jolly, Robert W., L.S.A., Shooter's-hill.
Montbrun, Domingo, M.D. Caraccas, Port of Spain, Trinidad.
Mills, Robert James, M.B. Aber., Norwich.
Norman, John Edward, Durham.
Proffitt, William J. W., Burton-on-Trent.
Rees, Alfred, L.S.A., Maesteg, Glamorganshire.
Rigby, William Bradshaw, L.S.A., St. Helen's, Lancashire.
Rule, George Frederick Henry, L.S.A., Elgin-crescent.
Scott, William Francis, M.D. McGill, Hull, Canada.
Simpson, James Herbert, M.B. Aber., Pontefract.
Skerman, Sidney, L.S.A., Waltham Abbey.
Smelt, Frank Hayes, L.R.C.P. Edin., Old Trafford.
Symons, John, L.S.A., Penzance.
Taylor, Henry Edward, L.S.A., Bradford.
Thain, Leslie, L.S.A., Peckham Rye.
Todd, Howard J. McC., L.S.A., Kennington.
Tucker, Milton M., M.D. Toronto, Ontario.
Watson, Charles Scott, M.B. Edin., Ochterlony, Forfar.
Wilkie, David William Balfour, M.B. Melb., Melbourne, Australia.

The following gentlemen were admitted Members on the 14th inst., viz. :—

Alford, Charles E., L.S.A., Crewkerne, Somerset.
Blake, William H., Lymington, Hants.
Buncombe, John D., Wellington, Somerset.
Cambridge, Thomas A., L.S.A., Gower-street.
Dring, William E., L.R.C.P. Edin., Camden-road.
Farbstein, Henry, Hull.
Ferguson, John, Manchester.
Gibson, Charles P., Leeds.
Goodchild, Francis, Ealing.
Greenwood, Major, Dalston.
Herbert, Ethelbert E. H., L.R.C.P. Edin., Devonport.
Hudson, James, L.S.A. Holt, Norfolk.
Kyan, John H., Preston.
Newton, James, Manchester.
Procter, Henry C., Leeds.
Sangster, John I., Barnsley.
Walker, Horace, L.R.C.P. Lond., Camberwell.
Whitley, Francis G. H., L.S.A., Truro.
Wickham, Henry, L.S.A., Tetbury, Gloucestershire.

The following gentlemen were admitted Members on the 15th inst., viz. :—

Collins, William E., Brecon.
Cuthbert, William W., L.S.A., Mendlesham, Suffolk.
Duggan, Motherwell, Durham.
Elcum, Donald, L.S.A., Hampstead.
Gadsby, John T., Godmanchester, Hunts.
Giles, George M. J., Alexandra-square, South Kensington.
Ingram, Ernest F., Worcester.
Lewis, Thomas P., Edinburgh.
Rean, William H., L.S.A., Poplar.
Richardson, Sidney L., Sydney, N.S.W.
Sedgefield, Arthur R. W., Hammersmith.
Webb, William H., L.S.A., Wellington, Shropshire.
Wickers, Henry A., Grosvenor-road, Pimlico.
Young, Archibald P., Norwood.

The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates on the 10th inst., viz. :—1. Name, in their respective relations, all the structures which are divided in amputation through the wrist-joint. 2. Give the relations of the posterior tibial artery, from its commencement to its bifurcation ; and describe the operation of tying it in the middle third of its course.—3. What is enchondroma? Describe its characters, and mention the structures in which it is developed. 4. What effects are likely to follow the lodgment of a foreign body in the iris? Describe the treatment you would adopt for such an injury, and its consequences. 5. Mention the various complications of acute gonorrhœa; and describe the more prominent symptoms of each. 6. How is fracture of the base of the skull usually caused? State and explain the symptoms which are regarded as characteristic of the injury.

The following were the questions on the Principles and Practice of Medicine submitted to those candidates on the 11th inst. who had not passed a recognised medical examination, viz. :—1. What are the consequences, local and general, and what the diagnostic signs, of the following varieties of heart disease :—(*a*) Obstruction at aortic orifice, (*b*) incompetence of aortic valve, (*c*) obstruction at mitral orifice, (*d*) incompetence of mitral valve? 2. How would you treat (medicinally) a case of phthisis :—(*a*) With the object of improving the general health, (*b*) with the object of relieving cough, (*c*) with the object of arresting hæmoptysis, (*d*) with the object of checking diarrhœa? Give the doses (for an adult) of the various drugs you would employ in each case. 3. What are the various causes of obstruction of the œsophagus? How would you distinguish them clinically from one another?

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday November 9 :—

Gillard, Clarence Richard, Clapham-road.
Hammersley, Joseph, Bedford.
Pedley, Thomas Franklin, The Terrace, Camberwell.
Snowball, William, Canton, Melbourne.
Thurston, Edgar, Eton.

The following gentlemen also on the same day passed their primary professional examinations :—

Floyd, John, London Hospital.
Llewellyn, Walter, London Hospital.
Reynolds, Lewis William, Guy's Hospital.
Smith, Ernest Sutten, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DENTON, A. H., M.R.C.S. Eng., L.R.C.P. Edin.—Assistant House-Surgeon to the Sheffield Public Hospital and Dispensary.

FIATH, CHARLES, M.B. Lond., M.R.C.S.—House-Surgeon to the Norfolk and Norwich Hospital.

RICHARDSON, P. A., M.R.C.S. Eng., L.S.A.—House-Surgeon to the Croydon General Hospital, *vice* Henry Evans, resigned.

SKEARITT, E. MARKHAM, B.A., B.S., M.D. Lond., M.R.C.P.—Joint Lecturer on Medicine and on Pathological Anatomy at the Bristol Medical School, *vice* Martyn, deceased.

BIRTHS.

FINCH.—On November 3, at Colchester, the wife of Henry Finch, M.D., of a daughter.

GOLDSMITH.—On October 8, at Sutna, Central India, the wife of S. Jesse Goldsmith, L.R.C.P. Edin., Bombay Medical Service, Agency Surgeon, Baghelrund, of a daughter.

LOWE.—On November 6, at James-street, Lincoln, the wife of G. M. Lowe, M.D., of a daughter.

RICHARDSON.—On November 7, at Berrington House, Beal, Northumberland, the wife of Henry Richardson, M.D., R.N., of a son.

WHITE.—On November 9, at Brook House, Westbury, Shrewsbury, the wife of W. H. White, B.A., M.B., of a daughter.

MARRIAGES.

BURN—REILLY.—On November 9, at Guernsey, Surgeon-Major G. A. Burn, M.D., Fourth Cavalry, Hyderabad Contingent, to Eliza Gertrude, eldest surviving daughter of the late Captain I. M. T. Reilly, 45th Madras Native Infantry.

LOVELL—DEMPSEY.—On November 7, at St. Saviour's, Maida-vale, F. Otley Lovell, M.R.C.S. Eng., L.R.C.P. Lond., of 150, Alexandra-road, St. John's-wood, N.W., to Emma, only daughter of the late G. D. Dempsey.

O'NEAL—MACDOWEL.—On November 7, at St. Stephen's Church, Dublin, John Carter O'Neal, Captain Inniskilling Dragoons, to Lily Moore, eldest daughter of B. G. MacDowel, M.D., of Merrion-square, Dublin.

SPITTA—DACRE.—On November 9, at the parish church, Clapham-common, Edmund Johnson Spitta, L.R.C.P. Lond., of Ivy House, Clapham-common, to Frances Catherine, youngest daughter of Ranalph Dacre, Esq., of Nelson-terrace, Clapham-common.

DEATHS.

BARLOW, HENRY CLARK, M.D., F.G.S., of Newington-butts, Surrey, at Salzburg, on November 8, aged 70.

Horne, Thomas Benjamin, M.R.C.S., at Adwell, Torquay, on November 13, aged 57.

Jones, Ellis, M.R.C.S. Eng., of Liverpool, at The Grove, Menai-bridge, on November 9, in his 74th year.

Sankey, George Frederic, M.R.C.S. Eng., Surgeon 39th Regiment, at Dugshaie, Punjaub, on October 14, aged 33.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bridgend and Cowbridge Union.—District Medical Officer. Applications, with testimonials and certificates of qualifications and registration under the Medical Act, to Samuel Cox, Clerk, on or before November 24.

North Riding of Yorkshire Lunatic Asylum, Clifton, York.—Assistant Medical Officer. Candidates must possess a double qualification, and be duly registered. Applications, with testimonials, to the Medical Superintendent, on or before November 18.

Royal South London Dispensary, St. George's-cross, Lambeth road, S.E.—Honorary District Surgeon. Applications to Mr. Hentsch, at the Dispensary, on or before November 30.

St. George's and St. James's Dispensary.—Surgeon. Candidates for the appointment are requested to attend, with their diplomas and testimonials, at the Dispensary, 60, King-street, Regent-street, on Thursday, November 30, at four o'clock p.m. punctually. Candidates must be either F. or M.R.C.S. Eng., and not practising pharmacy.

Western Infirmary of Glasgow.—Superintendent. Applications, with testimonials, to Henry Johnston, Secretary, 30, Gordon-street, Glasgow, on or before December 1.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Hailsham Union.—The Third (A) District is vacant; area 7970; population 2044; salary £60 per annum.

Peterborough Union.—The Castor District is vacant; area 9102; population 1588; salary per case.

APPOINTMENTS.

Frome Union.—Thos. H. Worger, M.R.C.S. Eng., L.S.A., to the Kilmersdon District.

Great Yarmouth Parish.—William M. Vores, B.M. Cantab., M.R.C.S. Eng., L.S.A., to the North District.

Prescot Union.—William Cooper, M.R.C.S. Eng., L.S.A., to the Lower Widnes District.

St. Thomas Union.—Walter Dixon, M.B., C.M. Edin., to the Woodbury District.

Swansea Union.—Henry Davies, M.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Llangafelach District.

West Firle Union.—Hugh Wallis, L.R.C.P. and L.R.C.S. Edin., to the Second District.

The Paris Night Medical Service.—The Préfet de Police reports that since January 1, 1876, when this came into force, 2768 persons have sought for medical aid.—*Union Méd.*, November 4.

Dr. Burdach, Professor of Anatomy at Königsberg, has just died. He was a tutor in the University as early as 1835, and became Professor in 1844, holding that office until 1875. His most important work was one on the Structure of the Nerves.

Druggists in Prussia.—According to the *Berliner Klinische Wochenschrift* of October 30 last, there are 2357 chemists' shops in Prussia; and the number of persons engaged in the practice of pharmacy, either as principals, assistants, and apprentices, amounts to 5081.

The Vienna General Hospital.—According to the Report for 1875, there remained, at the beginning of the year, 1530 patients (888 males, and 642 females), and there were admitted during the year 19,767 (12,400 males, and 7367 females). Of these, 12,035 (7729 males, and 4306 females) recovered, 3143 (1966 males, and 1177 females) improved, 1893 (957 males, and 936 females) were discharged unimproved, and 2548 (1577 males, and 971 females) died. The mortality was at the rate of 12·9 per cent., or, with the exclusion of the subjects of tuberculosis, 9 per cent.—*Wien. Med. Woch.*, October 14.

On October 26 the Medical Faculty of the University of Geneva was formally opened. Five years ago the famed old Academy of Geneva assumed the title of University, and a Faculty of Medicine was created in addition to the already existing faculties. Till now the new faculty remained dormant or latent, but the buildings intended for it having been finished, it has burst into active life, and counts already fifty students. Most of the professors are, we believe, natives, but some eminent foreigners have been induced to join them—as Schiff, of Florence; Zahn, of Strasburg; and Laskowski, of Paris.

Small Poisonous Doses of Chloral in Delirium Tremens.—Dr. Frank, of the Cologne Bürger-Hospital, after exhibiting, by means of a long array of references, the great discrepancy existing among writers on the employment of anæsthetics with respect to the maximum and poisonous doses of chloral, observes that these really much depend upon the peculiarities of the patient, who even may himself differ at different times upon this point. In delirium tremens very small doses sometimes produce fatal effects, and he relates two cases which have occurred to himself. Both were men in the prime of life, with no disease of any organ, as shown at the autopsies, and yet in both small doses (one gramme and a quarter in one case, and two grammes in the other) of chloral of undoubted purity produced fatal paralysis of the heart.—*Berlin. Klin. Woch.*, September 11.

Treatment of Carbuncle by Blisters.—M. Jules Guérin, in a communication to the Académie de Médecine, says that the most efficacious mode of cutting short the progress of a carbuncle and hastening its cure is to cover the whole of the inflamed part with a large blister, having a hole in its centre to admit of discharges. The blister must be continued on until complete vesication has taken place, and any portion of the carbuncle over which this has not done so will remain hard and resistant. When the blister has taken effect the pain is at once relieved, and the redness and resistance of the tumour disappear, and it becomes benign and inert, its enucleation proceeding under the use of ordinary means, without the aid of the bistoury. When after the discharge of its contents a deep excavation remains, it is useful to apply to the walls a solution of nitrate of silver, with the object of obliterating the open vascular orifices and impeding the absorption of the diseased liquid.—*Gaz. des Hôp.*, September 14.

Chloral and Chlorate of Potash in Diphtheria.—Dr. Ciattaglia strongly recommends the local application three or four times a day of a mixture of chloral (one drachm) and glycerine (five drachms). Since he has employed this he has met with remarkable success. He gives internally chlorate of potash in doses of two and a half to four drachms for children and five drachms for adults per diem, dissolved in thirty-five drachms of water. He had already derived great advantage from the chlorate, but since he has combined with it the local use of chloral his success has been much greater. The development of the diphtheritic patches is arrested, and the disgusting odour of the disease disappears, if not at the first, at the second application. The chloral, also, is much more manageable in glycerine, the burning sensation being less, while it is longer retained in contact with the parts than when dissolved in water. It is also harmless even when clumsily applied.—*Presse Méd. Belge*, August 13.

Chloral in Labour.—Dr. Frazier states that he has employed this with advantage in many cases in which there has been a thick rigid os, or where the os was thin with a sharp, dense edge, and not dilatable, the pains being mainly in the back—short, severe, and producing little effect upon the os. He uses a mixture containing two drachms in syrup and water, of each half an ounce. Of this he gives one drachm in water every twenty minutes, until its soporific effects are produced. In excessively severe cases, with strong pains and a robust constitution, he gives a drachm and a half as the first dose. "It is occasionally necessary to follow with chloroform towards the last stages of labour; but for the classes of cases heretofore named, and during all the earlier stages of parturition, I most heartily recommend the use of chloral where an anæsthetic is indicated."—*American Journal of Obstetrics*, August.

The Health of the Police in 1875.—The Report of the Chief Surgeon on the Health of the Metropolitan Police Force during the year 1875, which has recently been made public, shows that the daily rate of sickness in the Force has remained about the same, slightly higher than that of last year, on account of severe weather, but varying only by a small fraction from last year's rate, and keeping still close to the standard of 3 per cent., which may be taken as that of the daily loss from sickness under the present system. The past year is stated to have been one which calls but for little remark. The total number of *fresh* cases of sickness which occurred during the year is slightly less than in 1874; and in the total number of deaths recorded during the same period, viz., fifty, as against fifty-three in the preceding year, it is worthy of notice that not one is referred to violence. The report may, therefore, be considered to be very satisfactory.

TREATMENT OF HYDROCELE BY INCISION AND THE ANTISEPTIC METHOD.—In corroboration of the advantage of this procedure for the radical cure of hydrocele as set forth by Prof. Volkmann, of Halle (*Medical Times and Gazette*, March 11, p. 288), Dr. Carl Reyer, of the Dorpat Clinic, relates some cases in the *Petersburg Med. Wochf.*, September 23, in which he had adopted it with complete success. He does not think it necessary to carry the incision along the entire length of the hydrocele, finding a lesser one answer all the purposes. He considers the operation, *followed by the antiseptic treatment*, suited not only for hydroceles with thickened walls and hæmatocele, but also for hydroceles usually treated by iodine injection, to which it is preferable on account of the rapidity and certainty of the cure.

AN epidemic of a most alarming nature, which up to the present time has not been accounted for, broke out last week on board her Majesty's ship *Favourite*, the Forth guardship, lying at her moorings at Queensferry. A number of the crew were seized with symptoms which were ascribed either to English cholera or to the effects of irritant poison. In the course of a few hours seventy seamen were suffering from violent vomiting and purging, and several of them became quite prostrate. The ship's cook expired in three days, after suffering much pain; no post-mortem examination was, however, made. It was at one time believed that the beef supplied to the crew had something to do with the epidemic, but an examination by Dr. Littlejohn, of Edinburgh, elicited the fact that, though poor in quality, it was sound. Of the seventy seamen who were attacked, it is stated that, with the exception of seven, all are now recovered so far as to be fit for duty. No member of the officers' mess was affected, and the illness was confined to certain messes on board. The Procurator-Fiscal of the County of Linlithgow paid a visit to the *Favourite*, and instituted inquiries on board, as well as in the village of South Queensferry. The *Favourite*, in accordance with Admiralty instructions, has proceeded to Portsmouth to be refitted.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Stockwell.—David Griffith Jones is *not* a member of the College of Surgeons, his name having been struck off the list on his conviction for the crime mentioned. Write to the Registrar.

A Provincial Teacher.—You are too late in your application; but the Committee will meet on Tuesday next to report on the candidates to a subsequent meeting of the Council, and at either of these meetings you could be nominated for the office of Examiner in Anatomy and Physiology by any gentleman you may know on the Council of the College of Surgeons.

G. Ramsdale W.—The lines quoted as applicable to Faraday were—

> "His life was gentle; and the elements
> So mix'd in him, that Nature might stand up
> And say to all the world, 'This was a man!'"

Courteous Doctoring.—A native doctor in charge of one of the civil stations on the Irrawaddy, when called upon to attend a patient, begins to prescribe by giving a list of the medicines he has in the dispensary, and then turns round and asks the patient which he would prefer!

Maltster.—It is stated that beer-drinking is going fast out of fashion in India, and only about one person in six now takes ale at tiffin and dinner. Twenty or thirty years ago half a dozen of beer at tiffin was no unusual allowance for a man.

Unmistakably Dead.—Yes; the late Lord Lytton directed that his body should not be interred until three medical men of high standing should separately have examined it and declared in writing that the signs of decomposition had unmistakably commenced. He forbade all dissection or autopsy, but requested that the most approved means short of mangling the body might be used for restoring life, in case there was any doubt of his decease, or he appeared to be in a catalepsy or trance.

Irresistible.—There is a good story told of Dr. Radcliffe, to the effect that once, when attending an intimate friend during a dangerous illness, he declared (actuated by a generous feeling) that he would receive no fee. But when the cure was complete, and the physician was taking his leave, "I have put every day's fee," said the patient, "in this purse, my dear doctor; nor must your goodness get the better of my gratitude." The doctor eyed the purse, counted the days of his attendance in a moment, and then, extending his hand by a kind of professional mechanical motion, replied, "Well, I can hold out no longer; single, I could have refused the guineas; but all together, they are irresistible!"

Unsophisticated.—The quality of ale in Henry VIII.'s time was ascertained by officers of great antiquity, called *gustatores cervisiæ*—ale-tasters, or ale-conners. These officers were regularly chosen every year in the court-leet of each manor, and were sworn "to examine and assay the beer and ale, and to take care that they were good and wholesome, and sold at proper prices according to the assize, and also to present all defaults of brewers to the next court-leet." Similar officers were also appointed in boroughs and towns corporate.

Medico-Clerico.—The joke on the medical profession which was made by a clergyman in Cromwell's time, who was deprived of his living for Nonconformity, was that this parson, a harmless man enough, went about saying to his friends that "If he were deprived, it should cost a hundred men their lives." Summoned before a magistrate, he thus interpreted his words—"Should I lose my benefice, I am resolved to practise physic, and then I may, if I get patients, kill a hundred men."

DEATH CERTIFICATES.

The New York *Nation* says:—"The 'physicians'" certificates of the facts and causes of death accepted by city boards of health, in parts of the United States, cover every degree of ignorance, incompetence, and even superstition. As an example is given a certificate cited by the Boston Board of Health, from a woman-physician:—'This certifies that a beby boy died on the born day of Febberiy, 1876. Cause of death, born.' We are also told that among the causes of death enumerated are 'canerum,' 'canker and spasms,' 'lack of vetullity,' 'lack of villality,' 'daeth barne,' 'canker humer,' 'swallowing,' 'lung diess,' (disease!) 'eauther of the bowels,' 'scharletina,' and 'chituses.'" Apparently there is room for improvement somewhere.

REPRODUCTION OF INTERMITTENT FEVER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In a widely circulated pamphlet on the virtues of the Hunyadi János mineral water, I find it stated that this water is useful for the purpose of reproducing intermittent fever when suppressed too soon. Dr. Amelung and Professor von Schroff are quoted in support of this statement. If this note should fall under the eye of any German physician practising in fever districts, he would oblige an invalid *confrère* by stating under what circumstances is it desirable to reproduce intermittent fever? I can fully understand the efficacy of a water containing sulphate of soda in the swollen spleen and liver which follow ague; but it is as to the possibility or expediency of reproducing the ague that I should like to have the opinion of the eminent physicians who are quoted in the prospectus of the Hunyadi János water.

I am, &c.,
INVALID.

London, November 13.

COMPULSORY VACCINATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As a constant reader of the *Medical Times and Gazette*, I have often noticed the comments made from time to time on this subject of compulsory vaccination, and particularly two such in the last number of your journal (for the 11th inst.).

I need hardly say I believe in vaccination; but I would venture to put in a word on behalf of the valuable principle of individual liberty. Let us try to put ourselves just in the position of the poor men who are now so often punished by the law—not for any crimes, but for refusing to submit their own children to a rite against which they have conscientious objections. No doubt they are wrong; we are all of us in error sometimes. But is this a kind or a wise way to convince them of their mistakes? Should we like our errors of judgment to be harshly dealt with by the State, and our just parental authority thus interfered with? I am sure that you and I would not, indeed!

I regret to see the tendency of this day (largely fostered, too, by a certain section of our profession) to passing so many compulsory laws. May we not be carrying a good thing rather too far? Is there not a danger of over-legislation? Just look at our laws! Who can understand them? See how few of them are capable of being practically enforced, and how many subside into dead-letters! It is much to be regretted that our legislators do not more carefully consider, before passing a new law, whether it is likely to be one that can be practically carried out. As it is, every man will soon require a lawyer to attend upon him, lest he should unwittingly render himself amenable to some Act of Parliament. The potential mischief of a dead-letter law as an occasional instrument of persecution should be borne in mind, for it is one of the discredits to our civilisation.

Inspectors and magistrates, prosecutions, fines and imprisonments, are becoming the order of the day. To a great degree these are a melancholy necessity in the complex state of society. But can we bear the thought that there should be one unnecessary or unjust prosecution, if we attempt for one moment to realise the suffering that it entails upon the poor and humble ones, who already have to bear the burden and heat of the day?

I am, &c.,
H. C. F.

[*,* Does our correspondent wish that individuals shall be at full liberty to endanger the lives of others by becoming or providing centres of infection?—ED. *Med. Times and Gaz.*]

COMMUNICATIONS have been received from—

Dr. DRUITT, London; Mr. B. R. WHEATLEY, London; Mr. R. DAVY, London; THE SECRETARY OF THE PATHOLOGICAL SOCIETY OF LONDON; Mr. J. CHATTO, London; Dr. JOHN SULLIVAN, London; Mr. T. M. STONE, London; Dr. EDIS, London; Mr. GEORGE BROWN, London; Dr. JULIUS ALTHAUS, London; Dr. BARLOW, London; Mr. C. J. CULLINGWORTH, Manchester; Dr. E. W. BERRIDGE, London; THE SECRETARY OF THE PRESS COMMITTEE, Philadelphia; THE SECRETARY OF THE HUNTERIAN SOCIETY, London; THE SECRETARY OF THE OBSTETRICAL SOCIETY, London; Mrs. THEOBALD, Leicester; Dr. RUSSELL, Birmingham; Dr. CHARLES J. EGAN, South Africa; Dr. BRAENRIDGE, Edinburgh; Dr. BALMANNO SQUIRE, London; Mr. JOHN INGRAM, London; Dr. SPARKS, Mentone; Mr. GODLEE, London; Prof. HUMPHRY, Cambridge; Mr. R. KERSHAW, London; Mr. STEPHENS, London; THE SECRETARY OF THE STATISTICAL SOCIETY, London; H. C. F.; THE REGISTRAR OF THE UNIVERSITY OF LONDON; M.R.C.S.; Mr. F. G. LARKIN, London; Messrs. MASON and BRAND, London; Dr. MORELL MACKENZIE, London; Dr. A. M. BUCHANAN, Glasgow; Mr. E. G. BANNER, London; Dr. JAMES ALLAN, Glasgow.

BOOKS AND PAMPHLETS RECEIVED—

Heinrich Frey, Compendium of Histology—Transactions of the Clinical Society of London, vol. ix.—J. L. Milton, On the Pathology and Treatment of Gonorrhœa—Lennox Browne, F.R.C.S. Edin., Medical Hints on the Production and Management of the Singing Voice—Dr. Ferd. Ad Kehrer, Beiträge zur Verleichenden und Experimentellen Geburtskunde—J. M. Cunningham, M.D., Report on the Cholera Epidemic of 1875, in India—Worthington G. Smith, F.L.S., M.A.I., Mushrooms and Toadstools—Alexander Glen, M.A., LL.B. Cantab., The Rivers Pollution Prevention Act, 1876—Henry Barnes, M.D., Notes in Practical Medicine.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wocheaschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Dublin Journal of Medical Science—New York Medical Journal—El Siglo Médico—Archives of Dermatology—Ohio Medical and Surgical Journal—Canada Medical and Surgical Journal—Canada Lancet.

APPOINTMENTS FOR THE WEEK.

November 18. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

20. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Lawson (a casual communication), "Micro-Photographs of the Blood Corpuscles," by Dr. Woodward, of Philadelphia. Dr. Dick (the paper of the evening), "On Division of Uretaral Strictures by Cutting."

21. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthepædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Mr. Gould—Sarcoma of Thigh. Dr. Goodhart—Diffuse Suppurative Inflammation of Mediastinum. Dr. Hilton Fagge—1. Primary Contracting Scirrhus of Liver; 2. Epithelioma of Bladder, secondary to long-standing Stricture. Dr. Thorowgood—Concretion in Vermiform Appendix, removed through Incision in Back. Dr. Lediard—Aneurism of Thoracic Aorta (two cases). Mr. Walsham—Unobliterated Ductus Arteriosus. Mr. A. Doran—Fracture by Muscular Action of both Sesamoid Bones of Forefeet of a Horse. Mr. Holmes—Stricture of Œsophagus. Dr. Griffiths—Dermoid Ovarian Tumours removed from Patients aged twelve and twenty-one years. Mr. Butlin—1. Fatty Tumour; 2. Perforating Ulcer of Foot, with Shortening. Mr. Godlee—Circulation Arterial from White Swelling of Knee. Dr. Julius Pollock—Perforating Ulcer of Endocardium. Mr. Howse—Ossification of Axillary Artery following Injury. Dr. M. Ord—Spontaneously Fractured Vesical Calculi.

Statistical Society, 7½ p.m. The President will deliver his Opening Address. Dr. Mouat, "Report on the United International Statistical Congress held at Budapest from 1st to 7th September, 1876."

22. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Association of Surgeons practising Dental Surgery (11, Chandos-street, W.), 8½ p.m. Mr. Cartwright (President), "On Teething and its Complications." Mr. T. Edgelow, "A Remarkable Case of Maxillary Disease." And other communications.

Hunterian Society (London Institution), 8 p.m. Mr. Hutchinson, "On Colles's Law with reference to the Transmission of Syphilis."

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

24. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Sir W. Jenner, "A Case of Leukæmia treated by Phosphorus." Dr. Gowers, "A Case of Lymphatic Leukæmia treated by Phosphorus." Dr. Greenfield, "A Case of Hodgkin's Disease, with Excess of White Blood-Cells, treated by Phosphorus." Mr. Brodhurst, "Cases of Subcutaneous Section of the Neck of the Thigh-Bone."

Queekett Microscopical Club, 8 p.m. Ordinary Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 11, 1876.

BIRTHS.

Births of Boys, 1238; Girls, 1242; Total, 2810.
Average of 10 corresponding years 1866-75, 2308·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	817	818	1635
Average of the ten years 1866-75	748·9	707·3	1456·2
Average corrected to increased population ...	...	...	1558
Deaths of people aged 80 and upwards ...	...	...	41

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	...	4	1	4	...	2	...	2
North	751729	18	1	5	...	7	2	4	...	6
Central ...	334369	1	...	4	...	2	...	...	...	...
East	639111	4	3	11	2	4	...	7	2	2
South	967692	23	15	8	5	5	...	7	...	6
Total	3254260	48	19	32	8	22	2	20	2	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·934 in.
Mean temperature	38·6°
Highest point of thermometer	51·2°
Lowest point of thermometer	25·5°
Mean dew-point temperature	34·0°
General direction of wind	Variable.
Whole amount of rain in the week	0·05 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 11, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Nov. 11.	Deaths Registered during the week ending Nov. 11.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2510	1635	51·2	25·5	38·6	3·67	0·05	0·13
Brighton	100632	42·7	61	39	53·8	29·0	39·1	3·95	0·68	1·73
Portsmouth ...	124867	27·8	68	64	55·0	29·4	41·7	5·39	0·10	0·25
Norwich	83430	11·2	53	20	51·5	26·5	38·6	3·67	0·93	2·33
Plymouth	72230	51·8	45	36	58·5	27·0	43·2	6·22	0·01	0·03
Bristol	199539	44·8	149	84	55·2	24·4	38·9	3·83	0·31	0·79
Wolverhampton ...	72549	21·4	51	33	51·3	25·6	38·8	3·78	0·24	0·61
Birmingham ...	371839	44·3	312	174	55·0	26·2	39·2	4·00	0·03	0·08
Leicester	113581	35·5	90	52	53·8	27·8	38·3	3·51	0·30	0·76
Nottingham ...	93627	46·9	69	40	53·9	25·8	39·7	4·28	0·04	0·10
Liverpool	521544	100·1	376	271	52·9	28·9	38·0	3·33	0·35	0·89
Manchester ...	357917	83·4	265	184	54·0	23·9	38·3	3·50	0·21	0·53
Salford	138425	26·8	122	106	53·5	23·3	38·1	3·39	0·08	0·20
Oldham	88609	19·0	61	44	...	...	...	...	...	...
Bradford	173723	24·1	109	92	53·0	29·0	39·2	4·00	0·06	0·15
Leeds	291580	13·5	225	120	55·0	29·0	40·2	4·55	0·11	0·28
Sheffield	274914	14·0	198	133	55·0	27·5	39·5	4·17	0·40	1·02
Hull	136933	37·7	87	51	53·0	27·0	38·8	3·78	1·46	3·71
Sunderland ...	108343	32·8	73	43	...	...	...	...	...	...
Newcastle-on-Tyne	139929	26·1	94	45	...	...	...	...	...	...
Edinburgh	215146	51·3	117	74	...	...	...	...	...	...
Glasgow	545144	90·4	370	245	55·5	21·5	36·4	2·41	0·25	0·63
Dublin	314666	81·3	152	128	54·0	27·8	42·9	6·03	0·71	1·80
Total of 23 Towns in United Kingdm	8028595	37·7	5660	3713	58·5	23·3	33·3	4·05	0·33	0·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·93 in. The highest reading was 30·21 in. at the beginning, and the lowest 29·41 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XII.
STRANGULATION.

Death by strangulation has so much *in common* with *death by hanging*, that some writers have treated the two subjects in connexion. The points of *difference*, however, betwixt the two are sufficiently obvious to require their separate consideration. In *death by hanging*, for instance, we have compression of the neck by a ligature of some sort, and *the added traction* on it by the weight of the body. In *strangulation*, on the other hand, while the latter element is wanted, the compression on the neck (which is the sole agency employed) may be effected by a ligature—*mediate strangulation*, so-called,—or by the hand in the so-termed *immediate* or *manual strangulation*. Unlike *hanging*, where *the mixed form of death* is encountered, in *strangulation* the fatal event is dependent on *asphyxia* alone. As *hanging* is most frequently the result of *suicide*, while *strangulation* is as generally *homicidal*, it will be understood that the latter will be often complicated with other traces of injury than those which had caused death.

Once more: From the relative facility of effecting the two modes of death being different in each—as was to have been anticipated—the morbid appearances encountered after *strangulation* are found, as a general rule, to be of a more marked kind than are usually seen after death by hanging.

All this, however, will come out more clearly as we proceed to consider, as I now propose to do, (1) the cause of death in strangulation, (2) the morbid appearances left by it on the dead body, and (3) the question of its accidental, suicidal, or homicidal origin.

1. *Of the cause of death* we have little to say, having already stated that this always resolves itself into death by *asphyxia*. When the constriction, however employed, is such as perfectly to stop the ingress of air to the lungs, insensibility and death are believed to follow almost instantly. In circumstances the reverse of this, the asphyxia will be longer in coming on.

2. *The morbid appearances* after death by strangulation will be those common to this and other forms of *asphyxia*, with, *in addition*, those indicative of *the special agency* which has been employed in effecting it. The former of these have been sufficiently discussed in previous lectures; the latter alone will demand our attention here.

The local or special appearances are liable to considerable variations according to circumstances. Homicidal strangulation, for instance, is often attempted and successfully accomplished in children, or aged or feeble persons, or in parties previously insensible from blows about the head or stupefied by intoxication or narcotics. Here, as the compression of the neck would be easily effected, the traces of such compression would not be very marked or complicated with other injuries about the neck. On the other hand, while such forcible strangulation has been but rarely found to succeed in young and vigorous persons with all their wits about them, when it has been successfully carried out it has been known to leave very marked injuries on the neck and other parts of the person. Hence, while in one of these sets of cases the appearances will be mostly those on the neck and organs of respiration, and these not very strongly marked, in the other these appearances will coincide with others on different parts of the body, especially on the head and face, and the whole indicative of considerable violence having been employed. Thus, while the head, face, and body generally may be altogether or almost natural, we may have marks of blows or abrasions on the head and face, particularly about the mouth and, chin, and, though less constantly, on the trunk and limbs; tumefaction and lividity of the face; the tongue protruded and fixed betwixt the clenched jaws; frothy bloody fluid issuing from the nostrils; numerous minute ecchymosed spots on the conjunctivæ, the face, front of the neck, and upper part of the chest. Considerable stress is laid by Tardieu on these punctated effusions, which, though encountered in suffocation from compression of the walls of the chest and abdomen, after prolonged and laborious labours, and violent convulsive attacks, he positively asserts are most frequent, best marked, and most characteristic in strangulation.—("Annales d'Hygiène," vol. xi. page 125.)

The local appearances met with *about the neck* are also found to differ according to the agency employed in the strangulation and the amount of the resistance which has been employed. Where the agent has been *the ligature*, *the grooves* left by it will most frequently be seen to cross the neck in an almost regularly horizontal direction, usually shallow, varying in breadth, either single, double, or multiple, as the ligature has made one or more turns around the neck; and embracing the whole or only a part of its circumference. *The bottom of the groove* is often pale and well defined, contrasting with the lividity of the surrounding parts. The absence here of the parchment-like state of the skin, the shallowness of the groove, and the lack of the indications of firm compression of the soft parts so usual in hanging, are explained by Tardieu as owing to the circumstances of the ligature, however strongly constricted, being but momentarily applied and speedily relaxed in strangulation, and there not being, as in hanging, the added weight of the body continued after death. In contrast with the less deep and distinct impress of the ligature over the neck in strangulation than in hanging, Tardieu has found ecchymoses more constant in the former than in the latter case; those ecchymoses corresponding with the points where the pressure had been greatest being well marked, of greater or less, but usually of considerable depth, and of irregular form, but mostly in the direction of the groove.—(*Ibid.*, pages 126-7.)

In *manual strangulation*, again, the external appearances about the neck will be different from the different character of the agency employed in effecting it, and are to be looked for on the sides of the larynx, under the lower jaw, and at the lower part of the neck. The appearances will usually be such as point pretty distinctly to the previous application to the front of the throat of the thumb and one or more fingers, leaving ecchymosed patches corresponding to the points of the fingers, and not unfrequently linear or curvilinear scratches or abrasions caused by the nails of the assailant.—(*Ibid.*, pages 127-8).

In proceeding to the examination of *the deeper-seated parts of the neck*, whether in cases of mediate or immediate strangulation, traces of injuries are frequently encountered of a more marked sort and serious character than is usual in hanging, or which might be gathered from the appearances externally. Thus, even where no ecchymoses are visible on the surface, *extravasations of blood* have frequently been encountered, not only in the subcutaneous areolar tissue, but in the interior of the muscles above and below the hyoid bone, and on the outer surface of the larynx and trachea; and where the strangulation had been *manual*, extravasated blood has been met with under the lower jaw, over the sternum, and even in the pectoral muscles. These effusions of blood have been isolated and circumscribed, and corresponding in size with the impressions of the fingers on the surface; at other times diffused from infiltration of blood through the loose areolar tissue of the neck. The larynx and trachea have usually escaped serious injury in strangulation; though injuries of these have been met with. *A highly congested state of the* lining of the *trachea* is a frequent appearance, and still more so a *mucous froth* in this canal, with minute air-bubbles, white or sanguinolent, sometimes penetrating the bronchial tubes, occasionally replaced by a layer of blood coating the larynx.

The vascular condition of the lungs in this mode of death is not always the same, these viscera being sometimes found *congested*, sometimes *natural*. Unless there has been a combination of smothering and strangulation, as is sometimes the case, *capillary ecchymoses have not been observed* on the surface of the lungs. A characteristic condition of the surface of the lungs in strangulation—according to Tardieu—is *the rupture of their superficial air-cells*, singly or in groups, giving to the organs, on a superficial examination, the appearance of their being interspersed with pseudo-membranous patches, but which on a closer inspection are seen to resolve themselves into emphysema, arising from air-bubbles under the pleura. Equally characteristic with this, though not so constant, according to the same authority, are *apoplectic kernels* (*noyaux*) in the tissue of the lungs, from well-defined and distinct infiltrations or extravasations of blood, varying in size from that of a threepenny piece (*pièce de vingt centimes*) to that of a half-crown (*pièce de cinq francs*). The heart may be found empty or containing blood either fluid or clotted.—("Annales d'Hygiène," vol. xl. pages 120-134, *pass.*)

I will only add that, as far as my own experience goes, these pathognomonic appearances in the lungs will be found available in many instances of death by pure strangulation, though less available in the mixed cases which occasionally present themselves in practice—a point to which I shall have to return under Death by Suffocation.

The brain and other organs in strangulation present no characteristic appearances beyond those met with ordinarily in death from the other forms of *asphyxia*.—(*Ibid.*)

So much for the post-mortem appearances after death from this form of violence. To one of these (the groove on the neck) we must return, to notice its *direction*, especially as on this a *distinction betwixt death by hanging* and *death by strangulation* has been made to hinge—a point which, when treating of *hanging*, I reserved for this place.

In mediate *strangulation*, as I have said above, the mark of the ligature is usually *circular*, and situated at *the lower part of the neck;* while after hanging it has more or less of *obliquity*, and its position is *high up the neck*. It should be kept in mind, however, that these distinctions do not always hold good in practice. In hanging, we have seen, the marks of the ligature may be *circular*, as where it has been drawn tightly all round the neck, or where it has made several turns around it; while in strangulation it may be oblique, as where the ligature has been applied loosely and from behind, or its loose ends twisted and drawn upwards, the party assailed being in the lying posture. Of this last *apparently* unlikely occurrence I had an illustrative instance in my own practice. A woman convicted of the homicide of her newly-born infant, in the spring of 1855, had passed a ligature twice round its neck, twisted the loose ends at the left side of the neck, pulling them upwards, so as to give a degree of obliquity to the second turn of the cloth, and to leave the mark of the twisted part of it at the angle of the jaw and the cheek, in front of the ear, as in death by hanging. In death by *hanging* it usually happens that the weight of the body occasions *the knot* to be *drawn upwards* to the highest point on the neck; and the higher, the looser the ligature and the greater its consequent obliquity. Too much weight is not, however, to be given to this circumstance. The case of the child just mentioned has some bearing on this point, though less direct than the case which follows.

Several years ago a girl in Loch-street, Aberdeen, committed suicide in the following unusual manner. After making a loop in the middle of a sheet, she attached the two ends of it to the two front posts of her bed. Putting her head through the loop, she then pushed her head and bust over the front of the bed on which she was stretched at the time. The weight of the upper half of her body had thus sufficed to produce death by hanging, as she was found, some hours after, in this position, quite dead. Here, consequently, the knot in the ligature was nearest to the centre of the body, instead of being, as usual in hanging, nearer the head than the rest of the cord.

There are further reasons which justify some caution in deciding betwixt death by hanging and strangulation, from the obliquity of the cord in the one case, and its circularity in the other. In the first place, instances have been related where a *circular mark* has been observed in hanging.—(Taylor's "Manual," page 734). Of this I met with an instance in 1874. A weaver at Gilcomston, who had formerly been at sea in the merchant service, was found in a privy suspended by a thick cord to a beam, the ligature circular and the knot on the same level, the cord having been fastened by what is known as the "sailor's knot." It is but fair to state, however, that in this instance the nates were close to the ground, and the feet resting on it, as in the case referred to under Death by *Hanging*. Again, a murderer, who had succeeded in strangling a person, might afterwards drag the body along the ground by the free ends of the cord before leaving his victim, and thus communicate a degree of *obliquity* precisely the same as if the individual had been hanged. But what is of still more importance to remark is, that it is quite possible to conceive that in a person who had strangled himself this *obliquity* of the cord might be detected, and that, too, where the body had not been at all interfered with after death.

As this position would be disputed by medical jurists, I shall adduce the proof of it, as it is not an imaginary case, but one which has actually happened in my own practice. As the case illustrates another point to be presently considered, I shall only mention here that an old man, whose body was found a few summers ago in the woods at Huzzlehead, had chosen this mode of committing suicide. In this case his neckcloth was passed more than once around the neck, a walking-stick had been passed through the open loop of the neckcloth, by means of which the compression had been made, in the way carriers usually tighten their ropes in securing their loads upon their carts. On first seeing this body in the wood, where it remained in the precise position in which it had been discovered, my impression was, that, on account of the obliquity of the outer fold of the neckcloth, the body must have been dragged along the ground by the stick. On a careful examination, however, another mode of explaining the circumstance presented itself, which undoubtedly was the correct one. The place where the body was found was in the centre of a thick clump of young trees, set close together. The ends of the walking-stick had got so entangled with the trees on each side as to prevent the uncoiling of the turns of the neckcloth in front of the neck. Consequently, had the individual, in his last convulsive struggle, made an effort to change his position, the weight of the body would have drawn the ligature into the oblique position in which it had remained after death.

Taken with the cautions and restrictions we have noticed, the indications derivable from the state of the *ligature*, and its position in regard to *circularity* and *obliquity*, are not to be despised, but, on the contrary, may afford us valuable diagnostics for the determination between the *probabilities* of death by hanging or strangulation, when the appearances in the body point to one or other of these modes of death.

The only remaining point connected with death by strangulation is the question *whether* it has been *the result of accident*, *suicide*, or *homicide* in any given case. The *possibility* of *accidental* strangulation has been entirely overlooked by foreign medical jurists. Three such cases are adduced by British authors—one by Smith, one by Taylor, and one by Watson. In Smith's case a young man paralysed in his arms was accustomed to assist himself, in moving a heavy weight, by a cord attached to it and passed round his neck. One morning he was found dead, and the cord twisted around his neck. It was supposed that in attempting, as usual, to move the weight, it had slipped behind, and produced fatal compression of the trachea. In the other two cases *the strap* which supported a weight on the back had slipped over the windpipe.

A case which appeared to me to belong to the same category recently occurred in my own practice. An hostler in an inn at Huntly, in the autumn of 1860, was carried to bed very drunk, and left there with his clothes on. It was supposed that afterwards he had got up so far as to lean over the front of his bed to vomit, with his hands pressed on the pit of his stomach, as he was found dead in this posture in the morning, rigidity having in all probability come on at the moment of death. His neckerchief was so tight around his neck that the constriction thus caused would have sufficed to produce strangulation from his inability to change his position in the helpless condition he was in from deep intoxication at the time. The inspection, by presenting all the appearances which were to have been expected in such circumstances, left no doubt on our minds here as to the correctness of the supposed mode of death.

The possibility of *suicidal strangulation* has been denied on purely *physiological* grounds, inapplicable to the cases of *mediate* strangulation which, however unusual, have been known to occur by means of ligatures twisted by the hand or a stick tightly round the neck.

From the admitted *rarity* of such cases it may be allowed me again to refer to that of the old man who was found in the woods at Huzzlehead. That his was a case of *suicide* was proved to the satisfaction of the law authorities who investigated the case, from the *moral* evidence alone, which in this instance was unusually strong. It may be worth while to advert to the leading points. This man was *insane*, having laboured for some time under melancholia. He had some time previous to his death attempted to drown himself; and so afraid was his wife that he would take his own life, that she would not trust him to shave himself, or to have access to a knife. When he was first missing she was quite convinced that he had accomplished his purpose, and did not expect to see him again in life. The examination of the body fully bore out these strong suspicions. The trifling articles which the deceased had in his possession when he left home were found in his pockets. The stick with which the ligature was twisted was the one he had left home with. He had in his neckcloth usually a "stiffener," as it is called, made of carpetting. This stiffener was found carefully folded up in his vest pocket,

showing that the neckcloth must have been unloosed, the stiffener taken out and placed where it was discovered, the neckcloth again replaced with a knot at its extremities, through which his *own stick* had been placed,—an attention to minute proprieties which no assassin would ever have thought of or hazarded. These circumstances, added to the fact of his dress not having been deranged, negative, in a complete way, the possibility of strangulation otherwise than by his own hand.

But what is still more to the point is, that the experiments of Fleichmann, detailed under Death by Hanging, show that it is possible, even with the unassisted fingers, so to compress the windpipe as to produce strangulation.

Homicidal strangulation may take either of the two forms respectively characterised as mediate and immediate. The latter of these forms, immediate or manual strangulation, under the appropriate name of garroting, is unfortunately becoming a trade amongst foot-pads in our large cities, with the intention, on their part, not of taking life, but of producing momentary insensibility to allow the party to be robbed. It is sometimes had recourse to with more fatal effect by the ravisher on his victim, and by the murderer to complete his nefarious purposes after having rendered the person insensible by blows about the head. That the garroter's trade is not a more fatal one than we find it to be, is explicable from the circumstance just referred to, that the object is attained by him short of taking life; and by that mentioned at the outset, that the parties attacked by him do not belong to the class of infants or old and enfeebled subjects, but the young and vigorous, who present greater powers of resistance to the more serious danger threatened. Murder in this way, unless in infants, is oftenest practised by means of the ligature.

A case of this kind was tried here in the spring of 1838, in which a man came by his death in a sudden quarrel at a market. Crown council, however, in this instance failed in his proof of death by this precise mode, in consequence of a difference of opinion between the medical witnesses for the Crown and those for the defence, the latter arguing that, the deceased having fallen undermost in the struggle, some injury might have been done to the spine sufficient to account for death—a circumstance which, though not *probable*, was not *impossible*. The objection could not be repelled, in consequence of the medical examiners having neglected to *inspect* the spine. The anterior border of the sterno-mastoid on one side was lacerated, and blood was effused in the vicinity of the vessels; but the examination of the cavities of the body appeared to have been conducted in a careless manner, as scarcely anything was said of them in the medico-legal report, and at least one post-mortem change was adduced as a proof of violence during life. The non-medical witnesses deposed that after the fall the pannel sat upon the chest of the deceased, with a leg on each side, while with one hand he grasped the neck or breast of the deceased (it did not clearly come out which) for a sufficient length of time to have produced death by strangulation. I was engaged in this case as a witness for the defence, but was not examined in consequence of my opinion inclining rather to the prosecutor than to the pannel, though prepared to give a guarded judgment on a point which was weak from the defective character of the medical examination of the body.

There are few occasions which are more likely to present themselves, on which the medical jurist would be required to make up his mind to have to encounter frivolous objections, than a case of this kind, if we may judge from what is known of such trials.

Thus it has been suggested on the defence that the deceased might have fallen in a state of intoxication, and have become accidentally strangled by a tight cravat, or by any foreign body exerting pressure on the trachea. In one instance, in which there were finger-marks on the neck, it was attempted to be shown that the deceased might have fallen out of bed, and, his hand being found in the position indicated, the marks on the neck might have thus been produced, while he might have been accidentally strangled. In a third instance it was argued that a person believed to have been strangled had died of apoplexy from having gone to bed with a handkerchief tied too tightly around the neck. Difficulties of this kind may in general be pretty easily obviated by attention to circumstances—such as the position in which the body was found; its locality, especially in relation to surrounding objects; the state of the clothes on it, if any; the local appearances on the neck, how caused, and whether before or after death; the state of the apartment, and of the doors and windows, whether these had been shut from within or from without; the previous state mind of the party, etc. Any appearances of *contusions* or *wounds* should be looked for on any part of the surface. The state of the stomach and intestines should be noted, and any foreign body found there, if suspicious, examined chemically. The use to be made of the *moral proofs* by the medical practitioner must be left to the decision of the law authorities.

ORIGINAL COMMUNICATIONS.

CASE OF SPORADIC HÆMOPHILIA.

By THOMAS BARLOW, M.D., B.Sc.,

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On September 11, A. H., a man, aged twenty-nine, came to the out-patient department at Charing-cross Hospital, complaining of having passed blood in his water. His urine, some of which he brought with him, was pale claret-coloured, and showed abundance of red corpuscles under the microscope; no other deposit. It was precisely the sort of urine which made one think of renal calculus. This, at first, seemed a likely cause, especially when it was noticed that he had some well-marked gritty tophi in the pinna of each ear. But it was found that he had had no symptoms of renal calculus beyond the hæmaturia and slight aching in the loins. He had never had any colic or pain referred to the testicles, and he had never passed any gravel. He was a little below average height, fairly nourished, very florid, the small vessels of his face very full. Gums not spongy, but a hæmorrhagic patch was seen on the hard palate. His pharynx flabby; voice weak and high-pitched. Thoracic and abdominal viscera natural, so far as I could ascertain. Pulse rather full, 80. Joints natural. There were some hæmorrhagic flea-bites on the shoulders, and also some small ecchymoses, caused, he said, by his scratching himself. On one calf there was an ecchymosis of some depth, the area of a shilling. This the patient could give no account of. Another such ecchymosis was made with a very moderate pinch. Blood examined under the microscope showed nothing abnormal; the red corpuscles were of good colour.

The ecchymoses led to inquiry into the previous history, which was as follows, obtained from the patient, and subsequently supplemented by the mother:—His father had died, aged forty-five, having been ill two years, from consumption. Neither he nor any of his relations had suffered from immoderate bleeding. Patient's mother was one of seventeen children; none of these had suffered from bleeding. The mother herself had lost a great deal of blood at her labours, but had not bled at other times. She had had ten children, four of whom died in infancy. Of the remaining six, two girls are consumptive; of the four boys, the other three are healthy. None of her children had suffered from bleeding except the patient. He was a healthy baby. He was first noticed to bruise easily when he began to get about—viz., when two years old. He bruised especially about the thighs and legs; to a less degree on the arms. The least knock or pinch would bring out the bruises, but often "frightful places" would come out, as big as a five-shilling-piece, without his knowing how they came. *The "bruising" now is much less than it used to be.* Patient attributes this to his taking great care of himself; but, as he is a lamplighter, he must be very often exposed to bruises, and it is noticeable that he does not bruise about the shoulders. With respect to bleedings from mucous membranes, patient does not remember any special nose-bleeding till he was twelve years and a half old. Then, one day, he bled from seven in the morning till two next morning, with only two hours' intermission. He frequently bled from the nose for six hours at a stretch after the above, but for the last four years the nose-bleedings have been much less frequent, and have seldom lasted more than half an hour. At the time when he was suffering in this way he says he always knew that he was going to have an attack, from feeling very heavy for three days before. There was nothing, however, in his appearance which led others to predict it. The blood was rather dark in colour; it always "congealed."

Gums.—He has had several teeth removed; there has not been any alarming bleeding on such occasions, but his gums have often bled spontaneously in the night. He has never coughed up any blood, nor has he vomited any.

Bowels.—When he was twenty-one, he had an attack of "purging," preceded by nose-bleeding. Immediately the purging began he passed a large quantity of blood. He continued to pass it for two days, and says that during that time he went to stool every forty minutes.

Urine.—When six years old he passed some bright blood once with his water, the first thing in the morning. He says there was some clotted blood on the end of the penis, so that it may have been due to some injury. Did not pass any blood in his water again till he was twenty-four years old; was then overworked. He had no pain, except a very little in the loins. Passed thin claret-coloured water for a fortnight. Three weeks before he came to the hospital, when I saw him, he had begun again to pass claret-coloured water. As I stated above, there had been no renal colic, but a little pain in the lower part of the back and the right shoulder. I will dismiss the hæmaturia by stating here that it suddenly ceased about four days after he came to me—that is to say, having lasted nearly one month. He was taking fifteen minims of liquid extract of ergot three times a day at the time when the hæmaturia stopped, but I do not pretend that this had anything to do with its cessation. His face was much less flushed, and he felt "brighter and more comfortable."

Joint Symptoms.—Patient never had any swelling in the knees till he was twenty-five. In the middle of the night pain came in one knee. He was hot, sweated a great deal, and could not move in the morning. Within a few days swelling had ceased in one knee, and gone to the other. He had severe pains in the groins and loins, and the feet swelled up on the outer and under side and on the top, but not the big-toe joints, and not the ankles. None of these places became "black and blue" subsequently. He was ill for a fortnight. He has had during the last five years three such attacks every year. These attacks have never lasted less than ten days or a fortnight; one, for which he was in Charing-cross Hospital, lasted one month. In each attack he has sweated most profusely, and has been very hot.

The tophi in the ears, the patient says, have come within the last four years. They are painful when his joints get bad.

Remarks.—There can be no doubt that A. H. is the subject of hæmophilia, and, if the statements are to be trusted, of sporadic hæmophilia. If he inherits any hæmorrhagic tendency, it has probably come to him through his mother. She lost a great deal of blood at her labours, but this was the only manifestation she presented. It is worth noticing that both she and her mother were rather prolific, which is often the case in hæmorrhagic families. Whether this patient will start a hæmorrhagic stock remains to be seen. He is married, and has one boy, aged ten months, who has not bled hitherto. Bleeding from the kidney is not common in hæmophilia. Dr. Legg has told me that he has only met with it in one case. Of course one cannot say that the patient has *not* a renal calculus. The tophi are in favour of a gouty condition. This appears to me to have supervened on the partial subsidence of his hæmorrhagic tendency, so far as interstitial and mucous-membrane bleedings are concerned.

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A CASE OF

OBSTRUCTION OF THE BOWEL,

TREATED SUCCESSFULLY BY A SYPHON-ENEMA, FOLLOWED BY HYPODERMIC INJECTIONS OF ATROPINE.

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Assistant-Physician to Charing-cross Hospital, etc.

This case would seem to be of interest both clinically and therapeutically: therapeutically, because it demonstrates the value of certain methods of treatment which, so far as I can ascertain, have not been at all tried in this country; clinically, for various reasons which will appear in the narrative.

Jane B., a widow, aged sixty-eight, was admitted into Charing-cross Hospital on Friday, July 23, 1875, under the care of my friend Dr. Silver, of whose beds I at the time had charge. She was a spare, slightly-built woman, who had borne several children, and who, up to the change of life, had enjoyed unusually good health. At this period she began to suffer from headache, and from various trifling disorders of digestion, which increased so that during the last four years she had xperienced repeated attacks of constipation, supervening on c generally sluggish condition of bowel. She varied a good deal in her dates from time to time when questioned, but it was certain that so long as four years ago she had an attack of costiveness lasting many days, and that during the last twelve months such attacks had become more frequent and more aggravated as regards duration and general symptoms, one having lasted a month, and having been attended by severe abdominal pain and repeated vomitings. She was admitted for constipation, and stated that she had passed nothing by the bowel since June 28, at which date she had, for the first time for a month, a slight evacuation; so that, practically, at the time of admission there had been obstruction for seven weeks. There was no history of cancer in the family, and between the attacks she had always been perfectly well, not losing flesh to any marked degree. She had never vomited or passed blood. There was no history of syphilis. In short, no history could be obtained of any disease likely to be followed by stricture of the intestines.

On admission she was comparatively free from pain, but complained of occasional seizures, during which the "stomach was drawn up." The face was a little anxious; the brow more deeply furrowed than age would account for. She was dull if not disturbed, and volunteered but little information. There was no headache; the mind was clear; the eyes bright; and the complexion good for one of her years. The tongue, coated white, was not dry. Occasional vomiting occurred after food. Thus the general symptoms were comparatively slight, but the local condition serious. The abdomen was greatly enlarged, and, at times especially, very irregular in shape; the umbilicus was obliterated; both flanks looked full; everywhere was a feeling of semi-solid resistance (especially marked about the umbilicus), but nowhere could a distinct tumour be made out. There was well-marked tympanitic note in the flanks, but a "patchy" muffling of the note anteriorly, mostly about the navel. The edge of the liver could not be felt; its dulness ascended superficially as high as the fourth space in the nipple line. Spasm of the intestine (afterwards observed as a regularly recurring symptom) came on during examination, and immediately the shape of the abdomen was altered. Its surface, especially in the epigastric and umbilical regions, became irregular; a large tumour-like mass came into view, occupying these parts, lobulated in look and to touch, and to the latter tense and firm, but lost both to eye and hand gradually towards the hypochondriac regions, though prolonged more distinctly to the left than to the right. The tumour was pear-shaped, and more like the stomach in this respect than anything else, but its narrow extremity was three inches distinctly to right of the middle line, and it was undoubtedly an immensely distended transverse colon. Its lower edge was sinuous, and crossed the abdomen about two inches below the navel. During "spasm" the contraction of small intestine was equally well defined through the retracted abdominal wall, declaring itself by a wave-like rippling between pubis and umbilicus as the peristaltic action apparently began, and proceeded, to terminate at its acme in the transverse colon. These attacks were repeated at short intervals, lasted about half a minute, and passed off gradually; they were accompanied by pain, which the patient likened to "grinding labour pains." The abdomen, as might be expected, was at such times dull on percussion; but in periods of rest percussion could not define any particular tumour, and the appearances were those of a large and pendulous abdomen, as if indicative of a lax state of the viscera. Thus, the flanks became fuller when the patient turned on this side or that, but irregularly and not in the manner met with in ascites. There was no true tenderness of the abdomen; but manipulation excited spasm-pain, which the patient confounded with tenderness. On admission the temperature was normal—respirations 30, pulse 90. Patient was put on a diet of beef-tea and milk, with small doses of brandy.

From July 23 to 26, enemata, sometimes of gruel and castor oil, sometimes containing oil of rue or turpentine, were assiduously used by Mr. Henwood, the Resident Medical Officer, without any good result. They were returned almost immediately, unchanged. Thirty grains of sulphate of magnesia were given every four hours. On July 27 a long enema-tube was passed without difficulty, and twenty ounces of gruel, with three ounces of castor oil, were thrown up. This injection was returned in five minutes unchanged. There was no trace of fæcal matter on the tube. A tight flannel roller gave temporary relief from the spasmodic pains. Ten minims of liquor potassæ in tea were prescribed to be taken twice a day.

On July 28 there was no change. Two minims of croton oil were given the preceding night, without the least result; patient did not vomit. Enemata had been used four times a day, but on this morning the long tube could not be passed more than about three inches. Finger in the rectum could detect nothing beyond a very lax condition of mucous membrane; the uterus was natural in size and position. Half a grain of opium in pill was ordered three times a day.

On July 29 the patient was worse. She had vomited frequently during the last twenty-four hours, especially after food. Spasms were severe, the intestines rolling under the hand with every attack. No motions; and the long tube had been passed with the utmost difficulty. Opium was continued through this and the following day, so that on

July 31 the pupils were contracted, and the abdominal pain much diminished. There had been no evacuation, and vomiting persisted. The tongue was dry and foul; the countenance very anxious; pulse, respiration, and temperature unchanged. It was found impossible to pass the rectal tube more than two or three inches, and thus far only with much pain. On this day, assisted by my friend and colleague Dr. Green (to whose advice I was much indebted) and by Mr. Rodwell, the Assistant Medical Officer, I had fitted up over the patient's bed, at a height of nearly three yards, a pail of about two gallons' capacity. This was filled with lukewarm water, and by means of an elastic tube, three-quarters of an inch in diameter, attached to an ordinary long rectal tube, the contents of the pail were, by syphon-action, injected in a continuous stream into the bowel. The rectal tube, prior to commencement of injection, could be introduced scarcely a quarter of its length, and to this extent only with difficulty, but immediately the flow of water was permitted, and dilated the intestine before it, the tube passed with the greatest ease. It was therefore clear that the lax condition of the mucous membrane or the collapse of the walls of the intestines prevented its progress, rather than any permanent stricture. The continuous flow of water caused, of course, some annoyance, and towards the end distress. The water returned as quickly as injected, but by means of firm pressure with a cloth around the anus we were enabled to retain it at intervals for short periods, at the same time preventing too forcible mechanical action likely to result by slightly pressing the syphon-tube, and thus moderating the current. The operation lasted thirty minutes, and about two ounces of scabrous masses were discharged, these being distinctly fæcal. It was unlikely that any, or at least that much, of the injection was retained, as was expected; but the operation was in a sense immediately successful, insomuch as no trace of fæces had appeared in any previous injection. Slight signs of shock were quickly recovered from. Patient was ordered to continue opium and sulphate of magnesia, but to have no enemata until seen next day.

She passed a bad night, and next morning (August 1) asked, for the first time, for something to relieve her pain. There was no tenderness over the abdomen, and no headache. However, the propriety of colotomy was talked of. But a dull, irregular tumour could be seen and felt in the region of the umbilicus, more distinctly to the left than to the right. The abdomen looked larger. No spasms came on during manipulation, nor at other times, as before. It was resolved to wait, and to continue the opiate alone.

On August 2 an enema-tube could not be passed more than two or three inches. The abdomen was now especially tense in the left hypochondrium. Spasm had recurred, and during its occurrence was evident a decided change in the shape of the colon. Just above the umbilicus—a part previously very prominent during spasm—existed deep hollowing. Dulness was decided in the left hypochondrium. Pulse 90, steady and firm; temperature 98·5°. Patient complained of great pain, and lay constantly on the left side. She had vomited repeatedly, but nothing stercoraceous. The legs pitted on pressure. One-sixth of a grain of morphia hypodermically was ordered three times a day, and enemata were continued in the ordinary way. Patient, at her own request, had a warm bath, which gave very marked temporary relief from pain.

On August 3 an enema of gruel and castor oil returned after ten minutes, mixed with liquid and scybalous fæcal matter. There was now marked dulness along the course of the descending colon. Next day fæcal matter was again passed with enemata of gruel and oil, one of which was retained three hours. There was more decided dulness, with doughy feel in the left iliac region; but the shape of the abdomen was much more uniform, and the coils of intestine did not stand out in the same way as before. Pain was, however, still severe at times. Morphia was stopped, and liquor atropiæ was ordered to be injected subcutaneously in three-minim doses twice a day. Next day, August 5, fæcal matters passed in larger quantities; a free flow of urine followed the use of the atropine (an enema had been retained some time), and the pulse rose to 96. During this day there began a continuous "running" of liquid fæces, and the abdomen became lax, so that it was easy to feel lumpy masses in the descending colon.

On August 6, liquor atropiæ being continued, an enema brought away a vast quantity of fæcal matters. The pupils were widely dilated. No vomiting; tongue cleaner and more moist; pulse 100. On August 7 larger quantities were passed: the rectum was found to be loaded, and a catheter was insinuated through its contents as high as possible, and enemata given through it, with the best results. The shape of the abdomen was now completely changed; the largely distended transverse colon had disappeared, but it was still easy during spasm (now more regular and less distressing) to make out the intestines between the umbilicus and pubis. Considerable pain was still complained of, but there was no vomiting, and the patient took plenty of concentrated beef-tea with sherry. Large evacuations were constantly passed, and on August 9 the abdomen was quite small, and its walls so relaxed that a roller was applied for their support. Up to August 16 atropine was continued in the manner and doses mentioned, and during the time of its use there was a greatly increased flow of urine. Strychnine was then substituted, the abdomen at the time being everywhere flaccid, and the bowels acting daily without enemata. The obstruction had indeed, to all appearances, been (whatever its nature) completely overcome.

A diagnosis of an obstruction situated near the end of the transverse colon, or in the upper part of the descending colon, was made. The distended coil of intestine, crossing the abdomen from right to left, was judged to be transverse colon for several reasons. Its position favoured this view, its shape also, the stomach being readily excluded on grounds which it is not necessary to dwell upon; its size was more in favour of large than small intestines; and, finally, it was argued that it could hardly be a portion of small intestine distended above a stricture, seeing that no fæcal vomiting had occurred, and no severe general symptoms, though constipation had been practically complete for seven weeks, but that it was much more probably large intestine, which had acted as a receptacle of fæcal matter, whose accumulation at length had become so great as to lead by its mechanical effects to serious symptoms. This view was strengthened by the recollection that in the rectum of aged persons fæces may collect in large quantities, and give rise to no alarming signs until their amount has become extreme, and begun to tell mechanically by its excessiveness. Thus it was supposed that one had to do with an obstruction near the end of the transverse colon, or immediately below it; and that it could not be far below was proved by the fact that a large rectal tube could be passed at least as high as eighteen inches from the anus. The seat of obstruction was, therefore, limited within narrow bounds, and the presumption was strong that its exact position was on the splenic bend of the colon, because the large distension of intestine terminated there, and there was no sign of accumulation of fæces in the left flank—that is to say, in the course of the descending colon.

It was a matter of considerable importance, as regards treatment, to determine the exact seat of obstruction, and of importance also to determine its nature, which was in this case really a more difficult matter. However, it was easy to exclude acute obstruction from intussusception, internal hernia, rotation of intestine, etc., and chronic obstruction from carcinoma. The case, indeed, looked most like one of fæcal accumulation in an aged person—such as often occurs, for example, in the rectum to a typical degree,—accumulation being favoured by a lax condition of bowel generally, and of mucous membrane in particular, which, at angular portions of the tract, as at the splenic or hepatic bend of the colon, might give enough impediment, taken with other things, to set up a dangerous obstruction. It was possible, also, that there might be a gradually increasing stricture from fibrous bands outside the walls of the intestines, or from fibroid changes the result of old ulcers in the walls themselves. Ulcers may occur with but few symptoms, which are apt to be forgotten in the lapse

of years. The history, imperfect as it was, certainly was in favour of some such diagnosis, especially the gradual increase in the severity of the attacks of constipation and the increase in their number during the past twelve months, without any of the signs which accompany malignant disease. However, there remained the fact that long-lasting obstruction had been overcome, and there was some hope thence of a good result, though this last attack had gone on for so long a period.

A diagnosis of the position and nature of the obstruction seemed made with enough certainty to justify an energetic line of treatment. That the portions of intestine below the seat of obstruction were collapsed, and their mucous membrane relaxed, was proved by the difficulty frequently attending or preventing the passage of a rectal tube, and by digital examination of the rectum. Local conditions were therefore unfavourable to the retention of enemata, which were, indeed, rejected mechanically as quickly as they were—one can hardly say, thrown up. And even with the long tube much the same results might be expected, and really occurred—injections flowing back as fast as they left the mouth of the tube. So their mechanical effects were really *nil*, and their general effects equally useless—whether they contained or not castor oil, turpentine, oil of rue, or other ingredient, or consisted simply of soap-and-water or of gruel. All these were tried without the least result. Under such circumstances it was believed that as the immediate evil to be met was probably a fæcal accumulation, so to speak, within easy reach, a method should be devised of passing a powerful and continuous current of water against this accumulation. A syphon was therefore adapted in the rude manner described, and warm water poured up to the amount of about eight quarts. The patient bore the operation remarkably well, and the only drawback seemed to be the mess occasioned—a drawback of but little moment, and easily obviated by some simple contrivance to carry off the rejected water. Some such contrivance as that used in aural injections would answer well. To secure the full mechanical effects of the fluid, pressure was at intervals made around the anus, so as to retain the water for a short time; while the flow was continued, but moderated by slight pressure on the elastic tube. One practical lesson was taught in the operation by the readiness with which the rectal tube passed at the moment injection commenced; it followed at once the dilating flow of water, though difficulty in passing it in the ordinary way had been great, and frequently insuperable, with various experimenters. As to the results of the forcible enema, it might appear, from a casual view of the history of the operation and its effects, that the plan failed; but a closer examination will, I believe, clearly show that it was eminently and immediately successful. The fact that but little is brought away in the rejected fluid of an enema used in the manner described does not prove that it has been inefficacious. From the ear, for example, waxy accumulations may issue only days after the use of protracted syringing, and yet no doubt exist that the result is really the effect of the operation. But beyond the fact that in this case there were at the time slight fæcal discharges, proving that, at any rate, the obstruction had been touched, and that within two days vast quantities of fæcal matter began to pass, the physical change in the abdomen immediately after the operation was such as might fairly be attributed to the continuous enema. The patient passed a bad night after its use, and complained of more pain; but next day an altered shape of the abdomen was apparent, and a distinct, though irregular, tumour could be made out, extending more to the left of the umbilicus than to the right. On the second day the change was more decided, and almost conclusive that fæcal matters had passed downwards to the left side beyond the original seat of obstruction. The patient now lay constantly on the left side, as if thus to escape the pressure of the fæces accumulating in the left colon. On the third day there was marked dulness along the descending colon, and simple enemata succeeded at once in bringing away the causes of this dulness. The obstruction was, in fact, overcome, though the fæces, owing to the atony of the bowel, passed slowly, but were at once mechanically removed with more or less ease by simple injections. That this atony existed was clear even later, for scybala accumulated in such quantities in the rectum that a large tube could not therefore be passed, and it was necessary to insinuate a catheter through the masses to permit of the injection of water into the intestine above them. Enormous quantities of fæces were thus evacuated during the following days. As to the other remedies which were used, morphia and opium were no doubt of much service in a manner I need not specify. Liquor potassæ and frequently repeated doses of sulphate of magnesia were given, in the hope of inducing a more liquid condition of fæces, and of thus facilitating their discharge. The hypodermic injection of atropine seemed to be of decided benefit. Its more common physiological effects were quickly perceived, as will have appeared from the history of the case; and it is certain that with the onset of these effects occurred a decided increase in the discharge of fæcal matters. The use of atropine indeed seemed to have placed the intestinal muscular coat in such a position that it responded more vigorously than was normal to external stimuli; it "braced up" the relaxed muscular walls, and promoted fæcal discharge, increasing the mechanical effects of enemata, by which the real obstruction had been previously removed. The subcutaneous use of the drug would certainly recommend itself to me in cases of a like nature with occasional or repeated vomiting, though it would be wrong to attribute great things to it in this particular case, where so many factors might claim a share in the favourable issue. Towards the end of the case more or less simple enemata were employed, but they were largely admixed with castor or olive oil, not so much for the sake of obtaining the specific action of these ingredients, but with the object of preventing the absorption of fluids passed up solely for their mechanical effects—effects, of course, lost should they be rapidly absorbed. That oils do prevent the absorption of water by the lower intestines is a fact mentioned by Niemeyer in his article on obstruction of the bowels, but not alluded to by English writers so far as I know. In some cases of fæcal obstruction which I have had an opportunity of observing, it certainly was clear that when purely watery enemata were retained for any time, the greater portion quickly passed by the urine; sometimes, indeed, there was no return of fluid by the bowel at all. But this did not occur where there was a large proportion of oily matter in the enemata. Experiments on animals to ascertain the absorptive power of the lower bowel, and the conditions which modify that power, have been lately made by Czerny and Latschenberger, and, amongst other things, it was proved that oils prevented absorption of fluids. These experiments were instituted with a view of increasing our ability to feed patients by the rectum, but their results might be further applied to the use of mechanically acting enemata.

Note.—The patient whose case is narrated above subsequently died of obstruction, and I had an opportunity of seeing the post-mortem examination. About an inch to two inches above the left end of the transverse colon was an annular stricture, caused by fibroid thickening of uncertain origin, not completely occluding the intestine, but barely admitting the passage of the little finger. Immediately above the stricture was a recent ulceration of the coats of the intestine. The whole of the large bowel above was immensely dilated, the dilatation being greatest near the stricture, so that the transverse colon had indeed the shape of the stomach, with the larger end projecting downwards into the left lumbar region. The walls of the dilated portions were thickened. The intestines above the stricture, as high as the ileo-cæcal valve, were filled with uniformly solid fæcal matters (weighing seven pounds), which looked as if packed and pressed into them. In the ileum, for a considerable extent upwards, were quantities of liquid fæces, but this portion of bowel was not distended like the parts below, though considerably dilated. The transverse colon, like a huge solid roll, occupied a great part of the abdominal cavity. The descending colon was collapsed, as were also the sigmoid flexure and the rectum; their mucous membranes were lying in relaxed folds. These portions of intestine, before being opened, had more the appearance of arteries than of bowel. These post-mortem conditions bear out, perhaps, most of what has been said as to the possibilities of an accurate diagnosis of the seat and nature of the obstruction, and certainly testify as to the value of the treatment adopted. Probably during the subsequent attack, of which the patient died, the stricture had become more and more impermeable, ulcerations, consequent on previous attacks, having led by their after-healing to this condition. Perhaps, also, repeated seizures, and consequently repeated dilatations above the seat of stricture, had finally induced such an imperfection in intestines that they could no longer contract with sufficient regularity and power to discharge their fæcal contents, no matter what the remedies employed to assist them might have been.

Mansfield-street, Cavendish-square, W.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
Physician to the Hospital for Diseases of the Nervous System.

(*Continued from page* 568.)

III. The third question I have brought forward is this:—*Do the several diseases of the nervous systems bear a certain definite proportion to the sum total of these maladies, or are they subject to considerable fluctuations? and have, in particular, paralysis and insanity, as is commonly asserted, increased perceptibly within the last decennia?*

For answering this question, I have drawn up Table III., which shows the mortality from the several diseases of the nervous system for the same period, and in lustra, as before; and I now proceed to consider these diseases *seriatim*, in their relation to the entire group of nervous diseases.

1. *Cephalitis*, which includes inflammatory diseases of the brain and spinal cord and their membranes, with the only exception of tubercular meningitis, shows a mean percentage for thirty years of 6·64, the greatest discrepancy being 0·87. The mortality was lowest in the first lustrum; it rose in the second, remained the same in the third, fell slightly in the fourth, and rose again steadily in the fifth and sixth. It is therefore seen that of late years *an increase in the fatality of cephalitis has taken place.*

2. *Apoplexy*, which comprehends chiefly cases of cerebral and meningeal hæmorrhage, shows a mean percentage of 16·19 for thirty years. The discrepancies from this mean are greater than those of cephalitis, the greatest being 2·70. As in cephalitis, the lowest mortality occurred in the first lustrum; it rose suddenly in the second, fell slightly in the third and fourth,

TABLE III.

Showing the Deaths from the Several Diseases of the Nervous System in England, and their Percentage of the entire Mortality.

	Cephalitis.	Apoplexy.	Paralysis.	Delirium Tremens.	Chorea.	Epilepsy.	Tetanus.	Insanity.	Convulsions.	Disease, etc.
1838-42.....	12,088	28,316	26,465	1,152	150	5,585	529	1,773	127,276	8,685
1843-46.....	Vacat	Vacat	Vacat	Vacat	Vacat	Vacat	Vacat	Vacat	Vacat	Vacat
1847-51.....	16,747	39,321	35,975	2,588	248	8,667	643	2,600	117,991	15,079
1852-56.....	17,246	41,681	42,044	2,534	316	10,339	714	2,412	122,796	17,449
1857-61.....	17,250	43,414	44,447	2,325	289	11,689	..	2,046	126,602	22,871
1862-66.....	19,818	50,691	51,301	2,633	339	12,359	..	2,959	131,829	20,988
1867-71.....	23,078	55,158	55,895	1,948	373	12,290	..	3,861	130,027	27,820
Percentage I.	5·78	13·49	12·61	·54	·07	2·66	·25	·84	60·97	4·14
Lustrum II.	6·71	16·39	14·93	1·07	·10	3·62	·26	1·08	49·26	6·28
.. III.	6·71	16·15	16·28	·99	·12	4·01	·27	1·07	47·61	6·80
.. IV.	6·36	15·97	16·33	·86	·10	4·31	Vacat	·75	46·72	8·49
.. V.	6·80	17·30	17·51	·90	·11	4·21	..	1·01	45·04	7·19
.. VI.	7·51	17·85	18·11	·63	·12	3·98	..	1·25	42·19	9·00
Total Percentage	6·64	16·19	15·96	·83	·10	3·79	..	1·00	48·70	6·98

and rose again somewhat considerably in the fifth and sixth. The rise altogether amounts to 4 per cent. as between the first and last lustra.

3. *Paralysis* shows a mean average of 15·96, the greatest discrepancy being 3·35. This affection has more largely and steadily increased than either cephalitis or apoplexy. While in these latter diseases there have been occasional slight falls, paralysis has risen without any interruption, and more particularly so in the second, third and fifth lustra; and while the rise for cephalitis amounted to 2, and for apoplexy to 4 per cent., paralysis is seen to have risen by nearly 6 per cent., as between the first and last lustra.

4. *Delirium tremens* shows a mean average of 0·83, the greatest discrepancy being 0·53. It seems to be, on the whole, rather on the decline at the present time; for although the minimum was registered in the first lustrum, the maximum, which occurred in the second, has never again been reached in any of the subsequent periods; and the last lustrum shows a particularly decided fall.

5. For *chorea*, as for all previous diseases, the minimum was noted in the first lustrum. The mean average is shown to be 0·10, the greatest discrepancy being 0·03. The mortality rose steadily in the second and third lustra, fell in the fourth, and rose again in the fifth and sixth. The rise as between the first and last periods amounts to 0·05, and this is not inconsiderable if we take into account the small number of deaths which are caused by chorea. This increase will perhaps be better realised when I say that the number of deaths from chorea in the last lustrum was much more than double that in the first, while the deaths from all nervous diseases were only in the proportion of 3 to 2 in the same periods.

6. Concerning *tetanus* we have defective information; but in the three lustra for which it has been registered, a slight increase has been perceptible, the numbers being 0·25, 0·26, and 0·27 respectively.

7. *Epilepsy* shows a mean average for the thirty years of 3·79, the greatest discrepancy being 1·13. There was a decided increase in the mortality from it during the first four lustra, after which it diminished, but not to the same extent as the previous rise had been, so that the first lustrum is seen to be more than 1 per cent. lower than the last.

8. *Insanity* shows a mean average of 1·00, the greatest discrepancy being 0·24. The first lustrum showed the comparatively low mortality of 0·84; in the second a not inconsiderable rise took place, which was succeeded by a slight fall in the third, and a decided fall in the fourth, in which it reached a minimum of 0·75. A second rise then took place, and continued up to the last lustrum, which attained the maximum of 1·25. I have also found that each year, singly, of the last lustrum shows a rise over its predecessor, the maximum of 1·54 having been attained in the year 1871. The popular notion that the mortality from insanity has increased during the last ten years, is therefore shown to be correct.

9. *Convulsions*, which term includes chiefly infantile eclampsia, form by far the most important cause of death amongst the several diseases of the nervous system. The mean average for thirty years is seen to be 48·70, the greatest discrepancy being 12·27. There has been an uninterrupted fall in the mortality from

convulsions ever since registration commenced. A maximum of over 60 per cent. was attained in the first lustrum; after which a very great fall occurred in the second, amounting to no less than 11 per cent., and suggesting doubts as to proper registration during the first lustrum. There is a difference of not less than 18 per cent. as between the first and last lustra; and this large diminution in the mortality from convulsions has allowed a rise to take place for other nervous diseases, without causing a corresponding rise in the mortality from these affections altogether.

10. *Disease of the brain, etc.*, although including a variety of nervous maladies, has, on the whole, shown a tolerably steady rise. The minimum of 4 per cent. occurred in the first lustrum, after which a decided increase took place in the second, a slight one in the third, and another considerable one in the fourth. The fifth lustrum showed a fall, but the sixth attained a maximum of 9 per cent. The mean average is 6·98, the greatest discrepancy being 2·84.

We may therefore arrange the several diseases of the nervous system according to their fatality in the following order:—

Convulsions	48·70
Apoplexy	16·19
Paralysis	15·96
Disease	6·98
Cephalitis	6·46
Epilepsy	3·79
Insanity	1·00
Delirium tremens	0·83
Tetanus	0·26
Chorea	0·10
	100·45

The error of 0·45 in this calculation I consider to be owing to errata of the compilers or printers of the Registrar-General's Reports.

IV. *Are nervous diseases, as is commonly asserted, more frequent in large towns than in the country, and is there any apparent influence of race or climate?*

This question may, at least to some extent, be answered by the aid of Table IV., in which I have collected and compared the deaths from these diseases as they occurred respectively in London, the South-Western Counties, and Wales for a quarter of a century. The commonly received notion that diseases of the nervous system are more prevalent and fatal in the great centres of social, professional, and commercial life than in rural districts is thereby proved to be fallacious, for it appears that the death-rate is lowest in London—viz., 10·66 per cent. of the mortality from all causes for the five lustra; that in the South-Western Counties it is higher than in London, amounting in the average to 11·20; and that it is very much higher in Wales—viz., 15·38—that is, nearly 5 per cent. more than in London.

These facts, which stand out with great clearness from Table IV., appear to me eminently suggestive.

That the nervous system should be more liable to break down in the fine and wholesome atmosphere of agricultural districts than in the close and foul air of the courts and alleys which abound in great cities, seems to show that excess of manual labour is more exhaustive to the nervous system than excess of mental labour, and that the more nourishing and substantial food which is enjoyed by even the poorest classes in London, as compared with their brethren in the country, more than compensates them in this respect for the advantages the country affords, as far as air and climate and the supposed wholesomeness of rural pursuits are concerned.

The liability to nervous diseases seems to diminish *pari passu* with the increased density of the population. In the years from 1841 to 1860 the density of population in London was 0·35 acres to a person; in the South-Western Counties 2·78 acres; and in Monmouthshire and Wales 4·40 acres to a person. Respiratory diseases are in this respect altogether different,

TABLE IV.

Showing the fatality of Nervous Diseases in LONDON, S.W. Counties, and WALES.

	LONDON.			SOUTH-WESTERN COUNTIES.			WALES.		
	Deaths from Nervous Diseases.	From all Causes.	Per-centage.	Deaths from Nervous Diseases.	From all Causes.	Per-centage.	Deaths from Nervous Diseases.	From all Causes.	Per-centage.
1847-51	31,163	292,013	10·67	18,701	181,572	10·32	18,007	127,731	14·11
1852-56	32,379	307,620	10·10	21,087	175,793	11·17	20,564	130,675	15·77
1857-61	33,038	312,616	11·05	20,246	182,434	11·12	21,889	138,643	15·80
1862-66	38,695	370,653	10·36	21,460	188,993	11·40	23,370	150,670	15·46
1867-71	42,344	380,868	11·12	22,077	184,428	11·99	23,045	146,308	15·76
Mean Percentage of five Lustra			10·66			11·20			15·38

being proportionately much more numerous in London than in country districts, and particularly in Wales.

I do not, however, consider that a lesser density of population explains altogether the extraordinary difference in the mortality from nervous diseases which is shown to exist between London and the South-Western Counties on one, and Wales on the other side; for I have found that Wales exceeds all English counties so strikingly in this respect, that neither density of population, nor climate, nor difference of occupation will account for that circumstance. I am therefore inclined to attribute this difference to another influence which distinguishes Wales fundamentally from all other English counties, and that is—*difference of race*. I think we may fairly conclude, from the facts which I have brought forward, that the nervous system of the Anglo-Saxon race has greater powers of endurance and resistance to unfavourable influences than that of the Celtic race, and is better able to bear rude shocks, as well as the ordinary wear and tear of life, with impunity. If this were to be definitely proved by further researches, more especially concerning the French and Italians,

as opposed to the English, Americans, and Germans, an interesting clue would be furnished to the problem why it is that the Anglo-Saxon race appears destined to rule the world.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MIDDLESEX HOSPITAL.

CASE OF MEMBRANOUS CROUP—TRACHEOTOMY—RECOVERY.

(Under the care of Dr. LIVEING.)

[For notes of the following case we are indebted to Mr. T. James, Physician's Assistant.]

C. R. S., aged three years and three months, at home, admitted November 22, 1875. Present attack: Was quite well to-day, till seized a couple of hours ago with difficulty of breathing, cooing respiration, and croupy cough.

November 22.—State on admission: Pulse 132; temperature 99·5°; respirations 30. Patient is not cyanosed; epigastrium very little retracted during inspiration; speaks in a hoarse voice; inspiration and expiration are audible at some distance from patient's bed; fauces a little congested, not œdematous—no false membrane. Urine contains no albumen. ℞. Vin. ipecac. ʒss.; four doses to be given at intervals of ten minutes.

23rd.—12.30 a.m.: Was sick after second and third doses, and retched a good deal; brought up no false membrane. Is now asleep. Respiration loud and crowing. 9 a.m.: Altogether has had a fairly good night. 11 a.m.: Respiration more impeded. Veins of neck and temples turgid. Patient lies with back arched, so as to give epigastrium more play. Epigastrium yields more with inspiration, but not very markedly. Over back, sibilus and rhonchus are heard (propagated from larynx). Occasional cough, but there seems too little air in chest to admit of a long cough. Bowels open twice. 12.45 p.m.: Tracheotomy performed by Mr. Scott, the House-Surgeon, without chloroform. Incision made close above sternum. Trachea very deeply placed (child being plump), but was cut into without being drawn forwards. Attempt made to insert collapsing tube, but without success; the trachea being so far back, the sides of the tube could not be kept in apposition, and one side always fell without the trachea, and the inner tube pushed trachea before it. Obliged to be content with raising one edge of the tracheal slit with a hook, and passing in a long flattened single tube. The hæmorrhage was but slight from one or two small veins, one large vein at left side of wound being held aside by a blunt hook. The operation being completed, the dyspnœa was immediately relieved. 2.30 p.m.: Cyanosis has quite disappeared; cheeks rosy. Respirations 42, quiet. Epigastrium rises with inspiration. Whole chest expands fairly well. Breath-sounds generally clear. 3 p.m.: Pulse 162; temperature 103·2°; respirations 48. 5 p.m.: Pulse 180; temperature 104·2°; respirations 45. Coughs at intervals through the tube, and a little reddened mucus comes away. 6 p.m.: Pulse 164; temperature 104·2°; respirations 54. 10 p.m.: Is doing well so far. Coughs well. Has taken a little milk.

24th.—10 a.m.: Temperature 102·6°. Got a fair amount of sleep. Takes plenty of milk. Bowels open several times, due apparently to the strong expiratory efforts in coughing. 6.30 p.m.: Temperature 103°; respirations 50. 9.15 p.m.: Temperature 102·2°; good pulse.

25th.—1.30 a.m.: A good deal of dyspnœa, which subsided after coughing up a few pieces of inspissated mucus. 9 a.m.: Temperature 102·2°. Takes milk and brandy-and-egg mixture. 11 a.m.: Sudden dyspnœa; child started up, clutching at its throat, and becoming blue in the face. Tube promptly withdrawn and found to be completely choked by a plug, besides which the bore has been lessened about one-half by an even layer of inspissated mucus. Tube cleansed and replaced. Noon: Respiration unimpeded. 2 p.m.: Temperature 101·4°. 4.30 p.m.: Tube appears to be blocked again—removed and cleansed. As soon as it was replaced, two or three pieces of false membrane were expelled after some difficulty. 6 p.m.: Temperature 103°. 8.30 p.m.: Considerable difficulty in expiration; tube again removed, is quite clean; as soon as replaced, more false membrane expelled. 10 p.m.: Pulse 156 fair; temperature 102·8°; respirations 60.

26th.—1 a.m.: Ordered to take some port wine during the night. 4.45 a.m.: Has had very little sleep. Tube choked; removed and cleansed. 9 a.m.: Has slept for an hour and a half uninterruptedly; looks more bright and cheerful. Temperature 101·8°. 10.30 a.m.: Tube brushed out with a pipe-cleaner. A good deal of inspissated mucus removed. A little bleeding caused by brush in trachea. Brush passed two inches into trachea; brought away no false membrane. 4 p.m.: A good deal of distress in breathing. Tube brushed out with pipe-cleaner, but no relief. Tube removed, when patient expelled several small pieces of membrane, and a good deal of sanious discharge, which had passed into trachea from wound. Wound is very sloughy, and smells badly. Tube cleansed and replaced. Takes a little port wine. 6 p.m.: Temperature 102·2°. Difficulty of breathing. Brush passed into tube, was then removed, hardly at all fouled. Still dyspnœa. After severe coughing she retched and expelled some frothy fluid from mouth. Tube replaced, followed by coughing and expulsion of false membrane. Breathing easier; inclined to fall asleep; local inflammation around wound. Ordered two ounces of port wine daily. 8.30 p.m.: Temperature 102°. 11 p.m.: Has had some severe fits of coughing, but is now pretty quiet. Breathing not very good.

27th.—4.30 a.m.: Breathing much impeded, though patient has been sleeping. Tube removed; found nearly choked up; cleansed and replaced; after which she breathed freely again. 7 a.m.: Temperature 101·8°. 12 noon: Tube taken out, cleansed, and replaced. 7 p.m.: Tube removed and left out.

28th.—2 a.m.: Difficulty of breathing; tube replaced, followed by coughing and expulsion of false membrane. 9.30 a.m.: Temperature 100·2°. 11 a.m.: Tube removed and left out. 2.30 p.m.: Temperature 100·8°. 3 p.m.: A little air passes through larynx; patient can nearly blow out a candle-flame placed near her mouth. In good spirits. Less swelling of tissues about wound. 5 p.m.: Difficulty in inspiring; the epigastrium drawn in a little. Tube replaced (not readily); she gave a few croupy coughs before the tube was replaced. A large quantity of bloody mucus and membrane immediately discharged from tube. Epigastrium sinks in less. 8 p.m.: Temperature 102°. 10.30 p.m.: Tube removed, cleansed, and replaced.

29th.—8 a.m.: Tube removed and left out; coughed a good deal, and brought up pieces of membrane, and latterly some bloody fluid and mucus. 10.30 a.m.: A few râles heard over left back. 7 p.m.: Temperature 101·4°. 10 p.m.: Aphthæ on tongue and inside of cheeks. Ordered mel. boracis for mouth.

30th.—12 noon: Tube has not been replaced; a good deal of rhonchus all over chest, but no sibilus or fine crepitation. 10 p.m.: Temperature 100·8°; wound dry; tracheal orifice and trachea below orifice get choked by inspissated mucus and pus, at times not very easily detached.

December 1.—6.30 a.m.: Urgent dyspnœa; a feather passed down two or three inches into trachea, brought up two or three large pieces of inspissated muco-pus, after which breathing easy. 10.30 a.m.: Wound less inflamed; still very dry. Occasional distress of breathing, relieved by cough and clearing out of tracheal orifice with a feather. Epigastrium retracts slightly with inspiration. 9 p.m.: Looks rather weary; does not take food so well.

2nd.—1 a.m.: Has had some attacks of coughing; cough at times is of a croupy character; respirations 56. 11 a.m.: Several large pieces of inspissated mucus expelled with much difficulty; wound less irritable; otherwise *in statu quo*. 3.30 p.m.: Asleep; appetite failing. 9 p.m.: Has improved, being more lively.

3rd.—10 a.m.: Rhonchus over chest; expectoration copious.

4th.—11 a.m.: Free discharge of mucus; wound shows no sign of uniting; very little air passes through mouth and nose; tongue cleaner; appetite improving.

8th.—Wound somewhat smaller in size, and more tubular.

13th.—Is much improved; breathes now almost entirely by larynx, and has regained her voice; wound healthy and much smaller; still coughs a little mucus through opening; tongue clean, appetite good, and is in good spirits; breathing noisily during sleep; urine contains no albumen.

17th.—Wound quite scabbed over; rhonchus over chest (propagated from trachea); no moist sounds.

31st.—Child in good health and spirits.

January 4.—Discharged well.

MEMBRANOUS CROUP—TRACHEOTOMY—RECOVERY.

(Under the care of Dr. CAYLEY.)

[For notes of the following case we are indebted to Mr. T. James, Physician's Assistant.]

L. G., aged four years, at school, admitted June 3, 1876.

Family History.—One of five. Rest living, but not very healthy, all being subject to cough and colds. Has had measles. Three years ago had whooping-cough, since which, whenever she gets a cough, it is of a croupy character.

Present Illness.—During early part of day previous to admission was tolerably well, but at 9 p.m., whilst in bed, awoke with cough and dyspnœa. Croup or diphtheria was not known to exist in the neighbourhood.

State on Admission.—Child fairly well nourished. Has severe dyspnœa, and laryngeal stridor with both inspiration and expiration. Metallic cough and voice. During inspiration the epigastrium is much retracted.

June 3.—Cough frequent. Sibilant râles heard all over chest, but no dulness on percussion. Tonsils a little enlarged and fauces slightly red, but no exudation is visible. Expectorates a yellowish phlegm. Pulse 140; respirations 48. Urine 1030; acid; albumen a trace. ℞. vin. ipecac. ʒj., now and every quarter of an hour until vomiting is produced. 7.30 p.m.: Has had fourteen one-drachm doses of ipecacuanha wine, but has only been a little sick. No membrane brought up. Complexion becoming dusky. Restless but drowsy. Pulse full and strong. 8 p.m.: Pulse 130; respirations 42; temperature 99°. Throat red; tonsils swollen. A patch of membrane of greyish colour is visible on right tonsil. 9 p.m.: Breathing has not improved. Face dusky. Lower ribs sink in on inspiration. Drowsy. 10.30 p.m.: Increased dyspnœa. Rhonchus and sibilus heard over both backs. Face more dusky. Eyes puffy. The child was placed on a table, and chloroform administered. Tracheotomy was performed by Mr. Karop, the House Surgeon (operation lasted twenty-five minutes). On opening the trachea a very large quantity of muco-pus, mixed with some blood, was expelled through the opening. A collapsing tube was inserted, and patient removed to bed. The opening of tube was covered with a piece of muslin and some steamed cotton-wool. 11.30 p.m.: Pulse 144; stronger than before operation. Respirations regular and easy. Cough has been troublesome, and a good quantity of muco-purulent secretion has been expelled through tube without difficulty. Face has returned to natural colour. Child seems bright and playful. Has taken some milk and brandy. Ordered three ounces of brandy daily.

4th.—12.30 p.m.: Pulse 144; respirations 48. Has slept a little. Takes nourishment well. A feather is used to remove any accumulation of secretions. No false membrane has been removed. 2.30 a.m.: Pulse 152; respirations 66; temperature 99·8°. Colour good. Has had a severe fit of coughing. No membrane expelled. 7 a.m.: Temperature 101·2°. General condition same. 12 noon: Pulse 162; respirations 66; temperature 103·2°. Has had a little sleep. Takes milk and brandy well. Considerable quantity of secretion expelled by coughing and feather. Colour of face good. 1 p.m.: Respirations 72. Colour not so good; face seems pasty. Secretion much more tenacious, and difficult to cough up. A shred of membrane, about one inch long and a quarter of an inch in breadth, coughed up. Examined under microscope it was found to consist of a few fibrillæ, intermixed with numerous granules and pus cells. 1.15 p.m.: Complexion improved. ℞. Quinæ disulph. gr. v., acid. sulph. dil. ℥v., aquæ ad, t.d.a. 3 p.m.: Pulse 168; respirations 72; temperature 102·8°. Respirations irregular. Complexion good; not pasty. 4.30 p.m.: Pulse 168; respirations 54; temperature 102·8°. Respirations regular; pulse small; colour good. Tracheal râles. Expectoration slight and fluid. Feathers have brought up more membrane. 10 p.m.: Pulse 144; respirations 54; temperature 100 8°. Has been sleeping off and on for last few hours. Colour of face good; no puffiness. Takes nourishment well. Pulse full; respirations regular.

5th.—12.30 a.m.: Pulse 144; respirations 72. Has slept about two hours and a half. Breathing regular. Has coughed up a good quantity of mucus, not tenacious. 6 a.m.: Temperature 100·8°. Has been sleeping well; breathing quietly. Cough frequent, but not violent. Aspect bright and cheerful. Bowels open. 8 a.m.: Respirations 42, regular and quiet. No tracheal râles. 10 a.m.: Pulse 120; respirations 54; temperature 100·3°. Urine acid; albumen one-twentieth; no blood. 11.30 a.m.: Face somewhat pale. Asleep. 9 p.m.: Temperature during the day has kept below 100·6°. Has had one or two severe attacks of dyspnœa and cough. Child seems cheerful, and takes nourishment well.

6th.—1 a.m.: Breathing not so well. Tube cleansed with feathers. Expels some mucus through mouth, and speaks in a hoarse whisper. 4 a.m.: Is able to breathe fairly well through the mouth. Has slept. Colour of face good. 10 a.m.: Breathing with some difficulty. Face somewhat cyanosed. Tube removed, and a larger and longer one introduced. Immediately after insertion of new tube, coughed up a large plug of mucus and membrane. 8 p.m.: Breathing well with the new tube.

7th.—1 a.m.: Temperature 100·1°. Asleep. Does not cough much. Feathers removed good quantity of mucus and some membrane. 6 a.m.: Temperature 100·1°. Going on well. 10 a.m.: Has expelled a good deal of mucus and some membrane during night. Pulse 120; respirations 36; temperature 99·7°. Sleepy; respirations deep and regular. 9 p.m.: Respirations 44. Asleep. Has had much less coughing during afternoon and evening.

8th.—6 a.m.: Temperature 100·6°; pulse 150; respirations 54. Has had a good night. Cough slight. Alæ nasi working. Pulse full and strong. Does not seem so strong. 9 p.m.: Pulse 132; respirations 48. Coughing rather increased. 12 midnight: Temperature 100·4°. Has been sleeping.

9th.—10 a.m.: Slept fairly well during night. Looks worn and tired out. Does not take food so well. Pulse 120; respirations 48; temperature 99·8°. Sweet jelly and eggs ordered. 9 p.m.: Respirations 44; temperature 99·2°. Has been easy during the day. Cough slight. One or two small pieces of membrane expelled.

10th.—10 a.m.: Pulse 132; respirations 44. Good night; slept well. Cough less. No membrane brought up. Takes food better. 9 p.m.: Has had a few fits of coughing during day; no membrane seen. Child seems very weak, but takes food well.

11th.—Pulse 132; respirations 42; temperature 101°. Has had a good night. 9 p.m.: Pulse 144; respirations 45; temperature 101°.

12th.—10 a.m.: Pulse 144; respirations 42; temperature 98·3°. Urine, specific gravity 1005; acid; a faint trace of albumen. Breathes well. 1 p.m.: Tube removed and cleansed. On closing tracheal opening great distress of breathing was experienced. Tube replaced.

13th.—Breathing fairly well. 9 p.m.: Temperature 98·1°. Can breathe through mouth, almost blowing a candle-flame out. Respirations 40.

14th.—Tube taken out. Breathes well through tracheal opening.

15th.—Continues to breathe easily through tracheal wound. Has coughed up a large quantity of mucus.

16th.—Has had a good night. When tracheal opening is closed with a sponge, patient can breathe through mouth, and makes an attempt to speak.

19th.—Able to speak a little when tracheal wound is closed. Some rhonchus and sibilus in larger bronchial tubes. Urine acid; a faint trace of albumen; no blood.

20th.—Lemonade, one bottle daily.

23rd.—Speaks quite plainly when tracheal opening is covered by a piece of lint; voice is rather faint. Wound is healing, and much smaller. Lotio rubra to wound; three ounces of port wine daily; one drachm of iron wine twice a day. Urine cloudy, acid; no albumen.

July 1.—Wound quite closed. Breathing through mouth well.

10th.—Urine acid; no albumen; specific gravity 1028.

17th.—Discharged well.

It will be remembered that some short time since a factory operative had his leg amputated in the Manchester Infirmary, and the loss of blood was so great that his life was given up as hopeless. Dr. Hardie stated that nothing but an infusion of blood could save his life; whereupon one of the students in the Manchester Infirmary, Mr. Irvin, volunteered to be bled for the purpose, and twenty-five ounces of blood were taken from him and infused into the veins of the dying man, who has now quite recovered. The Baron Barreto, of Brandon Park, Suffolk, having heard of this humane act from Dr. Hardie, who performed the operation, has presented Mr. Irvin with a massive silver cup bearing an appropriate inscription.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 25, 1876.

THE KEIGHLEY GUARDIANS.

The contest so long carried on between a majority of the Guardians of the Keighley Union and the law terminated on the 16th inst. in the submission of the rebellious Guardians. The case of "The Queen *v.* the Guardians of the Keighley Union: the Vaccination Acts" came on again, on that day, in the Queen's Bench Division, before Lord Chief Justice Cockburn and Justices Mellor and Lush, on the Master's report; and the defendants—who, it will be remembered, had been released on September 9 from York Castle on bail—came up for judgment. The Master's report very clearly set forth all the facts of the case, which must be so well in the minds of our readers as to make any full detail of them unnecessary here. But we may observe that so far back as July 5, 1875, after a long contention between the Keighley Guardians and the Local Government Board, on the application of the latter body a writ of *mandamus* was issued to the Keighley Guardians, commanding them "to give directions authorising the Vaccination Officer of the Keighley Vaccination District of the Keighley Union to institute and conduct proceedings against persons in default under the Vaccination Acts, by reason of their having neglected, within the said district, to take their children, or to cause them to be taken, to the public vaccinator to be vaccinated, or to cause them to be vaccinated by some medical practitioner, as required by the provisions of certain Vaccination Acts therein set out." Six of the Guardians replied that they desired to obey the writ, but, being in a minority on the Board, were unable to do so; while the majority made a return, excusing themselves from obedience because compliance would seriously endanger the health of the inhabitants, and endeavouring to shift the onus of issuing the required orders on to the Local Government Board. Early in January of this year judgment was given against this return; and a few days later, on January 26, a peremptory writ of *mandamus* was issued. Late in February a resolution was passed by the Guardians, in obedience to this writ, three of the present defendants voting against, and one for it; and early in March this resolution of obedience was returned on the peremptory writ. At that time the remaining three of the defendants were not members of the Board of Guardians, but they were later elected on it for the purpose of opposing the execution of the Vaccination Acts; and then the Board turned round, and, on May 3, resolved to rescind "all portions of resolutions which have been or can be construed into a general order to prosecute, and that instructions be given to the Vaccination Officer that the Board reserves to itself the dispensation of the Vaccination Acts." This course was persisted in, though the Local Government Board, which had all through acted with great forbearance and consideration, warned the rebelling Guardians that they were contemptuously disobeying Her Majesty's Writ; and consequently, in July, a writ of attachment was obtained against them, and on August 7 they were taken into custody and lodged in York Castle, where they remained till released on bail in September. Whilst they were imprisoned, the law-abiding members of the Board of Guardians passed a resolution to restore the instructions to the Vaccination Officer to what they were when the Guardians had made their return of obedience to the writ of *mandamus*, and these instructions had not again been altered. The Master reported, however, to the Court that, in answer to his interrogatories, the defendants said that they would not again endeavour to alter the instructions to the Vaccination Officer as now restored, though they would still, on conscientious grounds, each one for himself, refuse to be parties to authorising the officer to institute and conduct proceedings against persons in default under the Vaccination Acts. And on this the Solicitor-General said that the Local Government Board would be content that the defendants should be allowed to go on their own recognisances, to come up for judgment whensoever called upon, on the condition of their continuing to obey the law.

The Lord Chief Justice remarks that that would be a very happy ending of the case, and that it would be a very liberal, and, indeed, generous conduct on the part of the Board; and the defendants having each assented to the arrangement, they entered into their own recognisances, in the sum of £1000 each, to come up for judgment when called upon, it being understood that they are not, as members of the Board of Guardians, to do anything, by taking part in demonstrations or otherwise, to obstruct the carrying out of the directions to the Vaccination Officer to enforce the law.

The final observations of the Lord Chief Justice are so clear and instructive that we give them here in full. He said: "There can be no doubt whatever that the defendants are in contempt for the course they have pursued in refusing to obey the writ of *mandamus* issued from this Court. I have no doubt that they were actuated by conscientious motives; but it is not for members of a constitutional community like ours to set up their individual judgment against that which is the law of the land. It may be that here and there some mischief may have resulted from the practice of vaccination, to which these persons are so strenuously opposed. But when they bear in mind that which history tells us (though perhaps they are not aware of it), that before vaccination was introduced the small-pox was one of the greatest plagues that ever afflicted mankind, sweeping away its victims by thousands, and that it was a constant source of dread and terror to the whole community, and that this dreadful plague has been practically put an end to by the practice of vaccination, the knowledge of this surely would influence their minds, as it has influenced the mind of the Legislature and of all the more enlightened and educated portion of the community. But that is not the ground on which we proceed, and we proceed simply upon the ground that it is the duty of subjects to obey an Act of Parliament, and that it is the duty of this Court to enforce obedience to it; and if obedience is withheld, then this Court

must enforce it. There can be no doubt that all the defendants are in contempt. At the same time, they have been led into that contempt by a mistaken notion of their duty and a belief that they were benefiting the community by opposing the law. This cannot be allowed. It cannot be allowed that individuals should set up their judgments against that which the Legislature has enacted to be the law of the land. But I am glad that the matter has been brought to this end, and that we are thus relieved from the necessity of passing the severe sentence of imprisonment it would have otherwise been our duty to pass upon these defendants."

We will try to hope that all anti-vaccinationists will lay to heart the utterances of the Lord Chief Justice, though the character of the excuses urged by some of the defendants shows such crass ignorance and stupidity that, if they may be taken as fair examples of anti-vaccinationists, the chance of any real reform in such opponents of the law would appear to be very small indeed. One of the defendants had the boldness to argue that as Keighley did not return a member to Parliament it was unconstitutional to punish them for resisting the execution of a law in the passing of which they had taken no part, and thus to punish in their persons the community to which they belonged. This plea was passed by, as, we suppose, not worthy of notice; but when another of the defendants urged that they thought it was optional on them to pass a resolution to enforce the law, and that they had only not taken steps to carry it out, the Lord Chief Justice pointed out that they had been actively engaged in opposing the law, and disobeying the order of the Court. They had allowed themselves to be elected as Guardians for the very purpose of protecting from punishment those who disobeyed the Vaccination Acts; and when elected they had used all their powers of obstructing the carrying out of those Acts. They had wilfully resisted the execution of the law.

The case is of value as proving that the courts of justice, when set in motion, will require obedience to the Vaccination Acts as well as to any other law, pleas of conscience or of ignorance notwithstanding. Men may agitate as much and as earnestly as they like for the alteration or the repeal of a law, but wilful and persistent disobedience to a law cannot be allowed. We ourselves hold that it is very desirable that the State should offer the alternative of vaccination from the calf to those who, from ignorance, timidity, or prejudice, object to the use of humanised lymph; but till that supplement to the law is granted, we certainly do not hesitate, in the interest of mankind, to join all other authorities and powers in insisting on obedience to the law as it stands.

The case of the Keighley Guardians contains also a lesson to all who, for any reason, coquet with the Vaccination Acts, and, while obeying them themselves, and believing in the value of vaccination, give out such vague utterances regarding the Acts as encourage the ignorant and prejudiced in opposing them. For the sake of popularity, or perhaps a possible gain of political power, they do, or wilfully run a risk of doing, very grave and wide-spreading mischief and wrong.

TRACHEOTOMY IN DIPHTHERIA AND CROUP.

Whatever may be the outcome of the investigation instituted by the Royal Medical and Chirurgical Society as to the identity or non-identity of membranous croup and diphtheria, there will remain the fact that each of these diseases, or each of the varieties of the same disease, as the case may be decided, tends to kill rapidly by suffocation; and that this suffocation is due to two causes—first, to the mechanical obstruction offered by the diseased state of the mucous membrane; and secondly, to the laryngeal spasm excited by this diseased membrane.

In this respect, at least, the membranous croup of Home and Cheyne is identical with the tracheal *diphthérite* of Bretonneau, albeit the former is sporadic, and the latter epidemic—a point of difference upon which much stress has been laid. While, however, it is certain that membranous croup in the great majority of cases is a sthenic disease, which kills by suffocation, and not by the vital depression it produces, diphtheria, though it often resembles croup in its sthenic character, is, it must be confessed, frequently asthenic, and kills by its own intensity and virulence. In such cases, tracheotomy is out of the question, for no one would think of performing the operation when danger to life lies in a general infection of the system, and not in the local lesion of the air-passages. Excluding, therefore, from our consideration those cases of croup and diphtheria in which death is threatened by exhaustion, it ought, we think, to be regarded as a rule that the physician should advise, and the surgeon encourage, the performance of tracheotomy in these diseases when it is seen that medical treatment alone is clearly failing.

There are some—perhaps not a few—who would object to this on the grounds—first, that apparently hopeless cases do sometimes recover; and, secondly, that death is sure to follow tracheotomy, either from an extension of the disease itself, or as the result of the operation which has dangers of its own. Indeed, it is well known that some surgeons affirm the operation to be unjustifiable; while others, without going so far as this, deny the validity of any favourable arguments drawn from statistics, because, as they aver, the operation in the successful cases was performed so early that it cannot be said that recovery would not have occurred without it; or they dispute the nature of the disease, and declare that the successful cases were not membranous croup at all, but laryngitis or laryngo-tracheitis.

With regard to the first objection, it is pretty certain that, whatever may be the case on the Continent, and especially in France, where the operation is performed at a much earlier stage in the disease than elsewhere, English practice is entirely against it; for, as the result of our own inquiries, it is clear that the operation is not often, if ever, had recourse to in this country until all hope of recovery without it has been abandoned.

The time at which the operation ought to be performed is when the voice is extinct, and the difficulty of respiration continues and increases; when the skin is becoming livid, the extremities are cold, and the anterior thoracic wall, especially the lower end of the sternum, sinks in on inspiration. It has been asserted by some of the advocates of tracheotomy that, in the absence of stridor, and when the chest-wall remains puffed out and the lungs seem full and distended, the operation is undesirable, as these signs, they say, indicate the extension of false membrane along the small bronchial tubes.

It may be questioned, however, whether these symptoms ought to contraindicate interference, for they may arise from an œdema or congestion of the lungs, the result of long-continued obstruction to respiration—a condition which, doubtless, impairs the chances of the operation, but does not render it useless, although it does suggest that the operation ought to have been earlier entertained. But the existence of congestion is no real contraindication; for its relief is facilitated by the increased freedom of breathing after tracheotomy.

Nor can the second objection be any longer supported, for many of the successful cases have occurred where undoubtedly there was false membrane present; and there are now numerous proofs that the false membrane can sometimes be removed by the surgeon, and sometimes expelled by the patient after tracheotomy has been performed. Indeed, it seems obvious, granting the presence of the membrane, that the best chance of getting it expelled is to open the windpipe,—for is not this the recognised practice with other foreign bodies in the air-passages?

Some months ago we instituted an inquiry, by which we

acquired sufficient information to show that there is a fair proportion of recoveries after the operation, whether we look to metropolitan or provincial, English or Scotch practice. We collected altogether from hospital and private practice eighty-nine cases of unmistakable croup and diphtheria, in all of which tracheotomy was performed, and out of these thirty-six recovered and fifty-three died: which means that two patients out of every five operated upon recovered—a success by no means insignificant when it is remembered that the operation does not cure the disease for which it is done, but only affords a chance of life by postponing or averting death.

In several of these successful cases the true nature of the disease was shown by the escape or removal of false membrane. Last year we published (*Medical Times and Gazette*, July 17) a successful case by Dr. W. Richardson, of great value and importance, in which this occurred; quite recently another case illustrating the same fact was brought before the Medical Society of London; and in another column will be found the detailed reports of two similar cases, which have been recently under treatment in the Middlesex Hospital, in each of which tracheotomy was followed by the expulsion of false membrane and recovery.

DR. DEVILLE AND THE LOCAL BOARD OF HEALTH, HARROGATE.

On Monday last, Dr. Deville, the Medical Officer of Health at Harrogate, made application, in the Queen's Bench Division of the High Court of Justice, for a *mandamus* to compel the Local Board of Health to permit him to discharge the duties of his office. He set forth that he had been duly elected to his office, and had discharged its duties down to the end of April last; the Local Board had then, however, taken great offence at a paper which he had read at the meeting of the Social Science Association at York, on "The Sanitary State of Watering-Places," and in which, in order to secure visitors to such places against certain possible dangers to health, he had suggested a survey of lodging-houses by sanitary inspectors, especially with a view to proper drainage, and a certificate by inspectors of the lodging-houses being in a proper sanitary state. The Local Board applied to the Local Government Board in London to sanction their dismissal of Dr. Deville, but their request was refused. Nevertheless they persisted in treating him as if he had been dismissed; they returned his reports, and instructed the inspector of nuisances not to pay any regard to his representations as to nuisances; so that, in fact, he found it impossible to exercise his functions or discharge his duties as Officer of Health; and he could not obtain his salary. Under these circumstances Dr. Deville prayed for a *mandamus* to the Local Board, directing them to permit him to discharge the duties of his office, from which they had virtually expelled him. The Lord Chief Justice observed that as to the matter of salary Dr. Deville was in his office, and was entitled to his salary, whether he was allowed to discharge his duties or not, "so that he was in the happy position, without any fault of his own, of holding a sinecure." True, his salary was not paid, but, *O fortunatus nimium!* he had the ordinary legal remedy for that against the Commissioners, who are the Local Board of Health. The Court unanimously refused the *mandamus*. They suggested that the inspector might be proceeded against for disobeying his superior officer; but the application for a *mandamus* was too general; "it was asked rather to forbid the Board to act in a certain way, than to do an act, which is the proper object of a *mandamus*." Finally, the decision of the Court, as given by the Lord Chief Justice, was as follows:—"If the authority of the Local Board were necessary to put the officer of health in motion, or to enable him to discharge his duties, it would be different, but they have no such function to discharge. The order of Dr. Deville, as Officer of Health, is in itself sufficient to make it obligatory on the inspector to do his duty; and though the Board tell him not to perform his duty and obey the lawful orders of the Officer of Health, he is bound to obey. They may expose themselves to penal consequences by thus acting, but we cannot grant a *mandamus* to the Commissioners to perform functions which really do not belong to them. They have no right to give the inspector instructions as to his discharge of his duties. The Act gives them no such authority; it is vested in the Officer of Health. Their order to the inspector not to obey him is mere *brutum fulmen*, and will not protect him from the consequences of his disobedience of the lawful orders of the Officer of Health." And he added—"We cannot grant a *mandamus* to direct a public body to perform functions which they do not really possess, and therefore cannot perform." The application was consequently refused.

Dr. Deville's wise and excellent suggestions for increasing the safety and attractiveness of our health-resorts had excited the indignation and wrath of the ignorant and short-sighted *bourgeois* interest, and he has in consequence been placed in a most painful and unenviable position. It seems that a Local Board of Health may virtually disregard a decision of the central authority—the Local Government Board—and ignore their officer of health, whose only remedy will be the anxious and expensive one of an appeal to the uncertainties of the law. He can proceed against his inspector for disobeying him while obeying the orders of the Local Board; he can proceed against the Board for refusing to pay his salary; and the Board *may* "expose themselves to penal consequences" by directing the inspector of nuisances to disregard the orders of the medical officer of health. Truly a delightful batch of legal processes is offered to Dr. Deville, and a great encouragement given to officers of health. We commend Dr. Deville's position to the consideration of the Local Government Board, and of some of our sanitary legislators. It ought not to be left to the medical officer of health to find the remedy for such a state of things as now exists at Harrogate.

THE ROYAL COLLEGE OF SURGEONS.

The special meeting of the Council of the Royal College of Surgeons, to be held on Friday next, will be one of great importance, as the decisions then come to will probably involve, indirectly, the fate of the latest Amended Conjoint Scheme for England. It may be remembered that the conference of the representatives of all the English medical authorities, held at the Royal College of Surgeons, agreed in March last to recommend that the Committee of Reference should consist of four representatives from each of the Corporations, and two (one in medicine and one in surgery) from each University, the Corporations thus appointing, altogether, twelve, and the Universities eight members of the Committee of Reference. This Amended Scheme was, however, objected to by the Universities of Cambridge and London, and the University of London suggested that the Committee of Reference should be constituted of representatives to be appointed in equal numbers by each of the Medical Corporations and Universities of England; and it was recommended that if the proposal should be adopted, the number of representatives of each authority should be two. This alteration would, it will be seen, give the preponderance of power in the Committee of Reference to the Universities instead of to the Corporations—an extremely important change; but the suggestion was accepted by the Royal College of Physicians, and a month ago was also adopted by the Council of the Royal College of Surgeons. The resolution of the latter College was carried, however, by only nine votes (including that of the President) to seven, while some of the members of the Council who were present

declined to vote at all. It is not surprising, then, that there should have been considerable unwillingness to accept as final such a vote on so weighty a matter; and, consequently, at the meeting of the Council on the 9th inst., a resolution was proposed and carried for the confirmation of the minutes of the above-mentioned meeting, with the exception of the resolution altering the constitution of the Committee of Reference. It was further decided that the subject of the Scheme should be discussed at an extraordinary meeting of the Council, to be held on December 1. It is evident, on the slightest consideration, that very grave, if not absolutely insuperable, objections may be made to the suggestions of the University of London. The Royal College of Surgeons grants something like 400 diplomas of membership and fellowship in the year, while the Universities of Oxford, Cambridge, and Durham together confer perhaps not twenty medical degrees yearly; and yet it is proposed to grant each of these Universities an equal representative power in the Committee of Reference with the College of Surgeons. Again, the College of Surgeons would have only two votes in the nomination of examiners, while the College itself now does not entrust this important and responsible business to a smaller body, we believe, than a committee of six members of Council. It seems more than probable, therefore, that the alteration suggested by the University of London will be rejected by the College of Surgeons; and in that case, we suppose, the Amended Scheme of March, 1876, will fall through—a result which will be caused indirectly, as we have said, by the vote of the College, but will, in reality, be due to the objections raised to the Scheme by the Universities of London and Cambridge. One word more we will venture to add. May it not be justly expected that every member of the Council of the College of Surgeons will be prepared to vote at the meeting on Friday next? It seems anything but creditable that any member should decline the responsibility of saying Yes or No to questions of such high importance as those to which we have been referring.

THE WEEK.

TOPICS OF THE DAY.

The steadily advancing recognition of the importance of a general knowledge of the laws of health, more especially as applied to the daily wants of life, has led to the introduction into London of the two specially directed courses of lectures of which we gave notice a fortnight ago. Dr. Corfield, under the auspices of the National Society of Health and the Trades' Guilds of Learning, is now giving a course of twenty lectures on the Laws of Health, at the rooms of the Society of Arts; and on the evening of the 17th inst., Dr. Richardson, under arrangements made by the trustees of the Gilchrist Education Trust, commenced his series of ten lectures on Human Physiology, addressed to the teachers of the primary schools of the metropolis. The action of the trustees of this fund is left as unfettered as possible. The instructions in Dr. Gilchrist's will were, that certain specified moneys should be used by the trustees in such a manner as they shall in their absolute and uncontrolled discretion think proper and expedient for the advancement and propagation of education and learning in every part of the world, as far as circumstances permit. For the last ten years scholarships have been given from the fund in India, Canada, Australia, and other of our colonies; while London, Leeds, and Manchester have been supplied with courses of lectures by Professors Huxley, Ramsay, Duncan, Dr. Carpenter, Mr. Norman Lockyer, etc. This year the teaching of physiology to those who teach in our primary schools was determined on, and the syllabus Dr. Richardson has drawn up states his intention to bring prominently forward the various applications of physiological knowledge to the wants of life.

Princess Louis of Hesse, and Princess Louise, Marchioness of Lorne, paid a private visit, last week, to the Samaritan Free Hospital, and inspected minutely and with great care both the in- and out-patient departments during the busiest time of the day, in order thoroughly to observe the working arrangements, in which Princess Louis is much interested, having a large institution at Darmstadt of a similar description under her own immediate supervision.

Thanks to the exertions of Dr. Sedgwick Saunders, Medical Officer of Health for the City of London, another extensive seizure of adulterated tea—about 40,000 pounds weight—has been made in the bonded warehouses belonging to Messrs. Wrightson and Son, Tower-hill. This tea had been stored there for nine years. Dr. Saunders proved its utter unfitness for use, and remarked that several cases of this description had come under his notice, but in each, the moment it became known that he was analysing samples, it was removed to Holland in great part, though much of it, he was afraid, found its way into workhouses. In 1874 he took samples of 544 chests in the metropolitan warehouses, and this was so removed; again he did the same with 500 half-chests in the East and West India Docks. This was offered publicly for sale at 3½d. per lb., and was reshipped to Rotterdam; it was largely adulterated with quartz. He had also analysed samples from two half-chests and seventy-two chests, all of which were removed. Sir Robert Carden said the tea should be tested before it went into bond; and Mr. Baylis observed that under the new Adulteration Act this was done. The present would probably be the last time he should have to make an application of this kind. Sir Robert Carden remarked that he had no hesitation in ordering the tea in question to be destroyed, and he only wished he had the original consigners, or the Chinese who sent it, before him to deal with.

At a meeting of the Sedgley Board of Guardians, held last week, the Medical Officer of Health reported that "out of twenty-nine deaths, twenty-two were infants, and it was shown that £5 death clubs led to the greater portion of this mortality, as they offered a premium for infant death, and frequently the death of a child was made the occasion of rejoicing." The Board regretted the existence of such a state of things, but confessed themselves unable to see their way clearly to suppress such an obnoxious system.

It is reported, but we believe without confirmation, that Professor Pirogoff has been appointed by the Russian Government to take the direction of the field ambulances in the event of active operations supervening; and further, that all surgeons in private practice throughout Southern Russia have received instructions to enter the army. A large majority, it is stated, have notified their readiness to obey this order.

We have elsewhere noticed the case of the Queen *v.* the Guardians of the Keighley Union. Last week these gentlemen surrendered to their bail in the Queen's Bench Division of the High Court of Justice; and on their promising to behave better so long as they are Guardians, the Local Government Board generously declined to press for punishment, and they were discharged, each in his own recognisances for £1000 to come up for judgment when called upon. It is not altogether satisfactory to hear that on their return to Keighley last Saturday they were loudly cheered by an admiring mob; and that at an open-air meeting, held shortly afterwards, addresses approving of their conduct were delivered from a waggon by their supporters.

A recent case reported from St. Mary's Hospital may somewhat shake the faith, or at least the practice, of those who regard early rising as the first of all virtues, unless they add teetotalism to early rising. It ought also to serve as a warning to publicans. A man employed as a cab-washer was admitted,

having completely lost the use of his upper extremities, while his voice was reduced to the merest whisper. On being questioned, he stated that as he usually finished his work just as the public-houses opened, he always had the very first glass of beer or gin that was served in the morning—that is to say, the liquor which had remained all night in the draw-pipe in contact with the lead. His gums showed the well-known blue line indicative of lead-poisoning, and other confirmatory symptoms also existed. Some of the gin, similar to that which he drank every morning, having been procured and tested, gave 1/8th of a grain of lead per fluid ounce. The patient was ultimately cured by the exhibition of iodide of potassium and the use of galvanism.

The fund for the extension of the Norfolk and Norwich Hospital, on behalf of which institution a meeting was addressed by the Prince of Wales on Monday last, will be augmented by subscriptions from the Duke of Norfolk, who has promised the sum of £1000; the Earl of Leicester, who, under certain conditions, has subscribed £5000; Mrs. Dashwood, of Caistor, who contributes £1000; the Rev. Sir E. Jodrell, £1000; Mrs. E. P. Clarke, £1000; Messrs. Gurney and Co., £5000; and Messrs. J. and J. Colman, £1000.

The Registrar-General's Quarterly Return of births, deaths, and marriages registered in Scotland during the quarter ending September 30 last, has just been published. From this report it appears that in the period under notice 30,790 births, 16,465 deaths, and 5895 marriages were recorded. These figures show that the birth-rate has considerably exceeded the average of the corresponding quarters during the previous ten years; that the death-rate has been remarkably low; and that marriages have occurred with more than average frequency. The class of zymotic diseases caused 414 deaths in July, 436 in August, and 394 in September—constituting very nearly 20·2 per cent. of the total mortality ascribed to specified causes. This proportion is far lower than that usually observed in the principal towns of Scotland. It is worthy of notice that during the period now considered not a single death occurred from small-pox.

We have reason to believe that in all probability the long-standing grievance of Army Medical Officers with regard to mess and band contributions and subscriptions will very shortly be removed, by the settlement of the matter in favour of the medical officers.

THE "BANNER SYSTEM" AT GUY'S HOSPITAL.

Lately a good deal of discussion has been going on in the public press respecting the best means of trapping and ventilating drains and sewers, and preventing the escape of sewer-gas into houses. Among the various plans that have been proposed to solve the sewer-gas difficulty, the one which promises to give the best results is perhaps that which is known as the "Banner system." This system has recently been adopted at Guy's Hospital, where the drainage was, until within the last few months, in a most unsatisfactory condition. Mr. A. Billing, F.R.I.B. Architects, the Surveyor to Guy's Hospital, under whose supervision the drainage work at the Hospital has been carried out, sends for publication a copy of a letter which he has received from Mr. Banner, and in which the inventor explains his system as follows:—"The specification of my patent is very simple, consisting of a cowl, a trap in the basement of the house only, and an inlet for fresh air into the soil-pipe a little above the latter (or into the drain, etc., as the case may be). The essence of it may be described as based upon thorough ventilation—that is, the constant withdrawing from the drains or soil-pipes of the house, during all winds and all weathers, any little foul air there ever can be within them, and replacing it with fresh air. For effectually securing this, I have used my own appliances at the Hospital to carry out my system, for which an inlet for fresh air into the soil-pipe a little above the trap is an absolute necessity, as without it no cowl, however powerful, will work at all; and such an air-inlet, led from any point to the foot of the soil-pipe, as you will see, is a very important part of my patent rights." By the system, as carried out at the Hospital, a continuous current of air is admitted by an inlet placed near the base of the soil-pipe, immediately over the double-dip trap which separates it from the drain. The soil-pipe itself is carried through the roof of the building without any diminution of its internal area, is, of course, open at the top, and is surmounted by a cowl. The current induced by the counter-openings and the action of the cowl is of such velocity that it passes rapidly by the closet and sink-connexions, imparting to these offshoots so much of its extracting force as to render unnecessary the syphon-traps, which are such a source of trouble and expense in the ordinary system of house-drains. A similar principle of ventilation has also been applied to the larger conduits. The drain which receives the soil-water from the wards and contiguous buildings, and which is about two hundred feet in length, has at each extremity a vertical shaft, which rises considerably above the roof. One of these is intended to convey a downward, and the other an upward current of air, and to facilitate their action each shaft is surmounted by a cowl. From experiments which have been made it has been found that the air in the drain is in constant motion, and the whole system works so well that Mr. Billing is very sanguine of its success. He adds further, that in his opinion "the 'Banner system' will settle the long vexed question of how sewers should be dealt with so as to overcome all difficulties and dangers in respect of the soil-pipes within them and the drains between them and the sewers." Other architects, however, who have studied the system, inform us that they are far from satisfied as to its merits. We shall therefore look forward with some interest to the result of the experiment which Mr. Billing has been induced to try at Guy's Hospital.

SMALL-POX IN LONDON.

During the week ending Saturday, November 18, the deaths from small-pox in London, which had been 15, 21, and 48 in the three preceding weeks, further rose to 52, the highest weekly number since May, 1872; 27 were certified as unvaccinated cases, 16 as vaccinated, and in 9 cases the medical certificates did not furnish any information as to vaccination. Of the 52 fatal cases, 24 occurred in the two Metropolitan Asylum District Small-pox Hospitals at Homerton and Stockwell, and 2 in the Highgate Small-pox Hospital; the remaining 26, or 50 per cent., occurred in private dwellings, for the most part in tenement-houses, where isolation of the patients is simply impossible. Not one of the 52 deaths from small-pox was of a person belonging to the middle or upper classes. Eleven of the small-pox patients had resided in Hackney, 5 in Islington, 5 in Bethnal-green, 9 in Lambeth, 3 in Clapham, and 3 in Camberwell; in all, 4 belonging to the West, 20 to the North, 2 to the Central, 8 to the East, and 18 to the South group of districts. The fatal cases showed a considerable increase in North London, especially in Hackney. Since the outbreak of the present epidemic, 687 completed cases of small-pox have been recorded in the two Metropolitan Asylum District Hospitals at Homerton and Stockwell, of which 165 resulted in death and 522 in recovery; the mortality was in the proportion of 24 per cent. of the completed cases, and exceeded that which prevailed among the cases treated in those Hospitals during the epidemic of 1871-72. Among the vaccinated cases treated this year the mortality had been 13 per cent., whereas among the unvaccinated cases it had been equal to 57 per cent. The Hampstead Hospital is now open, and, at the meeting of the Metropolitan Asylums

Board, on Saturday last, it was reported that 56 patients had been received into it. Convalescent cases had been transferred from the Homerton Small-pox Hospital to that at Hampstead, and arrangements have been made for the reception there of acute cases direct from Marylebone, Islington, St. Pancras, Hampstead, and Hackney; but the pressure on the Homerton and Stockwell Hospitals is still very great, and each Hospital still contains many more than its normal number of patients.

VERDICT OF MANSLAUGHTER AGAINST A CHEMIST'S ASSISTANT.

THE verdict recently given by the jury at a coroner's inquest held at Grangetown, near Cardiff, on the body of a child aged nine months, who died from an overdose of laudanum, will, it is hoped, serve as a caution to chemists and chemists' assistants, who, it is to be feared, often dispense preparations of opium for children without duly considering the responsibility they are incurring. According to the evidence of the parents, they had been in the habit of giving the deceased syrup of poppies almost from its birth, in order to keep it quiet. As the syrup of poppies did not, after a time, have the desired effect, the assistant at the chemist's where the drug was obtained added a few drops of laudanum. The quantity of laudanum added to each pennyworth of syrup of poppies was increased from time to time, until at last the assistant added fifty drops to the pennyworth of syrup. Of this mixture the parents gave half a teaspoonful at a time, as directed. The medical evidence was to the effect that death took place from inability to digest food—a condition doubtless caused by constant drugging with opium. At the time of death the child weighed only six pounds eleven ounces, the average weight of a child seven months old being twenty pounds. The jury returned a verdict of manslaughter against the parents of the deceased, and also against the chemist's assistant who supplied the laudanum.

THE PATHOLOGY OF DERMOID CYSTS.

SOME interesting additions to our knowledge of dermoid ovarian cysts were made at the meeting of the Pathological Society last Tuesday. Dr. Griffiths, of Swansea, brought forward two cases in which he had successfully removed one ovary from young single women, and he exhibited the cysts, containing skin, bone, teeth, and hair, to the Society. Mr. Spencer Wells had also placed on the table microscopic preparations made by Mr. Thornton, in which different structures found in dermoid cysts were clearly and beautifully defined. Mr. Wells stated that of 810 cases in which he had up to that time performed ovariotomy, only twenty had been dermoid cysts. Of these eighteen had recovered, proving that the fears expressed by others as to the mortality after removing dermoid cysts were very much exaggerated. Some of Mr. Wells's patients were young single women, one a girl only eight years old, and the cysts were probably congenital; but in other cases the patients were women who had borne several children. In reply to a question by Dr. Griffiths, Mr. Wells stated that if an extra-ovarian cyst could be removed, leaving the ovary on that side healthy, it would be right to allow it to remain, provided the Fallopian tube were uninjured; but if a portion of the tube must be removed, it would be better to remove the ovary also, otherwise the periodic maturation of the ovaries would probably lead to pelvic hæmatocele.

GERMAN PATHOLOGICAL CHAIRS.

PROFESSOR PONFICK has been called from Rostock to the chair of Pathological Anatomy at Göttingen; and Dr. Albert Thierfelder, formerly assistant in the Pathological Institute at Leipzig, has been called to succeed him. Dr. Thierfelder is well known to pathologists in this country by the excellent series of micro-pathological plates which he is issuing.

THE ISLINGTON "ROOKERIES."

LAST week the Islington Vestry prosecuted the proprietors of several of the houses situated in the courts leading out of High-street, Islington, for allowing them to be in a state injurious to health; and orders were made on defendants to stop the nuisance complained of, and prevent its recurrence. All the houses in the courts referred to have been condemned by the Metropolitan Board of Works, and plans have just been prepared for clearing the land on which they now stand, and erecting in their places a sufficient number of dwellings in blocks to accommodate the same number of persons as will be displaced. At present these courts contain 197 rooms, very small, and in an extremely dirty and dilapidated condition, into which no less than 547 persons are crowded. The new dwellings will contain a total of 241 rooms, divided into 133 tenements, thirty-four of one room each, ninety of two rooms, and nine of three or four rooms; and the whole improvement will be carried out at a cost of £22,265, of which it is expected that £14,305 will be recouped from sale of land, etc., making the total net cost £7960, which is an extremely small sum in comparison with the cost of other metropolitan improvements of a similar kind.

INSANITY IN VICTORIA.

FROM the Report of the Inspector of Lunatic Asylums on the Hospitals for the Insane, Victoria, for the year ended December 31, 1875, it appears that on that date there were 2557 registered lunatic patients in the colony of Victoria, showing an increase of 99 during the year. Of this number, 1498 were males and 1059 females. The total number of patients admitted to the public asylums of Victoria during the year was 659, of whom 559 were received for the first time, 18 were readmitted, 71 were transferred from one asylum to another, and 11 were escaped patients recaptured in the course of the year. The Report further shows that whereas, in the year 1868, 1 person in 1350 of the population was sent to a public asylum for treatment, during the year 1875 the proportion was only 1 to 1427. In comparing the proportion of recoveries in Victorian asylums with those in England, it is stated that in Victoria the admissions amounted to 659, and the discharges (recovered and improved) were 366, giving a percentage of 52·74. In England, according to the Report of the Lunacy Commissioners for 1874, the number of stated recoveries to 100 admissions is 36·49. Further, if the death-rate amongst registered insane in Victoria is reckoned on the total number treated during the year, it is found that there died a percentage of 5·50, whilst the mortality in England was 7·88 per cent. of the whole number under treatment—a comparison favourable to Victoria to the extent of 2·38 in every 100.

DEATH OF A CHILD FROM FRIGHT.

AN inquest was held by Mr. Payne, on Tuesday last, concerning the death of Emma Black, aged four years, who was alleged to have died from fright through being shut up in a dark cupboard at a Board school. After hearing the evidence, the jury returned the following verdict:—"That the cause of death is paralysis of the throat; but the jury think that the death was accelerated by fright, but how the child was frightened there is no evidence to show." The practice of shutting up small children in a dark cupboard as a punishment is simply atrocious, and ought to be specially forbidden by the School Board. Whether this death resulted from fright, or not, is quite irrelevant; there are very many authentic cases of chorea, hernia, and other diseases, which have been clearly traced to fright from this and other sources. We do not hesitate to say that the practice is most dangerous, and that the School Board authorities will be acting short of their duty if they do not once and for all forbid this mode of punishment in their schools.

NATIONAL HOSPITAL OF ST. JOHN THE EVANGELIST FOR INCURABLES.

It has been decided to provide an institution at Cowley St. John, near Oxford, for the reception of adult incurables. A suitable site has been presented, and an appeal is being made for funds to carry out the undertaking. No more worthy object can be imagined than the establishment of a home for those afflicted with incurable diseases. It is computed that one person in every thousand suffers from some sort of incurable disease, and if the lot fall on the poor, or even the middle classes, it entails sacrifices on the healthy and deprivations for the afflicted which those who are strong and well can scarcely appreciate. We wish the institution and its promoters every success. We gather that it is intended to provide accommodation for 150 patients, and it is estimated that the building will cost £30,000. We venture to point out to the promoters that this is an exceedingly heavy outlay, making each bed cost £200. Surely there is much needless expenditure somewhere. A building provided with all modern appliances suitable for the purposes in view could, we fancy, be built at half that cost; and, seeing that it has to be supported by voluntary contributions, we would suggest that all surplus funds be put away, with a view to a permanent endowment.

CONVICTION OF ANOTHER PRESCRIBING CHEMIST.

In the Court of Exchequer, on Monday, the East London Branch of the Medical Defence Association was successful in recovering a penalty of £20, under the Apothecaries' Act of 1815, from a chemist and druggist named Witherington, who resides at 410, Wandsworth-road. Evidence was given to prove that the defendant had attended sick persons, prescribed for them, and received payment for the medicines supplied. The defendant, who conducted his own case, contended that by the 28th section of the Act he was, as a chemist and druggist, exempted from the operation of the Act; but on this point he was overruled by the judge (Baron Pollock). The defendant then addressed the jury, asserting that he had only acted as the assistant of a properly qualified surgeon, and that these proceedings had been instituted maliciously. The jury, however, refused to accept these statements, and gave a verdict for the full amount claimed.

THE ATTENDANCE OF MEDICAL STUDENTS AT GERMAN-SPEAKING UNIVERSITIES LAST SUMMER SESSION.

According to the Calendar of the German University for 1876-77, the number of medical students at the different universities during the summer term of 1876 was as follows:—Vienna 780, Würzburg 527, Leipzig 378, Dorpat 353, Munich 347, Berlin 260, Greifswald 235, Graz 194, Zürich 193, Tübingen 179, Strasburg 178, Breslau 165, Berne 147, Erlangen 141, Königsberg 139, Freiburg 128, Bonn 127, Marburg 126, Göttingen 112, Halle 103, Heidelberg 101, Giessen 96, Jena 82, Innsbrück 81, Basle 76, Kiel 73, and Rostock 29. The total number of medical students was therefore 5372.

LONDON CABMEN AND DRUNKENNESS.

Although during the past year there does not appear to have been an increase of cases of drunkenness among the cabmen of the metropolis, neither was there a decrease. There are 13,000 licensed cabmen, and there were 1000 convictions. Though this is one in thirteen, it does not represent 1000 cabmen, as in some cases three, or even four, convictions were obtained against one man. Colonel Henderson, nevertheless, states that there is undoubtedly a steady and gradual improvement among the men. It is some satisfaction to get from such an authority this modicum of assurance that this useful class of men show symptoms of improved habits, and, we hope, of appreciation of the public efforts made to ameliorate their condition as public servants.

THE GOVERNMENT AND MEDICAL FEES IN PRUSSIA.

The new Bill for regulating the fees of medical men in Prussia (see *Medical Times and Gazette*, November 4, page 527) is still exciting great opposition among our German brethren. Not only are the maximum fees considered far too low, but the minimum honoraria are compared sarcastically to those of a street-porter. At a recent meeting of the Society for the Protection of the Rights of Berlin Physicians, which was attended by 359 members, it was resolved, by an overwhelming majority, to petition the Government to remove the restrictions on fees altogether, or else, if that were refused, to make the new scale more in accordance with the repeatedly expressed wishes of the medical profession.

DEATH OF MR. GEORGE MOORE.

We regret to have to record the death of Mr. George Moore, of the firm of Copestake, Moore, and Co., which took place on Tuesday last. He died from the injuries received through being knocked down by a horse in one of the streets of Carlisle. In Mr. Moore we have lost a man whose active exertions in the cause of charity had only been exceeded by the munificent gifts with which he endowed not a few. We fear that very many hospitals and charities have lost a friend and supporter whose place it will be difficult to supply. His family may count on a far-spreading and genuine sympathy in their great affliction.

TRAUBE'S SUCCESSOR.

Professor Leyden, of Strasburg, entered on his new post as Professor of Clinical Medicine at Berlin on October 30, and prefaced his inaugural lecture at the Charité Hospital with a eulogy of the lamented Traube, whom he succeeds, and whom he will find it no easy matter to rival or surpass.

MR. GLADSTONE ON VACCINATION.

Every Englishman, no matter what his politics may be, must, unless he is a rabid anti-vaccinationist, deeply lament the manner in which Mr. Gladstone has of late been playing with the subject of vaccination and with his own reputation. It would not, in these days, be a creditable thing in any one of our legislators to have no settled opinion as to the justice and value of the Vaccination Acts; but that a statesman of Mr. Gladstone's large experience and pre-eminent influence and power should speak in uncertain and obscure terms on the subject is—we must say it—simply and wholly inexcusable. In May last a letter from him on the matter was read at an anti-vaccination meeting in Manchester, and in it he said—"I regard compulsory and penal provisions, such as those of the Vaccination Act, with mistrust and misgiving, and were I engaged on an inquiry I should require very clear proof of their necessity before giving them my approval; but I am not able to undertake to enter upon an examination of the question." And again, in the beginning of the present month an inhabitant of Ipswich published an extract from a letter received from Mr. Gladstone, which contained the following sentence:—"I view with misgivings all new aggressions upon private liberty, unless upon a clear and certain proof of necessity; and I keep my mind open upon the question whether such proof has or has not been supplied in the matter of vaccination." It is deplorable to find a great statesman replying to agitators against an existing law by platitudes about private liberty, and acknowledging, or professing lack of knowledge and indecision, as to the justness of Acts passed while he was at least a prominent member of Parliament, if not a member of Government. The liberty of the subject is interfered with on all sides, and in a civilised community it must be so; and it is very difficult indeed to believe that Mr. Gladstone has really any doubt that

it is right and just to require an individual to accept protection against the risk of becoming a focus of contagion of one of the most loathsome, disfiguring, and deadly of diseases. Mr. Gladstone has not the excuse of doubt as to the protective power of vaccination, for he has at last been induced to "sanction" Dr. Russell Reynolds to say for him "that he no more questions the use of vaccination, which is practised and repeated in his family, than he questions other well-established medical doctrines and practices." Had Mr. Gladstone said this, or anything approaching to it, in the letters we have quoted, their power for mischief would have been greatly lessened; though they certainly would not have been so welcome and useful to the agitators to whom they were, in reply, addressed. Even when Dr. Wardell, on the 11th inst., wrote to Mr. Gladstone, pointing to the mischievous way in which his letters might be construed, Mr. Gladstone did not, in his reply, say a word about his own practical confidence in the value of vaccination, though he did remark that in his last previous letter on the subject he had stated that "in the investigation of such matters he allowed much weight to professional and experienced authority, or words to that effect"; and he added that he would "consider whether to offer any explanation." That "explanation" is contained, we suppose, in Dr. Russell Reynolds' letter; but it is a thousand pities that any explanation should have been made necessary. We are very glad to see that Mr. Cross, in his speech at Birmingham, on the 21st inst., spoke in the most decided and unhesitating manner on the subject of vaccination. While declaring that he was not for trenching upon personal liberty, if it could possibly be helped, he added, "There can be nothing so clearly proved as that it is absolutely necessary for the purposes of the public health that all children shall be vaccinated." Who can doubt which of these utterances—Mr. Gladstone's and Mr. Cross's—is most worthy of a statesman?

CAMBRIDGE PHILOSOPHICAL SOCIETY.

On October 30 a communication was made to the Society by Mr. Bettany, "On the Primary Elements of the Skull." An account was given by him of some of the conclusions arrived at by Professor W. K. Parker and himself in the preparation of a forthcoming work on the Morphology of the Skull. The detailed comparison, for the first time, of the whole of the developmental histories of skulls which have been hitherto investigated, including some very recent researches, had led to some important modifications of view. The questions dealt with in this paper referred to the cranial elements which appear earliest in the development. It was sought to discover what parts are axial, and what appendicular; whether, indeed, the axis of the body ceased at the middle of the base of the skull, and the latter has to annex properly appendicular structures in order to become complete. It appeared that there was much difficulty in determining these points, because in many of the higher forms the earlier stages of development were passed through with great rapidity, and because in other cases the adaptation of the adult form to its special conditions of life more or less affected the course of development, and disguised the real relationships. The author argued that the development of no one type afforded an absolute guide to principles; only when the whole of the facts became known could adequate generalisations be arrived at. Professors Huxley and Parker had some years ago been led to view the *trabeculæ cranii*, the primary elements underlying the base of the fore part of the brain, as not axial in character, but as comparable in effect to the visceral arches, or mandibular, hyoidean, and branchial series. Some of their main reasons appeared to be, that the trabeculæ in several types arose distinct from the axial parts, at the hinder part of the skull; that in the early flexure of the fore part of the brain, about the end of the *notochord*, or dorsal axis, the trabeculæ became correspondingly down-bent so as to be more or less parallel with the visceral arches; and that a very constant distribution of a branch of the great trigeminal nerve seemed to be analogous to the distribution of nerves on the facial arches. But many considerations now induced Professor Parker and himself to abandon that view, and rather to regard the trabeculæ as proper axial elements. Some of these were, that the trabeculæ arise in tissue immediately underlying the cerebral cavity, just as the vertebræ arise in tissue beneath the spinal canal; that the temporary mesocephalic flexure does not make this tissue other than axial, while the proper axial position is early resumed; that every relation of the trabeculæ proper is to the nervous centres, and that cartilaginous growths continuous with them bound the cranium laterally, just like the formation of the lateral occipital or vertebral regions. Further it was sought to show that, reckoning the trabeculæ as axial elements, they probably possessed their own appendicular parts in the prenasal and antorbital regions. It was contended that in the face of these facts it was in the highest degree undesirable to consider the fore part of the skull as a mere modification of facial appendicular parts, and that there were strong reasons for a recurrence to the earlier, more natural, and simpler conception, that the most important part of the skeleton had its own proper axis, and did not borrow it from without.

Professor Humphry was glad to find that Mr. Bettany is associated with Mr. Parker in producing in a collected form the results of the labours of that admirable and indefatigable investigator of cranial morphology. He was also glad to learn that Mr. Parker had modified certain of his views on the subject. Much light is doubtless shed upon the higher animal forms by researches into the lower; but it is sometimes forgotten that the converse is also true, and that much light respecting the significance or potentiality of the lower forms is shed upon them by observation of higher types. To his mind, in spite of all that had been recently said on the subject, the segmental or vertebral theory of the skull was one of the most assured of morphological views. He thought it impossible to make even a cursory examination of the mammalian skull without being convinced, with Goethe, that it is a continuation of the vertebral series, and that in its anterior or trabecular part it is, like the rest of the skeleton, planned in conformity with the principle of transverse segmentation. The divergence of the trabeculæ, caused apparently by the presence of the structure from which the pituitary body is formed, led to the view of their appertaining to the visceral arch, or appendicular elements; but their horizontal position and relation to the cranial cavity pointed to their axial character. At any rate, he could not doubt that the osseous centres formed from them, or in connexion with them—the basi-sphenoidal, the basi-presphenoidal and the basi-ethmoidal—are axial segments. He would throw out the suggestion that the trabeculæ may be both axial and appendicular elements, forming the bases of the axial centres just mentioned, and being continued forwards and downwards in the median plane, as a visceral structure, constituting the *septum narium*.

Mr. Balfour attempted to show that in the present state of our knowledge it was not possible to assign their true value to the various views on the morphological elements of the skull derived from the facts of embryology; and urged that in spite of the great advances which had resulted from the researches of Professor Parker, the time had not yet come when definite opinions could be maintained with reference to the trabeculæ. He further pointed out that, in forming his conclusions, Mr. Bettany had overlooked certain facts of development which tended towards a different view of the nature of the trabeculæ from that contained in his paper. He stated that in the general term "parachordal cartilage" two distinct elements were included—a central impaired element forming the immediate investment of the notochord, and equivalent to a continuation of the vertebral bodies; and a second element forming the lateral parts of the parachordal cartilages, and equivalent to the tissue which formed the arches of the vertebræ. He maintained that the trabeculæ were continuations of the lateral parts of the parachordal cartilages *only*, and could not therefore be strictly regarded as continuations of the axial skeleton which was formed by the vertebral bodies.

The late Dr. Sibson.—The will of this gentleman, who died so suddenly last month at Geneva, has just been proved under £6000. By it he bequeaths all his real and personal estate to his widow.

FROM ABROAD.

The Paris Student-Number.

The *Progrès Médical* of November 4 publishes its "Students' Number" (sold separately for forty centimes), which contains much information concerning medical teaching at Paris. There, as our readers know, is only one medical school, the Faculté de Médecine, which is also the examining body that confers the diplomas. Of course, there being only one school, the numbers of students is very large, but there seems to be no exact system of registration observed, by which the precise numbers may be known. It has been frequently stated of late that they reach the enormous number of 5000, which we have always regarded as a ridiculous exaggeration. This the *Union Médicale* a few days since stated it really is, the numbers having been drawn from unweeded registers, whereby have been included in them students of ten or fifteen years ago, who have long ceased to have anything to do with the school, and others who are absent from Paris, probably pursuing other careers, to say nothing of those who are dead. Some one has amused himself by counting the inscription-receipts which have been accumulated, without troubling himself as to whether they represent present students actually pursuing their studies.

Although there is only one school, there are numerous extra-academical lecturers on various subjects, who are authorised by the Minister of Public Instruction and the Faculty to deliver lectures at the École Pratique on their own account; and these this session have attained very large proportions—implying almost a mania for lecturing. The *Union Médicale* (November 14) publishes a curious analysis of the subjects about to be treated this session.

"The *laudatores temporis acte* will perhaps say that the free teaching of former days was stronger than at the present time, but they cannot say that it was more numerously represented. In fact, some fifty of 'free courses' are open, or are about to be opened, at the École Pratique. This is enormous, and we do not know that there has ever been a like emulation among the volunteers of teaching. It has seemed to us curious to examine which are the portions of medical science that principally engage the attention of these teachers; and the following are the results we have obtained from consulting the advertisements of these courses of lectures. It is with astonishment that we find that there is but one such on descriptive anatomy and dissections. It is true that almost all the prosectors and assistants of the Faculty and at Clamart give lectures on anatomy, and direct students in their dissections; but still it is indeed astonishing that besides them there is only one free teacher. Physiology and embryology are in the same position, only one course of lectures on each being announced. Internal pathology is better provided for, as no less than nine courses may be counted, while of surgical pathology there is no course at all. There is but one of clinical medicine and one of clinical surgery; but others will certainly follow. A free professor, who certainly shows plenty of courage, is valiant enough to announce a course of lectures on hippocratic medicine; and another will treat of surgical malformations. Two interpreters will undertake the hygiene and diseases of children, but therapeutics has only secured one. Medical electricity will form the object of two courses, and one is to be delivered on septic diseases. A lecturer will explain technical microscopy, and another will teach the diseases of women. There are two courses of midwifery, and two for preparing for examinations. Lastly come the courses of lectures on specialities—viz., two on mental disease, five on diseases of the urinary organs, eight on diseases of the eye, two on diseases of the skin and syphilis, two on diseases of the ear, one on diseases of the larynx, and one on the examination and analysis of the urine."

We have not space to indicate the contents of the *Numéro des Etudients*, but those who are in search of it will find full information concerning the Paris and other faculties, the hospitals, etc.

Professor Arlt's Cataract Operations.

Dr. Derby, writing from Vienna, says (*Boston Med. and Surg. Journal*, October 19):—

"I was fortunate enough to arrive just before the commencement of the vacation, and found a large number of patients and students in attendance. My chief interest was in the cataract operations, which were all done by the method of Graefe. So numerous have been the opposing plans advanced since the virtual abandonment of flap extraction, and more particularly since the death of Graefe, that it was most satisfactory to find the leading operator of Europe adhering to the same method we practise at the Boston Eye Infirmary, and for the superior advantage of which we have so long contended. Other operations, including that of Weber, have been given a fair trial here, and then relinquished, as offering certain disadvantages, or furnishing less perfect results. Arlt, claiming no modification of Graefe's method, insists nevertheless on the importance of performing the operation in a certain way. No atropine is used either before or subsequently, unless complications arise. No anæsthetic is administered. An extremely narrow and slender knife is employed; the cut is by no means linear, but has an appreciable height; the puncture and counter-puncture are in the sclero-corneal region, and the apex of the cut approaches the edge of the cornea. When the corneal cut is completed the edge of the knife is not inclined forward, but carried on in the plane of the wound, and a long and ample conjunctival flap is slowly formed. On the formation of such a flap Arlt lays much stress, having, he says, seen infection communicated to the corneal wound from suppuration in a short and rugged conjunctival flap. I saw no bleeding into the interior chamber in any of the cases operated on, so delicate was the knife employed, and so perfect the coaptation of the edges of the wound. The remaining steps of the operation are performed in the usual manner, special attention being given to a clean excision of the iris, and to a prevention of any incarceration of iris-tissue in the corners of the wound. The iridectomy struck me as rather smaller than the one we usually make. For two years past Arlt has met with a total loss of but 1·5 per cent. At the age of sixty-five he operates with the steadiness and dexterity that characterised him in my student-days, sixteen years ago."

Nitrite of Amyl for Noises in the Ear.

Dr. Michael, of Hamburg, communicated to the Section of Otiatrie (*Allgem. Wien. Med. Zeit.*, September 26), at the late Congress of Naturalists and Physicians in that city, a paper detailing the results of the trials of nitrite of amyl which he had made for the relief of noises in the ear. These constitute, he observes, one of the most distressing symptoms in many affections of the middle and inner ear, so that patients would rather resign themselves to complete deafness than to their endurance. Indeed, some have been driven by them to madness or suicide. Independently of their prognostical importance they are therefore, in a therapeutical point of view, of the greatest interest. In many cases, acute catarrah, tumidity of the tube, exudation within the tympanum or great depression of its membrane, etc., may act as causes, and on the removal of these relief follows; but in a great many other cases, especially in the indurated forms of inflammation of the middle ear and affections of the labyrinth, relief is not obtainable, or is but temporary. Every kind of narcotic, derivates, and galvanism have been recommended in these conditions; but, although some remarkable results have been obtained from these, they were quite exceptional. It therefore requires no excuse for proposing a new remedy for so distressing and obstinate an affection, especially when this has already met with some success.

Dr. Michael was induced to resort to the nitrite of amyl in consequence of its well-known paralysing influence on the sympathetic, and especially on the nerves of the bloodvessels, and the fact that many forms of noises in the ear are not dependent upon mechanical causes, but upon the impression made by nervous irritation due to hyperæmia or anæmia of the brain or internal ear. Only in this way can we explain their occurrence in pletheric and anæmic conditions, and under the influence of certain medicinal substances, as quinia, salicylic acid, etc. Dr. Michael has treated twenty-seven such cases at the Vienna Polyclinic, to which he adds eight others derived from private practice. The following are the results:—In nineteen considerable amelioration was produced, in eleven no effect was produced, and in three the noises completely disappeared from one ear and were diminished in the other. Three other cases are reserved for further observation. By far the greater number of cases were examples of *otitis media hypertrophica;* and among the improved cases were two,

and among the unimproved one, of affection of the labyrinth. Of the remedy from one to ten drops were inhaled—the often-tried application *per tubam* having proved in nowise preferable. The inhalation was continued until the production of the earliest intoxication-appearances, as shown by great redness of the face, brilliancy of the eyes, and distension of the blood-vessels; and on the occurrence of giddiness was immediately discontinued. In all the cases that were improved the noises during this period became considerably increased, diminishing as the redness decreased, and then becoming much less than before. The duration of improvement after a single inhalation varied greatly, amounting in some only to several hours, in others to several weeks, and in most of the cases to from two to ten days. The effect of the second inhalation usually was of longer duration, providing it did not follow the first at a shorter interval than two days. Several of the cases have been published in detail in Knapp and Moos' *Archives;* and it need only be mentioned here that in some cases in which the inhalations proved fruitless the noises completely disappeared on the commencement of the redness of the face, to reappear in all their former vigour when this had ceased. The subjects of these were always anæmic young females. Some patients declared that, although the noises really were no feebler, yet they found that they could more easily bear them, and on this ground requested a repetition of the inhalation. The duration of the affection seemed to exert no influence whatever, for in several cases in which improvement occurred the noises that had lasted from ten to twenty years yielded in just as short a time as in others in which they had only recently appeared. In four cases, besides the diminution of the noises, a considerable increase in the power of hearing also took place.

Nothing tends to impede the extension of a proposed mode of treatment more than its indiscriminate recommendation; and it is desirable, therefore, again to observe that this one is not beneficial in all cases, producing only improvement in most, and recovery in very few, while the effect is not durable in all. At present it is not possible to indicate with precision the cases for which it is most suitable. Acute catarrhs and affections dependent upon obvious mechanical causes do not call for its employment, as for these we have various means of treatment; and although there is not much use in offering a theoretical explanation of an empirical remedy, yet the cases in which affections of the labyrinth have undergone manifest improvement seem to show that the amyl directly influences the auditory nerve itself, or the vascular ramifications of the labyrinth.

GENERAL CORRESPONDENCE.

THE DEATH OF DR. M. BRUNTON.

LETTER FROM DR. ALEXANDER COLLIE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you kindly favour me with a small portion of your valuable space for a few remarks on the sad death by drowning of Dr. M. Brunton, late House-Surgeon of the Paisley Infirmary and Dispensary.

That death should have occurred in such a way in the case of a person nursed in a private house by private friends is conceivable, but that it should have been possible in the person of a young surgeon treated in a public hospital, served by physicians and surgeons of position and skilled nurses, fills me with amazement. And my amazement is not a little increased by the quiet way in which the London medical journals mention the fact. Not one of these appears to think that in recording such an event there is anything unusual or reprehensible. The occurrence is apparently accepted as something inevitable, however painful, and about which there is nothing more to be said than about any other unavoidable evil.

Believing, on the contrary, that such melancholy events are always the result of most culpable carelessness somewhere; that they may in all cases be easily prevented; and knowing, as a matter of personal experience, that, in similar cases which it has been my duty to investigate, culpable carelessness has existed, I take leave to say that this young man's death by drowning ought not to be allowed to pass unnoticed, and to express my hope that his brethren in the profession will demand a full and impartial investigation into the circumstances attending it.

I am quite unable to imagine, without assuming great carelessness on the part of some one, that a young surgeon, a resident in a public hospital, sick of a disease which placed his life in peril, should have been suffered to leave his bedroom, to walk over hospital ground, to climb a high wall, and finally to drown himself. The risks to which those of us are exposed who undertake the treatment of contagious fevers—diseases from which nearly all of us sooner or later suffer, and to which many of us fall victims—are, one would think, of themselves sufficiently grave, without the addition thereto of a treatment which permits of drowning in the nearest water-course. My experience supplies me with information of the way in which events of the kind in question occur, and I can readily imagine how this shocking death took place.

I forbear, however, in the meantime further remark, and confine myself to stating that, in my opinion, the profession ought to ask the managers of the Paisley Infirmary and Dispensary the following question—to wit: Who was responsible for the treatment under which Dr. M. Brunton was drowned in the river Cart? I am, &c., ALEX. COLLIE.

Homerton Fever Asylum, London, November 20.

THE PROPAGATION OF PUERPERAL FEVER.

LETTER FROM MR. HUGH ADCOCK.

[To the Editor of the Medical Times and Gazette.]

SIR,—I notice in your issue of to-day a paragraph headed "Propagation of Puerperal Fever," from which it appears the Registrar-General notices two cases occurring in Southwark, both certified to by the same medical man.

I beg to state it was unfortunately my unpleasant duty, but that I attended neither case during parturition, one having been attended by a certified midwife, whom I have cautioned, and who has discontinued practice for the present. The other was attended by a surgeon at Rotherhithe, who relinquished the case at the expressed wish of the patient's friends.

I am, &c., HUGH ADCOCK,
M.R.C.S.E., L.S.A., L.R.C.P., L.M.

50, Grange-road, Bermondsey, S.E., November 18.

THE SCHOOL OF HOMŒOPATHY.

[To the Editor of the Medical Times and Gazette.]

SIR,—My attention has been directed to the letter bearing the above title in your issue of November 18. Will you permit me to answer its query in a few words. The "kind of homœopathy" which it is sought to teach is that art and science of medicine which is based on two principles—(*a*) the knowledge of the physiological effects of medicinal drugs upon the animal economy; (*b*) the application of medicinal drugs to the cure of disease when administered in accordance with the rule of similars. The objects of the School of Homœopathy will be the following:—The delivery of courses of lectures (1) on Homœopathic Materia Medica and Therapeutics; (2) on the Principles and Practice of Homœopathic Medicine; (3) Clinical Teaching in the Hospital Wards and Dispensary. These lectures and the clinical teaching will be open freely to the profession, since our desire is to invite free criticism, without which the attainment of truth is slow and uncertain.

The advancement of the science and art of healing will, I hope, ever dominate over any sectarian prejudice or proclivity in the minds of the managers of our school. In demonstrating the behaviour of medicinal drugs as causes of drug diseases and as healers of idiopathic disease, our position is not that of defending a system, but of demonstrating how far that system proceeds in the direction of curative medicine. Experience alone can prove how far the method of Hahnemann—*i.e.*, that of a negation of pathology and the treatment by a careful comparison of drug-symptoms and disease-symptoms, and the covering of the one by the other—will carry us towards the perfection of drug treatment; or, on the other hand, how far a careful consideration of the pathology of each case is to be the indication for its treatment, by applying a drug which will induce a corresponding pathogenesy in the healthy body.

The modern school of homœopathic physicians incline to the adoption of the latter method, so far as the pathology of disease is well marked and well known; while they fall back on the Hahnemannian method when the pathology of a disease is obscure. Probably this is the method which will be adopted by our lecturers in treating these subjects; and I would refer

"Junius" to Dr. Hughes' last edition of his "Pharmacodynamics" in illustration of the manner in which the materia medica and therapeutics are likely to be taught in our school.

The remainder of "Junius's" letter scarcely demands a serious answer. There are men of imperfect and uncertain knowledge to be found in all professions; there are men who only partially adopt any system; there are men of such catholic spirit of eclecticism as to take that which appears to them to be good out of all systems,—and we have no more right to blame them than we should blame the captain of a steamer for using sails, if he thought the doing so would assist him in his voyage, or if his engines broke down. I enclose my card. I am, &c.,

November 21. THE HONORARY SECRETARY.

[*** The above was forwarded to us with Dr. Bayes' compliments. As the School was attacked we have allowed this reply to appear.—ED. *Med. Times and Gaz.*]

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 7.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

MELANOSIS.

MR. SYDNEY JONES brought forward a young man of twenty-three, who was suffering from melanosis. Three years ago an irritable sore formed upon a black mole near the knee; six months later a black tumour, which consisted of the mole and sore, was removed by Mr. Jones in St. Thomas's Hospital. The glands were not enlarged. After fifteen months a black mass was again removed from the cicatrix, and several glandular nodules from the groin. A third time growths were removed from either scar. Finally the patient had returned with no tumour in the former seats, but with a shower of shotty tumours under the skin in the left groin, which, gradually involving the skin, formed ulcerating patches. Besides these local manifestations, dark nodules had appeared on the abdomen, thorax, neck, and head; but there was no evidence of visceral affection. There was no history of cancer in the family. The growth was considered to be a melanotic sarcoma. The urine had been examined without special result.

Dr. HILTON FAGGE referred to the condition of urine found in certain cases of melanosis. He exhibited two specimens of preserved urine from patients that died of this disease, in both of which pigment particles were found. The second specimen had a greenish tint when taken from the dead body, and became black with nitric acid. A considerable amount of pigment was found in it by analysis. Virchow, in referring to pigment in the urine in melanosis, appeared not to estimate its occurrence as important; and Hoppe-Seyler considered it as indican, and indicative of disease of the liver only. In Dr. Fagge's first case, where this condition of urine was found, the liver was not affected. Dr. Fagge asked where this pigment was probably formed. The irregular distribution of it in the growths was remarkable. One of his cases was carcinoma; the other sarcoma.

Mr. JONES undertook to have the urine of the present patient carefully examined.

SYMMETRICAL SHORTENING OF THE FOOT.

Mr. SYDNEY JONES brought forward another patient with antero-posterior shortening of the foot, which was at once considerable and symmetrical, and yet not congenital, but the result of disease. The history of the case was one of recurrent bone disease, with formation of abscess and discharge of dead bone. The man was now thirty-nine years of age. Sixteen years ago the feet were known to be symmetrical, but there was now nearly four inches of difference in their length. The distal ends of the metatarsal bones and the phalanges had been the actual seat of disease.

Mr. DORAN contrasted this case with one that he showed last year of congenital shortening of the forearm.

In reply to Mr. Gould and the President, Mr. JONES added that there had been a succession of abscesses opening on the sole.

ANCHYLOSIS OF RIBS AND SPINE.

Dr. HILTON FAGGE exhibited the spinal column and ribs of a man of thirty-four, who died in Guy's Hospital, with bronchitis. The spine appeared anchylosed during life, and remarkably bent; so that the front of the chest and anterior abdominal wall were almost in contact: the ribs did not appear to move; and dyspnœa was extreme. The history went to show that about twelve months before, the posture began to be stooping. Post-mortem the spines and arches of the vertebræ were found to be united by bone external to the ligamenta subflava, while the bodies of the vertebræ were quite distinct, and the intervertebral substance normal. The ribs were ossified to the vertebræ. One hip was anchylosed, without absorption of the head of the femur. There was emphysema, with bronchiectasy, of the lungs; the liver was bent at an acute angle. The condition of the other joints was uncertain. Dr. Fagge said that this condition of bones appeared to be rare; it was important to note that the bodies of the vertebræ were not affected.

Mr. WAGSTAFFE suggested that the disease had been rheumatic arthritis, and mentioned some specimens very similar that he had seen.

Mr. BUTLIN pointed out that the state of the hip-joint confirmed the preceding opinion.

Dr. FAGGE said that no other joint was examined, and that no history of rheumatic arthritis had been ascertained.

Dr. GOODHART questioned the frequency of anchylosis in chronic rheumatic arthritis.

ANEURISM OF THE PULMONARY ARTERY.

Dr. FAGGE also exhibited a specimen of this nature from a child of two years and three-quarters, who died of hæmoptysis while suffering from symptoms of phthisis and extensive emphysema. Post-mortem the lungs were found in a state of advanced phthisis, and in a cavity at the upper angle of the right lower lobe was an aneurism as large as a cherry, with a distinct opening into a branch of the pulmonary artery.

REPAIR OF FRACTURED SPINE.

Mr. CARR JACKSON showed this specimen, which was recently taken from the body of a man who had met with an accident to the back twenty-six years ago. At the time of the injury the lower limbs were paralysed, but not the sphincters. The patient recovered in a month. The specimen now obtained was a remarkable example of repaired fracture of the spine. The second and third lumbar vertebræ were displaced and twisted; manifestly there had been both dislocation and fracture. A quantity of new bone was formed around, and several of the vertebræ were anchylosed. The spinal canal was, however, not materially narrowed.

The PRESIDENT inquired whether the patient had suffered pain, and whether there was any permanent muscular contraction.

Mr. JACKSON replied that pain had been severe. There was no contraction left.

Mr. WAGSTAFFE referred to a somewhat similar case.

SUPPURATION OF BRAIN AND CORD AFTER EMPYEMA.

Dr. PYE-SMITH brought forward this case. A man, aged eighteen, was treated in August for severe left pleurisy, by free opening. A large quantity of pus was evacuated, and the symptoms were relieved; the cavity was regularly washed out. The lung recovered itself gradually, and by the beginning of October the man was able to walk about, and the discharge had ceased. Then a new train of symptoms set in—namely, sickness, headache, and high temperature, followed by left hemiplegia and squinting. On the third day the man died comatose. Post-mortem the pleurisy was found to be nearly cured, the sac being reduced to a cavity, with but two ounces of matter. In the brain there were several points of suppuration, one of which had burst into the lateral ventricle: thence the pus had passed into the other ventricles, and the subarachnoid region of the cord. Dr. Pye-Smith said that the points of interest in this case were—1. That a fatal pyæmia seemed to have occurred when the original suppurating cavity had been practically abolished. The walls were thick; but two distinct spots of ulceration were found on them. 2. That there was complete absence of septicæmic symptoms. The man was in every respect well while abscesses existed in his brain. 3. That no other organs were affected, not even the lung. This seemed to point to more than mechanical conditions for the localisation of such abscesses. Just as there were certain other remarkable combinations, so there was one of pleurisy and abscess of the brain.

Dr. GOODHART said that he should not call this a case of

pyæmia. It was rather analegous to instances of pneumonia of surgical origin advancing to suppuration.

Dr. Greenfield asked whether it was possible that the abscess of the brain was the primary lesion. Cerebral abscess was liable to happen after necrosis of the ribs in empyema; and in this case the disease of the brain may have been latent for a length of time.

Dr. Pye-Smith replied that cerebral abscess was almost unknown, except as traumatic or secondary abscess. He had used the term "pyæmia" to express a familiar fact, not as implying any theory. There was no evidence either of primary disease of the brain or of necrosis of the ribs.

Scirrhus of the Diaphragm.

Dr. Walters, of Reigate, exhibited this specimen from a female of forty-one. The patient had suffered from dyspnœa and a feeling of constriction around the chest, and died of effusion into the left pleura, which had been temporarily relieved by aspiration. The post-mortem examination was performed under difficulties. The diaphragm contained abundant growth of scirrhus: one nodule projected into the left pleural cavity; a few nodules also existed on the upper surface of the liver. The stomach, spleen, and other viscera were healthy. The nodules had a bluish appearance; and the juice contained epithelial cells. There was no history of cancer or of phthisis in the family. (The specimen was referred to the Morbid Growths Committee.)

Fatty Tumour behind the Pharynx.

Dr. Frederick Taylor exhibited this specimen. A child of four had been ill for fifteen months—at first dysphagia was the complaint, but for the last ten months the neck in the region of the thyroid had been noticed to be large. On admission, there was stridulous dyspnœa, the eyes were prominent, and there was a swelling near the thyroid, which was diagnosed by more than one physician and surgeon to be due to enlargement of that body. The tumour, however, was prominent on either side, and soft; and caused unusual pressure on the vessels and structures around. On examination internally a swelling was seen at the back of the pharynx; its upper limit was on a level with the soft palate, and it was diagnosed to be a posterior pharyngeal abscess. On two occasions it was punctured and incised without success. Meanwhile the symptoms of pressure were more urgent, and tracheotomy had to be performed, but without success. Post-mortem the thyroid body was found to be normal. The swelling was due to a large lipoma lying behind the pharynx and bound down by it, the larynx, and the œsophagus, so that it projected laterally. The upper part of the tumour was semi-isolated, and closely resembled an abscess, even after death. There were no other important connexions.

Mr. Lucas confirmed what Dr. Taylor had said respecting the difficulty of diagnosis; and

Mr. Howse, who had also seen the case *intra vitam*, expressed himself to the same effect.

CLINICAL SOCIETY OF LONDON.

Friday, November 10.

Sir W. Jenner, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

Hæmophilia.

Sir William Jenner reported this case, which was that of a lad aged thirteen, who was admitted into University College Hospital on November 4, on account of hæmorrhage from the bowel. He was known to be suffering from the hæmorrhagic diathesis, having been several times in the hospital on account of severe hæmorrhage from slight causes. He had also often suffered from spontaneous bleedings from the nose and mouth, and also from frequent swellings of the joints; of late, the left knee had been permanently affected. A brother of the boy also suffered from the same condition, but no other member of the family. On admission, the boy was pale and prostrate, with numerous subcutaneous ecchymoses and considerable swelling of the right thigh. The hæmorrhage from the bowel, generally of dark blood, continued, in spite of an ergotin injection, and turpentine and acetate of lead by the mouth, employed before the boy was seen by Sir William Jenner, who ordered an injection of perchloride of iron into the rectum, and gallic acid to be given internally. The injection returned in ten minutes, but there was no more hæmorrhage, although small steels were passed. The boy, however, became paler, weaker, and more restless, and died twenty-four hours after admission. At the post-mortem examination, blood was found in moderate quantity in each side of the heart, and the clots were firm. The lungs presented no consolidation, but many peculiar pale patches, sharply defined, a little raised, with some adjacent hyperæmia, containing air, fluid, and a little more solid than the adjacent parts. The lower part of the rectum contained a very firm clot, and all the blood had evidently come from the lower six inches, where the mucous membrane was undermined by extravasations which had broken through it. The liver and spleen were healthy. The left kidney was absent; its suprarenal body was disc-shaped. The right kidney was hypertrophied, weighed seven ounces, and presented traces of fœtal lobulation. The aorta was rather small but healthy, and the arteries and veins were also healthy in appearance. The enlargement of the right thigh was due to an enormous extravasation of blood beneath the fascia. The clot was two inches thick, and very firm. The left knee-joint was found to be full of purple blood and stringy synovia. The synovial membrane was stained an ochre-brown. The cartilages presented evidence of chronic inflammation. Sir William Jenner remarked that the case resembled, in its general features, several other cases which had come under his notice; resembled them, too, in the seats of the hæmorrhage, in the character of the blood lost, and in the joint affections. The joint affections were of three kinds, and the boy suffered from the two forms which were most characteristic of the disease—spontaneous swelling, tenderness, and general puffiness of the joint, such as occurred in rheumatism; and swelling, the result of successive secretion, with hæmorrhage, the result of a slight injury. A rarer form sometimes seen in the disease was much simple effusion. The firmness of the clots in the heart and rectum illustrates the important fact that the blood in a case of hæmophilia, after death and during life, did not lose its power of coagulating firmly. The case lent no support to the view that the walls of the arteries were in these cases of abnormal thinness. In most of the cases Sir William Jenner had seen the bleeding was venous, not arterial. The source of the blood, the lower part of the rectum, was a point of great practical importance, and so also was the firmness of the clot which was found—a firmness probably due to the effect of the perchloride of iron, the best local styptic in these cases. It was very doubtful whether death in this case resulted from the hæmorrhage from the bowel; the extravasation into the thigh probably assisted, and the peculiar state of the lungs and bronchial tubes might have been the immediate cause of death. The points in the pathology of the disease which had been impressed on Sir William Jenner by the cases he had seen were—(1) that the tissues were all soft, so that they bruised easily; (2) that the blood was rather slow in coagulating, although it coagulated as firmly as in health; (3) that the blood is formed rapidly, that there was a tendency to plethora of the smaller vessels, and that when the patient was looking his best was the moment when injuries had the worst effect and spontaneous hæmorrhages were the most likely to occur. With regard to the etiology of the disease, in some cases, as in this one, it was certainly impossible to trace it back to the ancestors of the patient; but, when once developed, it often affected more than one member of the family; Sir William Jenner had known it transmitted by a daughter who was not herself the subject of the disease. The most important points in the treatment of the disease, as distinguished from the hæmorrhages, were the administration of a mercurial and saline sulphate of soda aperient every three weeks, and the latter repeated once a week; that the diet should be rather dry, with a considerable proportion of white fibrinous meats; and that plenty of open-air exercise should be taken, with the greatest care to avoid mechanical injuries.

Mr. Christopher Heath said he remembered the boy as a patient under his care. The rest in the hospital did him good. It was, however, rather curious that two instances of such a rare form of malady should be in the hospital at the same time, for at the present moment under his care there was also a patient all the male members of whose family were bleeders. He had carefully traced the family history in this case, and it was reported in the *British Medical Journal* for January 11, 1868. The female members of the family did not suffer, but they transmitted the affection to their male offspring. In the case of the boy under his care there was also some local infiltration of blood, but it seemed to be more superficial than

in Sir W. Jenner's case. The tendency to bleed in his patient could only be overcome by continuous irrigation with cold water. Internally he gave iron and hydrochloric acid. As a result of this tendency to bleed, all the males of the family had died out; only the females were left alive.

Mr. Howard Marsh had seen four or five such cases among children. In all, or almost all, of these the joint affection was present, but there had been no means of determining its nature. In one instance the elbow-joint had been destroyed, probably as the result of effusion. As a rule the joints resembled rheumatic joints.

The President did not think that iron given internally did much good in these cases. When relief had been afforded to the system by bleeding, almost anything would stop it. Locally matters were quite different; there he thought that iron was of the greatest value. If the bleeding came from the bowel, it was generally from the lower part of the rectum, to which the iron solution could be readily applied.

Dr. Greenhow knew of one family which had completely died out from this affection, yet there was no family history of bleeding. Two died under his cognisance; one from bleeding at the nose in whooping-cough, the other from bleeding after the removal of a tooth.

Sir W. Jenner said he had seen bleeding from the socket of a tooth promptly relieved by crystals of perchloride of iron.

After some remarks by Mr. Mahomed on the condition of the vessels,

Dr. Greenfield said he had seen plastic exudation in the bronchi in two cases where death had followed hæmorrhage.

Sir William Jenner, in reply to Dr. A. P. Stewart, said that there had only been one subcutaneous injection of ergotine (four grains). He also observed that Professor Rheinkens, of Brussels, whom he had seen, and who had recommended regular bleeding to keep off the malady, had had five cases; all of these patients were now dead.

Sequel of a Case of Rapid Contraction of a Cavity in the Lung.

Dr. Theodore Williams read a further account of a case communicated to the Society in 1871. He said that at the time when the case was first brought before the Society, some eminent Fellows of the Society had expressed doubts as to the existence of a cavity, in spite of the physical signs narrated; but the death of the patient in 1875, which permitted an inspection of the lungs, cleared up all doubts. The patient, a widow, aged fifty-three, was admitted into the Brompton Hospital in April, 1871, with a history of pleurisy of twelve years' standing, and of phthisis of one year's duration. Dulness was detected over the whole left side; cavernous sounds were audible from the first to the third ribs, and rhonchi and râles below, and also in the right lung. Subsequent examinations showed a gradual diminution of the cavernous sounds; and, in July, 1871—*i.e.*, three months after admission—they had entirely disappeared. No marked displacement of adjacent organs was then to be found; but a few months later the heart and stomach were drawn up, the right lung being drawn across the median line, and some shrinking of the side was visible. In 1872 the patient had survived a severe attack of capillary bronchitis; but died of congestion of the right lung in 1875, the physical signs before death indicating great shrinking of the right lung. The necropsy showed an old puckered cavity, about the size of a date-stone, near the apex of the left lung, underlying the portion of the chest-wall where the cavernous sounds had formerly been audible. The bronchus leading to the cavity was blocked and obliterated, and the greater part of the lung was in a state of fibrosis; the right lung, drawn across the median line, was partly emphysematous and partly congested. The heart was drawn up, and the left chest measured one inch and a half less than the right in circumference. Dr. T. Williams remarked that, in this case, each step of the contractile process had been noted by physical signs; and the post-mortem examination thoroughly confirmed the diagnosis. The fibroid process may have had its origin in the old attack of pleurisy, and was the means of limiting the caseation and arresting the disease. The cavity-sounds were quite distinct; and he could not understand the existence of a cavern being doubted. Cavities were overlooked during life by accomplished auscultators; but this arose either (1) from the bronchus leading into them being blocked, (2) from their being small and deep-seated, or (3) from the development of emphysema in the neighbourhood. On the other hand, consolidations should not be mistaken for cavities, the difference in the expiration note, the succussion sound, the gurgle, and examination of the sputum being easy means of distinction. Dr. T. Williams remarked, in conclusion, that far more cavities were overlooked than erroneously diagnosed.

Localised Hypertrophy of the Scalp.

This case was shown by Mr. Walsham. The patient, a boy aged sixteen, presented on the left side of the head a peculiar hypertrophied condition of the scalp, appearing as a soft loose mass, which could readily be pinched up from the parts beneath, was doughy yet elastic to the touch, not painful except on being handled, and did not pulsate. In front, it presented a peculiar lobulated appearance, the lobulated portions being raised, irregular, and of a pinkish-white colour. The hair follicles appeared enlarged and farther apart than usual; but the hair itself was healthy. The temporal and posterior auricular arteries were not involved in the disease. Two enlarged glands could be felt at the lower part of the swelling. The pericranium was not affected. The temperature of the part was slightly raised. This affection was said to have begun some eight or nine years previously as a small lump behind the ear, and was attributed by the friends of the patient to the application of a blister in this situation for an affection of the eye. It was said to have increased at first slowly, but afterwards rather rapidly. Mr. Walsham was inclined to regard the disease as a hypertrophy of the scalp and adjacent cellular tissue, probably of the nature of the so-called fibroma molluscum, as it bore some resemblance to the cases of fibroma shown by Dr. John Murray before the Royal Medical and Chirurgical Society in March, 1873. The non-congenital history of its origin, and the absence of any pulsation or visible enlargement of the vessels, precluded the idea of its being of a nævoid nature. The tumour was roughly confined to the distribution of the auriculo-temporal branch of the fifth nerve; and, as the disease appeared to have followed some affection of the eye, a reflex irritation of this nerve was suggested as a possible origin. Continuous pressure and partial excision were suggested as methods of treatment.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 16th inst., viz.:—

Benthall, Albert, L.R.C.P. Edin., Twickenham.
Calcott, Lewis B., Oundle, Northampton.
Capon, Herbert J., L.S.A., Bunhill-row.
George, George A., Romsey, Hants.
Goodsall, Frederick W. W., L.S.A., Highbury New Park.
Hallsworth, Francis A., L.S.A., Atherstone, Warwickshire.
Jaquet, John Lewis, L.S.A., Vincent-square, S.W.
Livesey, Ernest W., L.S.A., Victoria-street, S.W.
Masáni, Hormasji Dadábhói, L.M. Bomb., Bombay.
Masters, John A., Greenwich.
Norris, Edward S., B.A. Cantab., Kennington-park-road.
Pedley, Thomas F., L.S.A., Camberwell.
Porter, Charles F., Fleetwood, Lancashire.
Vasey, James A., Cavendish-place.
Vipan, Charles, Lansdown-place, W.C.
Willows, Robert G. E., Chesterton, Newcastle-under-Lyme.

Nine candidates were approved in Surgery, and, when qualified in Medicine, will be admitted Members of the College; and twenty-two candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. This closes the examinations for the diploma of Membership of the College for the present year.

The half-yearly primary examination for the Fellowship of the College was commenced on Friday, the 17th inst., when twenty-five candidates offered themselves, of which number ten passed, viz.:—

Clarke, Julius St. S., M.B. and L.R.C.P. Lond., Leicester, diploma of Membership dated May 20, 1862.
Lammiman, Cleland, L.R.C.P. Lond., Cannon-street-road, E., July 25, 1871.
Paley, Wm. Edmund, L.R.C.P. Lond., Southwark-bridge-rd., Jan. 29, 1874.
Pratt, William, M.D. Liége, Newtown, Montgomeryshire, July 25, 1876.
Andrews, William Stratford, student of University College Hospital.
Ashe, William Percy, of St. Thomas's Hospital.
Lowdell, Charles George Watton, of Guy's Hospital.
Poland, John, of Guy's Hospital.
Symington, Johnson, of the Edinburgh School.
Wright, George Arthur, of Guy's Hospital.

Fifteen candidates having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for six months.

The following were the questions submitted to the candidates at the written examination, all four of which were required to be answered, viz.:—1. Describe the minute structure of the spleen. State the current views respecting its office, and the grounds on which these are based. 2. What are the essential parts of an organ of respiration? Describe the chief forms of respiratory apparatus met with in the animal kingdom. 3. Describe the dissection required to expose the left superior intercostal artery and vein, and contrast the arrangement of these vessels on the two sides of the neck. 4. Give the dissection required to expose from behind the adductor magnus muscle, and mention in order from above downwards the parts seen on its removal.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 16:—

Bowen, Owen, Llandilo.
Butler, Samuel, Bridge-street, Wednesbury.
Mills, Robert James, Norwich.

The following gentlemen also on the same day passed their primary professional examinations:—

Campbell, John Melvin, St. Bartholomew's Hospital.
Christian, John, St. Thomas's Hospital.
Jago, William Pearce, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CHURTON, T., M.B.—Honorary Physician to the Leeds Public Dispensary.

HARRHY, WILLIAM ROSSEA, M.R.C.S., L.R.C.P.—Resident Medical Officer, Public Dispensary, 59, Stanhope-street, Clare-market.

LOWNDES, HENRY, L.K.Q.C.P. Ire. and L.M., M.R.C.S. Eng.—Consulting-Surgeon to the Liverpool Northern Hospital on resigning office as Honorary Surgeon.

SHAW, T. CLAYE, B.A. Lond., M.D., M.B., M.R.C.P. Lond., M.R.C.S. Eng., and L.S.A.—Medical Superintendent of the Middlesex County Lunatic Asylum, Banstead.

SMITH, ROBERT, M.A., M.B., C.M.—Assistant Resident Medical Officer to the Leeds Public Dispensary.

THOMAS, J. L., M.D., F.R.C.S. Edin.—Assistant-Physician to the Royal South Hants Infirmary.

TUCK, BUCKMASTER JOSEPH, M.R.C.S. and L.S.A., J.P.—Visiting Medical Officer to the Seaford Convalescent Hospital.

WILDING, LEONARD J., of the Infirmary, Whitehaven.—House-Surgeon to the Worcester Infirmary.

BIRTHS.

HANNAH.—On November 19, at 83, Holland-road, Kensington, the wife of Surgeon-Major Hannah, M.D., Army Medical Department, of a son.

LA FARGUE.—On November 10, at Godalming, the wife of George Frederick Heriot La Fargue, M.D., of a son.

WALKER.—On November 11, at The Grove, Portland, the wife of George E. Walker, L.R.C.P., of a daughter.

WILKIN.—On November 18, at Holmhurst, Beckenham, Kent, the wife of J. F. Wilkin, M.D., of a son.

MARRIAGES.

BLADES—BARER.—On November 15, at St. Mary's-in-the-Castle, Hastings, William Parker, fourth son of Charles Blades, M.R.C.S., of Tattershall, Lincolnshire, to Sarah, widow of Major Alfred Baker, Bombay Civil Service.

COGHILL—LOVELL.—On September 29, at Kandy, James Davidson Mackay Coghill, M.D., Medical Inspector of the Coffee Districts, to Mary Drummond, second daughter of Capt. Henry Preston Lovell, Superintendent Peninsular and Oriental Steamship Company, Calcutta.

DALZIEL—LORIMER.—On November 15, at St. Margaret's, Lee, John Arthur Dalziel, to Janet Susan Elizabeth, youngest daughter of Alexander Lorimer, M.D., Honourable East India Company's Service, Deputy Inspector-General of Hospitals, Madras.

ELIPPE—CREWDSON.—On November 16, at St. George's Church, Kendal, Walter Iliffe, F.R.C.S.E., to Mary Cicely, only daughter of Edward Crewdson, Esq., all of Kendal.

NEWINGTON—SPRATLY.—On November 16, at St. Peter's Church, Rock Ferry, Cheshire, Frank Euefer Newington, L.R.C.P. Lond., younger son of J. H. Newington, Esq., of Tenterden, Kent, to Matilda Margaret, younger daughter of the late Richard Spratly, Esq., of Ramsgate, Kent.

PINK—FARMER.—On November 15, at St. John's, Margate, Thomas Pink, M.R.C.S. Eng., Resident Surgeon of the Royal Sea-Bathing Infirmary, Margate, to Emma, second daughter of Joseph Farmer, of Chapel-hill House, Isle of Thanet.

PITMAN—JAMES.—On November 18, at St. Mary's, Islington, Robert Pitman, L.R.C.P., etc., of Acacia House, Highgate-hill, to Esther Hannah, widow of the late Mr. James, of Manor-road.

PURDOM—RAMSDEN.—On November 6, at Worksop, T. E. Purdom, M.B., to Mary E. F. Ramsden, eldest daughter of Robert John Ramsden, Esq., of Carleton Hall, Notts.

DEATHS.

BOWLBY, HENRY, M.R.C.S. Eng., late Honourable East India Company's Service, at Totnes, Devon, on November 15, aged 70 years.

DUKE, ROBERT RAWSON, M.D., son of the late Valentine Duke, M.D., of Harcourt-street, Dublin, at Barton Lodge, Cerne Abbas, Dorset, on November 14.

HEELAS, MARTIN LUTHER, M.R.C.S., at Fellows-road, South Hampstead, on November 7, aged 33.

HOWISON, JOHN, eldest son of James Howison, L.R.C.P. Edin., at Beds County School, Bedford, on November 18, aged 17 years and 5 months.

MILLER, JOHN, M.D., J.P., late of Rothesay, and formerly of Madeira, at 7, Sutherland-crescent, Helensburgh, N.B., on November 16, aged 70.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Candidates, who must be unmarried, and registered members of the medical profession in accordance with the terms of the Act 20 and 21 Vict., cap. 90, must send in their applications, with their diplomas and certificate of registration, to be accompanied by references, and addressed to the Medical Committee, Children's Hospital, Steelhouse-lane, Birmingham, not later than December 8.

CHESTER GENERAL INFIRMARY.—House-Surgeon. Unexceptionable testimonials will be required of moral conduct, and candidates must possess a double qualification and be duly registered. Testimonials to the Chairman of the Board, on or before December 4.

DERBY COUNTY LUNATIC ASYLUM, MICKLEOVER, NEAR DERBY.—Assistant Medical Officer. Candidates must possess a double qualification, and be duly registered. Applications, with testimonials, to the Medical Superintendent, on or before November 30.

LEEDS FEVER HOSPITAL.—Resident Medical Officer. Applications, with testimonials or references, to Dr. Eddison, 29, Park-square, Leeds, on or before November 29.

LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY.—Medical Officer. Candidates must be doubly qualified registered practitioners. Applications, with testimonials, to J. J. Melton, Portland-street, Lincoln, before November 30.

ROYAL SOUTH LONDON DISPENSARY, ST. GEORGE'S-CROSS, LAMBETH-ROAD, S.E.—Honorary District Surgeon. Applications to Mr. Hentsch, at the Dispensary, on or before November 30.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY.—Surgeon. Candidates for the appointment are requested to attend, with their diplomas and testimonials, at the Dispensary, 60, King-street, Regent-street, on Thursday, November 30, at four o'clock p.m. punctually. Candidates must be either F. or M.R.C.S. Eng., and not practising pharmacy.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Honorary Physician. Candidates must be graduates in medicine of a university, and be Fellows or Members of the Royal College of Physicians, London, or Fellows of the King and Queen's College of Physicians, Ireland, or Fellows of the Royal College of Physicians, Edinburgh. Applications, testimonials, and certificates of registration, under cover, to the Secretary of the Hospital, on or before December 2.

WESTERN INFIRMARY OF GLASGOW.—Superintendent. Applications, with testimonials, to Henry Johnston, Secretary, 30, Gordon-street, Glasgow, on or before December 1.

WEST SUSSEX, EAST HANTS, AND CHICHESTER INFIRMARY AND DISPENSARY.—Assistant House-Surgeon. Applications to the Secretary, on or before November 27.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Carnarvon Union.—The Llanrug District is vacant; area 28,639; population 13,647; salary £60 per annum.

Risbridge Union.—Mr. R. T. Smith has resigned the Second District; area 10,422; population 3868; salary £56 per annum.

APPOINTMENTS.

Bakewell Union.—George Harvey, L.R.C.P. Edin., L.R.C.S. Ire., L.S.A., to the Cromford District.

City of London Union.—Herbert A. Smith, F.R.C.S. Eng., M.B. Lond., L.S.A., to the Third District; Alfred B. Thompson, L.R.C.P., M.R.C.S., L.S.A., to the Casual Wards, Thavies Inn.

Erpingham Union.—Robert T. Hales, M.R.C.S. Eng., L.S.A., B.M. and M.C. Aber., to the Workhouse and the Beckham District.

Glanford Brigg Union.—Maximilian R. J. Behrendt, L.R.C.P. Edin., L.R.C.S. Edin., to the Messingham District.

Louth Union.—Thomas J. Higgins, L.R.C.S. Edin., M.D. Ire., to the Welton-le-Wold District.

Nottingham Union.—Thomas Worth, M.R.C.S. Eng., L.S.A., to the Workhouse.

Shepton Mallet Union.—Frederick J. Brennand, B.M. and M.C. Aber., to the Fourth District.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Mr. G. C. R. Bull, late of Epsom College, has obtained the vacant Exhibition in Natural Science.

DR. HENRY LOWNDES has resigned the office of Honorary Surgeon to the Northern Hospital, after fifteen years' service. At the time of his appointment the tenure of office was limited to that period, but has since been extended to twenty-one years. Dr. Lowndes, however, declined to avail himself of this extension, and formally resigned at the last meeting of the Committee. A special vote of thanks was accorded to him, with an expression of regret at losing his services, and he was appointed Consulting Surgeon.

HER ROYAL HIGHNESS THE PRINCESS LOUIS OF HESSE has sent to the Victoria Hospital, Chelsea, her photographic portrait, to be hung up in the ward which she has permitted to be called after her in commemoration of her visit to the Hospital on the 9th inst.

ASPIRATORY PUNCTURE OF THE BLADDER.—In a communication to the Hufeland Medical Society, Dr. Fürstenheim called the attention of his colleagues to the great value of Dieulafoy's instrument for capillary puncture of the bladder, and especially in localities where practitioners may not have had practice in passing catheters in difficult cases. Here is a means of emptying the distended bladder, easy of employment, unattended with danger, and infinitely to be preferred to the ordinary hypogastric puncture of the organ, which, in discussions in recent times, has been spoken of far too lightly. So little danger is there in passing Dieulafoy's capillary trocar through the integuments into the bladder, that Lücke recommends it in the diagnosis of stone in the bladder when the ordinary means fail; and Socin does not hesitate to employ it in the same case several times daily. Deneffe and Van Wetter have collected fifty-seven cases in which it has been employed without any fatal issue; but Dr. Fürstenheim is not aware that this small yet important operation had ever been performed in Berlin, and he therefore brought before the Society a remarkable instance of its great efficacy.—*Berlin. Klin. Woch.*, October 30.

REMOVAL OF A BEAN FROM THE LEFT BRONCHUS.—Dr. Brug relates the following case, which he saw at Prof. Lücke's Clinic at Strasburg:—A child, two years old, who was believed to have swallowed a bean, was brought to the Clinic after having suffered several attacks of suffocative dyspnœa, which seemed to threaten its life. While being examined it was seized with one of these, which passed into a state of complete asphyxia. As the bean had been swallowed nearly twenty-four hours before, and from the frequency and severity of the paroxysm seemed to be deep-seated in the bronchus, Prof. Lücke hesitated about an operation as of doubtful success. The body had become wedged in the left bronchus near the bifurcation, so that no air entered the left lung; and as it was evident that the child would die unless something were done, Prof. Lücke opened the trachea, and passed a large elastic catheter into the bronchus. This was dilated by the catheter, and the irritation thus caused induced a cough, which expelled both the instrument and the bean. The child was rapidly relieved, and was discharged four days after the operation, and when subsequently seen was quite well.—*Boston Med. Journal*, October 19.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Chirurgeon.—Louisa, daughter of George II., when Queen of Denmark, died of an operation for hernia, at the early age of twenty-six. The operation, we are told, occupied an hour. Queen Caroline, her mother, also died of hernia, after an operation by the celebrated Ranby. And Careline of Brunswick, wife of George IV., fell a victim to strangulated umbilical hernia.

Surgical Contrivances.—The remark of Dr. Paley was, "I challenge any man to produce, in the joints and pivots of the most complicated or the most flexible machine that was ever contrived, a construction more artificial, or more evidently artificial, than that which is seen in the vertebræ of the human neck."

Professor Marshall, F.R.S.—The annual course of his valuable lectures on Anatomy were commenced by this gentleman on Monday last, the 20th inst., at the Royal Academy, Burlington House, and will be delivered at eight o'clock on the evenings of Monday, Wednesday, and Friday, terminating on the 15th prox.

Dram-Drinking.—An old reproof of dram-drinking on 'Change runs as follows:—"Whereas Mr. Bickerstaff," says the *Tatler* for February 25, 1710, "has received information that there are, in and about the Royal Exchange, a sort of people, commonly known by the name of 'whetters,' who drink themselves into an intermediate state of being neither drunk nor sober before the hour of exchange or business, and in that condition buy and sell stocks, discount notes, and do many other acts of well-disposed citizens. This is to give notice that, from this day forward, no whetter shall be able to give, or endorse any note, or execute any other point of commerce after the third half-pint before the hour of one, and whoever shall transact any matter or matters with a whetter, not being himself of that order, shall be conducted to Moorfields upon the first application of his next-of-kin."

Dr. Jones.—Although a fine specimen, it is not equal to the gigantic trout in the Museum of the College of Surgeons, which was caught in the Thame at Drayton Manor, and presented by the late Sir Robert Peel; its weight was twenty-two pounds.

Mr. Williams.—From inquiries we have made, it appears that the new regulations for the Fellowship of the College, for members of your standing, are not yet decided. Write to the Secretary about January, when perhaps you may obtain a satisfactory answer.

A Hospital Surgeon.—Sophia, Bulgaria, has at the present time five hospitals—namely, the Civil Hospital (Turkish), of eighty beds; the Turkish Military Hospital, containing upwards of 450 beds; Hirsch's Hospital (entirely supported by Baron Hirsch), which consists of 100 beds; and the English Hospital, under the auspices of the Red Cross Society, 100 beds. With the exception of the latter they all lack the comforts and efficiency of the hospitals in England. As to the first principles of hygiene, they are absolutely unknown. The English Hospital has been fitted up for the purpose of converting it into an ambulance for the wounded. It is in charge of three English medical gentlemen at present in the service of the Imperial Government, and is supervised by Kirkov Bey, who is the head of the military hospitals in Sophia. This hospital was opened on October 30. In this ambulance, chloroform was for the first time introduced into Sophia, when it was administered by Dr. W. W. Elmslie.

A WARNING.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I wish to put my fellow-practitioners on their guard in reference to a visitor, whose object may be very well understood from the following:—On Saturday evening last (a most bitterly cold night), about seven o'clock, my servant told me a gentleman wished to see me in the hall, and, according to my regular habit, I immediately attended to his request. He wished to know if I would call to see his wife, at 30, Warner-street, in this neighbourhood, that evening; she was very ill, and he did not know what could be the matter with her; they had just come from Jersey, and he did not know whether or not she was pregnant; they had been married three months; but before I went he wished to go and fetch her sister, who lived in London, so that if I would call in an hour he would then have returned. I said that I really could not come as it was such a cold night, having only recently recovered from a severe attack of inflammation of the lungs and hæmeptysis; but he begged very hard again, and when I assented he went away with a most imploring request—"You won't disappoint me." Suffice it to say that when I went I found an empty house; and I have not seen my "gentleman" since, but shall be very glad to renew his acquaintance in a police-court—not that I suffered by his visit, excepting the vexation at being called out on such a fearfully cold night for nothing at all. His description is—about five feet five inches high, I presume about eleven stone in weight, about thirty years of age, fair complexion, and whiskers and moustache (of which he has a good quantity) nicely and evenly trimmed all round, and about one inch in length. A detective informs me that such a person should be detained till the arrival of a police-constable, and given in charge on suspicion. Trusting that he may soon fall into the hands of the police, I am, &c.,

44, Trinity-square, November 13. F. G. LARKIN.

THE TREATMENT OF A SNAKE-BITE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The intravenous injection of ammonia in snake-bite having proved to be not altogether satisfactory, may I trespass on your columns in making some remarks on the treatment of a successful case of snake-bite occurring many years ago in India.

The patient, an European, was bitten by a cobra di capello at the left ankle-joint, which bled a little after its infliction, so as readily to perceive where the virus was inserted. The first step in the treatment was the application of a ligature above the part, so as to cut off, as much as possible, the transmission of the virus through the veins and absorbents to the upper part of the body. A piece of string tied very tightly around the leg answered this purpose admirably. In the next place, scarification with the point of a bleeding-lancet was freely resorted to; which was followed by fomentations of hot water, and continued for about half an hour, so as to make the wounds and snake-bite bleed as freely as possible. At this time, and somewhat before, a distressing nausea was becoming more and more urgent, when it was deemed prudent to assist nature or the *vis medicatrix* by the exhibition of emetics of the tartarised antimony, two grains in eight ounces of water, of which a wine-glassful was taken every quarter of an hour till full vomiting was induced. This appeared to act as a charm, for after this treatment the patient quickly rallied, and soon threw off the languor and nausea that previously existed. The effect of the emetic appeared to cut off, or to prevent the virus from being absorbed into the system, and also to arouse the patient from the state he was in. That the virus apparently had taken decided effect may be learnt from the fact that a bright redness or erythema was perceptible all about the body, running in the course of the principal bloodvessels. It would appear, therefore, that, probably through the venous system, some of the virus was carried to other parts of the body, where it must have irritated and produced the erythema described. The cure was perfected by the administration of alterative doses of blue pill combined with quinine, to give tone to the system, after the previous active remedial measures had been resorted to. I am, &c.,

Wallingford, November 17. WILLOUGHBY ARDINO, M.D.

OCCULT FORCE.

Capt. Burton, the well-known traveller, writes to the *Times* to avow his belief that certain persons possess an unknown and unrecognised force, by which they work wonders such as are commonly ascribed to magic. He also believes in perception by other than the usual channels of the senses. Examples of preternatural perception are afforded by the clairvoyant, who pretends to read closed books, and to see through the viscera of a sick man so as to detect disease and prescribe remedies. The theory is that such persons have a kind of metastasis of the nervous system, so that the functions usually performed by the eye may be translated to the pit of the stomach or the tips of the fingers. The proper test of such pretensions is this: If the power of seeing with the fingers is real and to be depended on, let it be shown openly. But no clairvoyant ever yet ventured to tell the

number of a bank-note enclosed in an envelope, though the note would have been his own if he had done so. If the alleged power of perception is only occasional and transitory, it cannot be proved, and any supposed exercise of it must come under the category of lucky guesses or coincidences. The real occult force which the magician, or mesmerist, or clairvoyant depends on is the credulity and love of the marvellous which are the pre-eminent qualifications of the spiritualist believer or dupe.

HEALTH OF DUBLIN.

A correspondent of our contemporary the *Times* writes from Dublin on the 20th inst., "that with all its drawbacks and defects—and they are not to be denied—Dublin is a healthy city. Notwithstanding the horrid fever-nests which the Special Commissioners have so graphically described, there is less fever in Dublin at present than at the same season for years past. The proof of this statement is supplied, not by the Registrar-General's returns, which they discredit, but the doctors', which they surely will receive with confidence. In Baggot-street Hospital there are now only two cases of enteric fever, and the town is more free from disease than it has been for some time. In Cork-street Fever Hospital, capable of accommodating over 100 patients, there are now 32 cases, against 37 in the corresponding week last year, and of these 32, 12 are of chest disease. There are no fever cases in Sir Patrick Dun's Hospital, which is in the adjoining district to Baggot-street, but a poorer one. At the north side of the city, the great fever depôt is the Hardwicke Hospital, which contains over 120 beds. There are 33 cases, against 52 in the corresponding week last year. In the Meath Hospital there are 8 fever cases, against 10 in the same week last year. These facts will probably be thought sufficient to prove that there is no exceptional cause for alarm.

COMMUNICATIONS have been received from—

Dr. F. CHURCHILL, London; Mr. J. CHATTO, London; Mr. R. DAVY, London; Mr. B. R. WHEATLEY, London; Dr. JULIUS ALTHAUS, London; Mr. T. M. STONE, London; Mr. GEORGE BROWN, London; Dr. FRANCIS OGSTON, Aberdeen; Mr. CHARLES HIGGENS, London; Mr. HENRY MORRIS, London; Dr. THOS. BARLOW, London.

BOOKS AND PAMPHLETS RECEIVED—

L. M. V. Galippe, Etude Toxicologique sur l'Empoisonnement par la Cantharidine et par les Preparations Cantharidiennes—Report on the Sanitary Condition of the several Parishes comprised in the Wandsworth District during the Year 1875—A. Sanné, Traité de la Diphthérie—Le Dr. Lecorché, Traité du Diabète: Diabète Sucré, Diabète Insipide—Lyttleton S. Forbes Winslow, M.B., D.C.L., Handbook for Attendants on the Insane—Contradiction; or, Medical Men and Manners of the Nineteenth Century—F. A. Burrall, A.M., M.D., Nitrite of Amyl as an —Antidote to Chloroform—Transactions of the Medical Society of the State of Pennsylvania, vol. xi. part 1.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Boston Journal of Chemistry—Chicago Medical Journal and Examiner—The Dairyman—Students' Journal and Hospital Gazette—Home Chronicler—Le Mouvement Médical—The Broad Arrow.

APPOINTMENTS FOR THE WEEK.

November 25. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

27. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. Dr. Lichtenberg will exhibit a lad on whom Excision of the Ankle-Joint has been performed, with removal of the greater part of the os calcis. Dr. Edmunds, "A Second Case of Cæsarian Section, in which mother and child survived."

28. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Mr. Hulke—1. "Case of complete Absence of both the Upper Limbs"; 2. "Lodgment of a Tracheotomy-Tube in the Right Bronchus, and its Extraction." Mr. Morrant Baker, "On the Employment of Flexible Tubes in Tracheotomy."

29. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

December 1. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 18, 1876.

BIRTHS.

Births of Boys, 1327; Girls, 1322; Total, 2649.
Average of 10 corresponding years 1866-75, 2231·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	948	938	1886
Average of the ten years 1866-75	792·5	780·7	1573·2
Average corrected to increased population ...	...	...	1683
Deaths of people aged 80 and upwards ...	...	...	88

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	1	7	1	2	...	7	...	3
North	751729	26	3	8	3	6	...	11	1	1
Central ...	334369	1	...	1	2	2	...	1	...	2
East	639111	4	2	11	...	5	1	5	1	3
South	967692	19	10	28	...	12	1	5	...	7
Total	3254260	52	16	55	6	27	2	29	2	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·432 in.
Mean temperature	50·0°
Highest point of thermometer	63·3°
Lowest point of thermometer	33·2°
Mean dew-point temperature	47·0°
General direction of wind	Variable.
Whole amount of rain in the week...	1·46 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 18, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Nov. 18.	Deaths Registered during the week ending Nov. 18.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2649	1886	63·3	33·2	50·0	10·00	1·46	3·71
Brighton	100832	42·7	64	34	60·4	36·0	51·4	10·78	0·94	2·39
Portsmouth ...	124867	27·8	88	54	57·2	39·0	50·6	10·34	1·43	3·63
Norwich	83430	11·2	60	39	58·0	36·0	47·5	8·61	0·96	2·44
Plymouth	72230	51·8	40	35	58·0	40·0	51·2	10·67	3·06	7·77
Bristol	193539	44·8	129	90	59·4	33·9	48·4	9·11	2·10	5·33
Wolverhampton ...	72549	21·4	44	46	59·2	31·8	46·2	7·89	1·95	4·95
Birmingham ...	371839	44·3	286	174	59·9	31·0	47·0	8·33	1·70	4·32
Leicester	113581	35·5	100	65	61·8	32·8	46·7	8·17	0·90	2·29
Nottingham ...	93627	46·9	70	43	58·8	32·1	45·0	7·22	1·35	3·43
Liverpool	521544	100·1	339	279	57·3	33·9	47·1	8·39	1·18	3·00
Manchester ...	357917	83·4	217	225	59·0	24·0	46·4	8·00	0·79	2·01
Salford	138425	26·8	123	99	60·5	31·9	46·5	8·06	1·01	2·57
Oldham	88609	19·0	64	62	...	...	...	...	...	...
Bradford	173723	24·1	120	103	55·0	30·4	42·8	6·00	2·00	5·08
Leeds	294580	13·5	208	141	58·0	35·0	45·5	7·50	1·71	4·34
Sheffield	274914	14·0	217	165	58·5	34·0	46·2	7·89	1·84	4·60
Hull	136933	37·7	129	60	55·0	38·0	45·5	7·50	1·20	3·05
Sunderland ...	108343	32·8	89	54	54·0	31·0	44·3	6·84	1·16	2·95
Newcastle-on-Tyne	139929	26·1	108	64	...	...	...	...	...	...
Edinburgh	215146	51·3	109	96	...	...	...	...	...	...
Glasgow	545144	90·4	392	297	53·6	29·8	41·2	6·78	1·61	4·09
Dublin	314666	31·3	141	180	61·5	39·4	48·2	9·00	1·47	3·73
Total of 23 Towns in United Kingdm	8028595	37·7	5786	4291	63·3	24·0	47·0	8·33	1·49	3·78

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 24·43 in. The lowest reading was 28·99 in. on Sunday evening, and the highest 29·91 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ORATION DELIVERED BEFORE THE HUNTERIAN SOCIETY.

By HENRY G. SUTTON, M.B., F.R.C.P.,
Physician to, and Lecturer on Pathology at, the London Hospital.

THE Society, if I understand its intention, holds this annual meeting to promote a spirit of inquiry. It commemorates the name of John Hunter, because he was one of the greatest of inquirers. History itself pronounces that "he was one of those extremely rare characters who only appear at very long intervals, who, when they do appear, remodel the fabric of knowledge, revolutionise our modes of thought, and stir up the intellect to insurrection; they are the rebels and demagogues of science."

Example being contagious, we are stimulated, in commemorating that great man's work, to labour hard; like him, search more and more into the life of health and disease.

The Society could much more easily erect "a tardy monument to buried dust"; could delineate the character of the man, and devotedly describe his work; but devotion which does not multiply exertion is not a high attribute. We shall doubtless therefore all agree that the original founders of this Oration wisely intended that the Orator should endeavour to search beyond generally accepted opinions; and in so doing exemplify that the spirit of the great dies not—that the power transmitted by a great mind like Hunter's is not only accumulative, but illimitably reproductive. It is a great roadmaker into the unknown.

We, as medical men, may profitably look through the history of past teaching, trace the advance of the human intellect, although we cannot fully estimate the difficulties which had to be overcome. In so doing it becomes only too clear that the great reformers of the day, medical and other, have had to struggle with immense difficulties. Their greatest efforts appeared at the time to be attended with little result, or they even produced the very opposite effect from that which they intended. Hunter himself had no better fortune. His contemporaries considered that his pursuits had little connexion with practice; they charged him with attending to physiology more than to surgery. His experiments, said one writer, "if they be true, carry with them no manner of information, and no benefit can arise from them." His writings, it was said, showed an obscurity in the expression of his thoughts—a want of logical accuracy in reasoning and an incorrectness in his language, resulting from a deficient education. Some of his contemporaries looked upon him as little more than a mere innovator and an enthusiast.

To understand why his work was not appreciated by his contemporaries we have only to call to mind that history in many ways reveals what is now well established—that a man's power for good is not simply due to his own knowledge and skill, but it is regulated also by the knowledge and feeling of the people of the day. Considering the position of physiological and pathological knowledge in Hunter's time, no wonder his expressions were thought to be obscure, and his teaching altogether unpractical; for he taught—what even now is not sufficiently recognised—that disease to be rightly known must be studied, not only in man, but in lower animals, in vegetables, and also in connexion with disturbances in inorganic matter. In teaching this he laid the foundation of the science of pathology. Moreover, when he showed, with a true philosophical eye, that the strangest and most apparently capricious shapes, not only in man, but in lower animals, in vegetables, crystals, and in inorganic matter, were all simply deviations from normal forms, he founded the "science of the abnormal." As soon as it was recognised that the normal and abnormal changes in man were but the natural result of the antecedent physical changes in and around him, it was then clear enough that if the external conditions could be altered, disease might be prevented, modified, or cured; nay, more, it was obvious that if the external conditions could be altered without limit, the modifiability of man would be illimitable, and his perfectability might be possible.

It is now accepted as a truism that disease is but the product of the physical changes without and within the body; and it comes to us now so naturally to accept the conclusion, that we look back with wonder, not altogether without fear, and think how ever could any other opinion have been accepted and acted on. For how could a medical man, even in a small degree, succeed in preventing disease, ameliorate or relieve suffering, so long as ignorance led persons to believe that disease was produced by supernatural agencies? What could be done to prevent the spread of disease, when leprosy was thought to be a manifestation of Divine wrath; when outbreaks of small-pox, it was thought, were sent as punishments for the sins of the Jews; when, in the middle of the eighteenth century, as Combe (Buckle, vol. i. page 373) relates, persons thought that the fever and ague which prevailed every spring near to Edinburgh were sent by Providence; and when even the birth of malformed children was attributed to Divine intervention?

It is obvious that measures of prevention and cure then failed, not simply because medical knowledge and skill were inadequate, but also because the opinions of the day rendered it impossible for the people to co-operate and bring about preventive and other measures needed.

Seeing, therefore, how requisite is co-operation on the part of the people, we cannot but observe with great interest and gratification the conviction now growing, seemingly, in educated minds, that a scientific training to some extent is indispensable to every person. And although the superstition which formerly universally prevailed, and attributed disease to the supernatural, has happily almost disappeared, lingering only with the consistent but mistaken "Peculiar People," and although even the judge on the Bench lays down that persons shall not now endanger and leave the sick unattended because the superstitious opinions of old are retained, yet almost any day some of us could bring facts of common occurrence, showing that even now it is impossible to apply medical knowledge or skill to the utmost, because the knowledge and feeling of patients or others render them incapable of appreciating it. Persons suffering still look for specific cures, although not for charms.

How common it is to find that persons to whom (owing to the condition of the heart) rest is absolutely necessary cannot be induced to take it until great shortness of breath, or some other alarming feeling, compels them. They often cannot understand, and cannot be brought to feel, the necessity until too late. And again, how frequently we find that wakefulness, irritability, melancholic depressions, and the aching in limbs, can only be relieved by stupefying drugs, which create almost as much mischief in another way, because persons cannot be made to understand and feel that the undue action in their sensitive nerves and brain is kept up by the excessive feeling and excitement present in those around them. Many other illustrations might be adduced, but it is enough to ask ourselves if we do not frequently find that adults as regards their own health, parents as regards their children, corporate bodies as regards the community, cannot be brought to feel and understand that the disturbances within the body are but the natural result of the physical disturbances around it; and that if the external conditions are not removed or modified, injury must follow in some degree.

This difficulty arises from the fact that it is impossible, especially in adult life, for the mind to divest itself of old ways of thinking, much less of old ways of feeling. Even where scientific teaching is advancing, and great intellects are day by day proclaiming truths, highly developed minds evidently find it impossible to divest themselves of old habits of thought. Illustrations not a few might be gathered. There is the well-known instance of Sir Matthew Hale, retaining his belief in witchcraft when many other persons of his day looked upon all ideas of its existence as simply the outcome of old superstition. And it is instructive to remember that in passing sentence of death on two old crazy women for the alleged crime of witchcraft, he satisfied himself of the righteousness of the act by reasoning then in the same manner as many persons reason on different subjects at the present time. "There are," he said, "such creatures as witches, I make no doubt at all; for, firstly, the Scriptures have affirmed so much; and, secondly, the wisdom of all nations has provided laws against such persons, which is an argument of their confidence of such a crime." Such reasoning, it is recorded, was irresistible, and the old women were hanged.

Perhaps no illustration is more impressive than Sir Matthew Hale's, for it is accepted that he had high and original powers of thought, and he himself taught that opinions and practices for public good must be tentative only. As he expressed it, "Time is the wisest thing under heaven."

I may call to mind another and much later instance, showing how old habits of thought prevent exceptionally powerful minds from recognising growing truths. It is well known that John Wesley, who knew his time so well that he has been likened unto Richelieu, retained his belief in witchcraft, and his own words testify how incapable he was of freeing his mind from old teaching. Wesley said—"It is true likewise that the English in general, and, indeed, most of the men of learning in Europe, have given up all accounts of witches and apparitions as mere old wives' fables. I am sorry for it. The giving up witchcraft is in effect giving up the Bible; but I cannot give up, to all the Deists in Great Britain, the existence of witchcraft, until I give up the credit of all history, sacred and profane."(a)

One more illustration I may be allowed to give. It is taken from our own profession, and it is a very striking one, showing how extremely difficult—in fact, impossible—it is, in recognising a great truth, to divest the mind entirely from the errors of the day. Lecky records (in his "History of Rationalism," vol. i. p. 85) that in 1563 John Weir, a learned and able physician of Cleves, published a treatise against witchcraft. Weir said he was convinced, as a doctor, that many of the victims were simply lunatics, labouring under delusions about the devil, and he was greatly shocked at the sufferings they endured. But he said he had not the slightest wish to revolt against any of the first principles of the popular teaching, or even to free himself from the prevailing modes of thought: and he evidenced that by saying, "He was quite convinced that the world was peopled by crowds of demons, who were constantly working miracles amongst mankind," and his only object was to reconcile his sense of their ubiquity with his persuasion that some of the phenomena that were deemed supernatural really arose from disease.

It is not less instructive, as showing by what methods the human intellect is developed, to read further in Lecky, how Weir's enlightened but somewhat inconsistent opinions were answered.

Weir's work was answered by Boden, who, Hallam says, was a fearless and independent inquirer, with a philosophic mind stored with the facts of history and jurisprudence. Nay, more; only two men, Hallam says, could be compared with him—viz., Aristotle and Machiavel.

Boden, in answering Weir, showed that the laws of all nations recognised the existence of witchcraft. He collected hundreds of cases of persons who had been condemned by the law courts; he cited the opinions of the greatest writers and of the most illustrious Fathers; he described how the witches transported themselves through the air and had carnal intercourse with the devil; he gave their confessions when condemned, and described their demeanour at the stake. He further said he could scarcely find words to express the astonishment and indignation with which he read Weir's treatise: that a puny doctor should have dared to oppose himself to the authority of all ages; that he should have such boundless confidence in his own opinions, and such supreme contempt for the wisest of minds, as to carp and cavil in a sceptical spirit at the evidence of one of the most notorious of existing facts,—was, in truth, the very climax of human arrogance, the very acme of human absurdity.

The Society may wonder why I have dwelt so much upon these old incidents. I can only answer that I am led to do so by the allied facts of the day. Whilst fully recognising that the above referred to old ideas have long since departed, one cannot but see that, although the subjects have changed, old modes of thinking are continued. At the present day, do not many persons, whilst admitting that disease may in some degree be prevented, fail to see that even the complex conditions of mind—"orderly" and "disorderly" so-called—may equally be changed by modifying the physical conditions in and around the body? Do not persons now, as formerly, fail to see, and all of us in some degree fail to feel and recognise, that every mind must be hampered by old training—that, as Goethe says, we never forget the impressions of our youth? Like our ancestors, we are steadfast in rectitude, but obstinate in error; like them, we condemn unjustly and praise unwisely, because we don't see enough. Like our ancestors, we do not see sufficiently the relations between things. And is not the belief still general, even in the highest places, that human beings have an independent individuality—a separate and separable power, capable of acting by itself, the bodily form of which is abruptly limited from, and independent of, surrounding objects? Is it not still generally believed that this power of mind enables human beings to guide themselves, even against the whole of their feelings, aided by some mysterious immaterial agency? But is not such a belief derived from ideas kindred to those which taught that disease was produced by immaterial—that is, by supernatural—agencies? And does not such belief retard inquiry? This belief of independent individuality, is it not derived from feelings developed by old teaching, unacquainted with the structure of the human body, and of its relation to its surroundings? Persons must assume that man has an independent individuality so long as they fail to recognise that his surroundings are continually acting on him, and that he reacts on them. And, so long as he lives, such actions must inseparably connect him with, and make him dependent on, surrounding conditions and events. To take a single instance, man is continually taking in new matter with new energies, and giving out old. Where the new ends and the old begins is not only inappreciable to the senses, but to the imagination.

The doctrine of man's assumed independence of and abrupt limitation from his surroundings is untrue; all belief in it is founded on insufficient observation, and derived from too restricted reasoning.

Yet on this received belief of human independence is based the present doctrine of human responsibility. And the belief acts injuriously; for, like the old superstitions already referred to, it prevents persons searching to find out the causes of human conduct, good and injurious. It therefore hinders human advancement. It leads many persons to be content with simply awarding praise, or unjustly but conscientiously awarding blame or inflicting punishment. The belief, therefore, retards both the prevention and the cure of wrong-doing and disease. Moreover, to repeat, do we not ourselves almost every day show that we are fettered by old habits of thought and feeling? We affirm that we are practical, and not theoretical, forgetting that every practice is based on theory; and there are ample facts to show that no practice, no matter how injurious, is abandoned until the theory is altered. Are we not fettered by old habits of thought when we satisfy ourselves that we have found a remedy for a morbid condition, which cannot really be cured until the cause is removed? Are not pathologists hampered by old ways of thinking when they conclude that every form of phthisis is tubercular, and that all contagious diseases are propagated by germs only, forgetting that we cannot say how they are produced until not only one, but all their antecedents are known?

If we look abroad, and inquire if old habits of thought prevent other persons, as well as medical men, rightly judging of things, do we not see the lawyer, trained in the hard-and-fast arbitrary lines of the law, finding fault with the somewhat indefinite and qualified opinions of medical witnesses, forgetting that the well-educated medical man sees that the phenomena of nature are not sharply and abruptly defined? And his statements and representations, to be faithful, must be more or less indefinite also.

Theologians, trained to reverence and obey teachers and doctrines, consider firmness in belief as essential for the propagation of truth; and do they not consequently consider that the varying faith and scepticism of medical men are dangerous, and lead to infidelity? Are not those engaged in mercantile pursuits very apt to estimate everything by its money-value? In every calling we might trace the same limited action of mind, and be brought to see that mind acts, and, it would seem, can only act, according to the form it has received from surrounding conditions. This is still further evidenced if we consider the mental actions common to different periods of life; it is clear that their character alters as the external conditions, as well as the organs and tissues of the body, are changed. Moreover, it is seen that the difficulty in changing opinions, and of acquiring new ones, becomes greater and greater as the body becomes less and less modifiable. This is manifest if we trace the progress of mind from childhood to old age. Childhood and youth are very changeable, for the progressive development of their bodies continues to spread their inclinations and wants beyond the limits of yesterday. New and additional matter is accumulated, new structures and actions are being developed, and thus new connexions are formed, and new positions must be taken up. The mechanism of the eyes and ears is developed more and more by contact with external objects, new powers are acquired, and new things are looked for, seen, and accepted. Greater

(a) Buckle's "History of Civilisation," vol. i. p. 364.

development brings greater appreciation; new contacts bring new feelings; more complex feelings attend more developed organisation; more appetites, more ideas; and thus progress is possible. But when the body has reached the limit of its growth, when its mechanism may here and there be improved, but can never attain much greater development of structure, as in middle age, persons naturally become more conservative, slower in receiving new impressions; there are fewer new feelings and new ideas, and they become very retentive of old ones. There is lessening mobility in body; it is being stiffened more and more, not only in bones, cartilages, connective tissue, but also in brain and nerves, and they are therefore less and less impressionable and modifiable. Still later, when degenerative changes set in in nerve-centres and communicators, and digestive and respiratory surfaces are altered, there are fewer and fewer new actions, and less and less new materials are introduced into the body. It therefore mostly continues as before; it certainly does not change greatly; on the contrary, it mostly retrogrades. Satisfaction and content are often greater, and hope is less. As old age creeps on, the nerve-centres and communicators are more and more impaired and injured. Fewer and fewer impressions are received from the world without; therefore there is more patience and greater ease. This retrogression goes on until—

> "The last scene of all
> That ends this strange, eventful history,
> Is second childishness and mere oblivion—
> Sans teeth, sans eyes, sans taste, sans everything."

If we examine more in detail, it is seen that increasing investigation enables us to form some conception, although as yet an exceedingly imperfect one, of the way in which the brain may be, and probably is, mechanised, so to speak, to serve in mental operations. Years ago it was conjectured, and of late years it has been shown, that not only does a medullated nerve consist of a number of axis cylinders, but that every axis cylinder is made up of a vast number of extremely minute fibrillæ. If this be so, we are enabled better to understand how each one of the thousands of minute ethereal waves reflected from an object may excite changes in the retina, which, being transmitted along the optic nerve, produce the condition of sight; or, to take the case of smell, how it is, as has been asserted, that excitation may arise from one thirty-thousandth of a grain of sulphuretted hydrogen, and give rise to an olfactory sensation.

Moreover, the pyramidal cells of the convolutions, there is good reason to think, are made up largely of the above-mentioned extremely minute fibrillæ, which communicate with the fibrillæ of nerves. The fibrillæ of nerves, it would seem, pass into and through pyramidal cells, and then divide and subdivide, and communicate with the extremely fine network of fibres which form the so-called "neuroglia or connective-tissue," network, which Stilling, Henle, and others consider to be rudimentary nerve-structure. And if these pyramidal cells have—and they seem to have—fibres communicating with other adjoining and distant pyramidal cells, then some idea may be gathered of the mechanism regulating complex correlated and co-ordinated movements.

Further, if many of the fibrillæ going to these pyramidal cells be injured, and thus the means of communicating with the external world be lessened and disordered, then the power of perception, it would seem, must be more or less diminished and disorded also. Or the injury to these nerve-fibrillæ may be so extensive that the perception becomes so imperfect and distorted that it is obviously not a faithful reflex of the objects or actions exciting it. And if the injury be greater still, so that very few impressions ascending from the surrounding objects can reach the convolutions, then perception must be very imperfect,—there may be an illusion; or, the imperfect perception acting on memory, there is a delusion. For instance, the gas-flame burning in the chandelier is affirmed by the patient to be the sun, or stained spots on the sheet of his bed seem to him to be beetles.

When the convolutions can no longer receive impressions from external objects sufficient for immediate perception, memory remains, but its machinery may be in excessive activity; then idea follows idea—there are hallucinations.

I have recalled these particulars to show that there is in nerves and brain a mechanism which is the physical basis of mind; and increasing anatomical investigations appear to prove the truth of the views long taught by Locke, Helvetius, Condillac, and others, that mental states are derived from impressions or sensations. Everything which we know, said those philosophers, is the result of sensation—the effect produced by the external world. The attention we give to an object, said Condillac, is nothing but the sensation which that object excites. Memory is a transformed sensation.

If we examine further into the domain of mind, it becomes clear that not only do external impressions act on brain and produce the physical basis of mind, but they regulate movements of the body also. It is notorious that healthy persons every day manifest that most of their actions—some would say all their actions—are determined by feeling. Scores of illustrations might be mentioned, but it would be a waste of time to do so, for the fact is admitted. We are all well aware that healthy persons—those with ordinary healthy feeling—do generally act in a manner which avoids causing annoyance or injury. And this is done, seemingly, by some feeling, call it as we may, prudence or other, being stronger, determining the particular actions. Moreover, in a healthy person it would seem that no single feeling so strongly predominates that other feelings cannot come into action; consequently, conduct is determined not by one, but by many feelings, excited by many objects or events. Hence, a healthy person on the whole is led to do what is "right." And when but one or a very few feelings govern his conduct, it is common to say he acts from narrow views, and, in doing so, acts wrongly.

If we pass on to disease, which, as we all know, is only departure from or modification of health, we see still more strongly demonstrated that if any one feeling predominates greatly, it then dominates conduct and may lead to injurious actions.

In a case of hysteria, feeling of some or other kind is very active, excessive, and often uncontrollable. The patient betrays excessive sympathy for some things, and longs for persons to sympathise with her, to feel with her, to listen to her, to attend to her almost continually. And if the patient is excited to act by this feeling, she often exaggerates events greatly, and therefore represents them untruthfully. And the craving for the sympathy of others is so strong that she is led by her own feeling to act, as persons consider, deceitfully.

The patient will sit down to dinner and say she cannot eat anything, or very little. Seeing this, the mother or other person interested in her shows great anxiety for her to eat, begs her to do so; some censure, others pity her because she does not eat. All betray some great activity in feeling, which must, and evidently does, disturb the patient's own feeling still more, and her ideas consequently become more and more perverted, and the feeling and belief that she cannot eat increase. If this excessive activity in feeling continues, the patient may take less and less in the presence of her anxious friends, until they wonder what she lives on. Day by day, month by month, this feeling and perversion in ideas may be kept very active and be increased more and more. She eats still less, the body wastes extremely, and at last death itself may testify to her sincerity, and leave in our minds the conviction she was the victim of disease, and therefore could not act otherwise.

But patients suffering from hysteria rarely die from that complaint, and this happens because the excessive activity in feeling causes them in time much suffering. The feeling of sympathy that was pleasurable in a minor degree becomes very distressing in a greater degree. Sooner or later the patient longs for change, craves and solicits change. When some change is obtained, then if we trace the inability to eat further, it is seen that although the patient does not eat, and seemingly cannot eat, in the presence of her anxious friends or attendants, if she is able to get away from them, or nothing disturbs her feeling, she eats well or even ravenously. No persuasion on the mother's part can induce her to eat her dinner, but she will go out alone, or without her mother, into a confectioner's shop, and eat heartily. The old ways of thinking say at once it is very deceitful conduct. But the mother has watched the girl from childhood, and has seen all or most of her other acts, and knows that throughout her life the girl has generally acted faithfully. The mother therefore cannot, and does not, believe it is deceit; she thinks it is disease, or "miraculous." The acquaintances who know much less of the girl, and know nothing of the pathology of her condition, say the patient is a deceitful and untruthful person. If the case be followed further, it is seen that after much suffering on the part of the patient and friends, the girl is removed and placed under very different conditions, and her surroundings are altered. Then the old feeling diminishes and more healthy feeling is excited by the new surroundings; appetite returns, exaggerations, misrepresentations, and the supposed deceitful doings cease. But it is additionally instructive to notice that

if the old feeling be revived, as it commonly is, by letters, or by contact with those who excited it originally, the old actions return also.

Seeing from the above particulars of hysteria that whilst the great disturbance in feeling continues the patient's actions are injurious, but as soon as the changed conditions lessen the disturbance in feeling the patient's actions are altered and become more beneficial, do not the above facts therefore support the view that the disturbance in feeling caused the deceitful and injurious conduct?

If we inquire further, and in cases of more advanced disease, we then see only too clearly that great disturbance in feeling may be accompanied or followed by disorderly and injurious movements which the patient cannot prevent, or even by destructive acts. This is well illustrated in the early period of insanity. A patient thus suffering, and under my notice for many months, frequently complained of a very distressing feeling in her epigastric region; she said it was an "awful sensation." After this had continued awhile, she vomited and retched almost continuously for an hour or two. She had, seemingly, what Sir William Gull has termed a "mad stomach." But not only was the stomach thus affected, but at other times the intestine also, as shewn by diarrhœa. At other times she had a distressing sensation in her nose; and every morning immediately she got up her nose began, she said, to "run," and continued to do so for two or three hours, during which, she remarked, "I soak three or four handkerchiefs, and then it ceases." At other times there were flying pains in several parts of the body, more especially, perhaps, on one side of the face; and once I noticed there was increased redness also on the painful side. With these distressing sensations there were not only the above-mentioned involuntary muscular movements, but disturbance in ideas also. She said, "I cannot divest myself of the thought that every person I meet is going to die immediately." The patient has written me piteous letters, saying she had such dreadful sensations in her stomach, and such frightful thoughts, that unless something were sent to relieve her she must destroy herself. And cases have been recorded in which the epigastric sensation was so severe that it seemingly caused persons to kill themselves.

The current doctrine of the day says, If a person knows he is doing wrong, he can prevent himself doing wrong. But the particulars I have cited—and many more might be brought forward—teach that, when feeling is much disturbed, persons may know what they are doing, yet they cannot control their actions. A great disturbance in sensation produces, certainly is followed by, involuntary—that is, by uncontrollable—actions, such as vomiting, sneezing, diarrhœa, etc.; or it may produce acts which destroy the patient. And is it reasonable to conclude that if a person feels, in the sense a healthy man feels, he would, or could, kill himself? And when a healthy person says a criminal must be punished because he knew he was doing wrong, and therefore he should have controlled himself, does not the healthy man, in coming to this decision, reason on the assumption that the criminal felt as he (the healthy man) feels—that is, as he (the healthy man) assumes he would have felt and known under the circumstances? Do not the criminal's acts obviously in many cases refute that opinion? Do not his injurious outward actions indicate very disturbing changes within his brain? Do not his abnormal destructive acts indicate abnormal changes within his brain? His body, therefore, being different from that of a healthy man, must he not necessarily act differently? May we not go further, and contend that if his feelings are different he cannot know in the same way as a healthy man knows? Does not daily experience shew that, if a person is somewhat deaf, he comes to wrong conclusions as to what is said; if he tastes imperfectly, he mistakes what is placed on his tongue; if he sees imperfectly, his ideas of what he sees are not true to fact? Are we not by such and other instances led to ask, How can a man know rightly if his means of communicating with the external world are unhealthy? When, therefore, a criminal has lived for years—or, maybe, all his life—amongst surroundings very different from those around healthy, right-doing persons, must not the criminal's surroundings necessarily impress his nerve-communicators accordingly? And his nerves being thus made different, can he know or act like a healthy-feeling and right-doing person?

Do not the above particulars enable us to see that the moral and the physical are inseparable and correlated; that abnormality in the physical necessitates aberration in the moral; that healthy feeling and right doing, disorderly feeling and wrong-doing, are related as cause and effect?

In considering the above facts and opinions some persons might, as Boden did with Dr. Weir's treatise, contend that the data referred to are not only insufficient, but that the teaching of ages and of almost all countries, are completely antagonistic to the conclusions. But even if admitting that the evidence as yet adduced be insufficient, does it not in some degree show how mental actions and conduct should be examined?

Some persons hearing the above opinions, that feeling mostly governs conduct, and not knowledge of right and wrong, may contend that such views must diminish man's sense of his responsibility, and therewith promote evil doing. But may I not ask if the opposite teaching has sufficiently prevented evil doing? The priest and minister have taught the accepted doctrines, and adopted approved methods, yet have failed to prevent and cure the evil; the judge for ages has condemned, and the gaoler punished, and they have failed to prevent wrong-doing and crime. I do not contend for a moment that the action of the clergyman and the judge has not to some extent prevented, or even, in very many cases, cured wrong-doing, but simply that further and different proceedings are required. Are we not ourselves necessitated to inquire if the received doctrines are true, and the practices sufficient?—for do we not every day see that man is unable, that he certainly fails, to keep himself away from conditions which cause suffering, disease, and death? And so long as he fails are we not bound to inquire how and why he fails?

I am anxious to enlist the attention of these who take a view opposite to that I have advanced; the attention of those who consider that mind is an independent power, that man's will is free, and man's conduct governed by an unfettered will. But whilst holding that opinion, may not those persons be brought to see that whilst man's will has an independence it is yet dependent; whilst it has freedom, yet it cannot be altogether free?—for every action must have an antecedent, even if we are unable to trace it. And may we not usefully ask those who differ from us to search with us what are the antecedents of will? Further, may we not ask those who consider that man's moral faculty is derived from an immaterial—that is, supernatural—source, to consider with us whether, if man could be so developed and trained that he could feel and know the difficulties and sufferings of others as well as his own, he would not necessarily practise charity? If he could see the order in nature, feel and act accordingly, must he not necessarily act in an orderly manner and be truthful? If he could appreciate all the difficulties a wrong-doer has had to contend against, would not mercy be inseparable from his complete judgment?

If I again return to our own duty, are not we compelled to search for the antecedents of will?—for we see almost every day that man's will leads him amongst conditions which produce suffering and disease. The mother, relying on will, suffers disappointment and increasing pain because she thinks her child can, but will not, restrain his irritability and excitability. She fails to see that her own excessive feeling is one of the most powerful antecedents which prevents the child's will controlling his temper and movements.

A friend, relying on the doctrine of free will, thinks that a conscientious and intelligent young man should, by his will alone, control himself; overlooking that unfavourable external conditions may act, and increase some inherited or acquired disorderly actions in the young man's nervous centres, and render him incapable of controlling himself. A merchant, relying on his will, even when he is told that his health is failing, thinks he can prevent the surrounding conditions irritating and depressing his brain-actions more and more; and he continues to rely on his will until he becomes disabled, and even then his old habit of thought prevents him seeing that his failure was preventable.

In concluding these observations, I may here say that the common events of medical practice, as well as prevailing teaching, have led me to make these remarks. And they may be useful if they enlist the attention of members of the profession, who have very many opportunities of showing persons that their feeling must be healthy if they would act rightly, if they would protect themselves and do good to others. And at the present day, when education is exciting so much interest, we perhaps cannot sufficiently teach that it is not enough to educate persons, in the ordinary sense of the word—make them intelligent and know much; their feelings also must be trained healthily if they are to act properly.

ORIGINAL COMMUNICATIONS.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

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(*Continued from page* 597.)

V. The next point which I purpose to elucidate is the *influence of sex* on the production and fatality of nervous diseases. This is shown in my fifth and sixth tables, the former of which indicates the influence of sex on the mortality from nervous diseases altogether, and the latter the same for the *several* affections of the nervous system.

It appears from Table V. that the percentages for the deaths of *males* from *all* diseases of the nervous system have been very steady during the last twenty-five years. The highest point which was reached was 13·08, and this number actually occurs twice—viz., in the third and fifth lustra. The lowest point came to 12·62, and the mean average is 12·94. The highest discrepancy from the mean is 0·32; but if we exclude the first lustrum, in which the influence of cholera disturbed the ordinary death-rate, the mean average becomes 13·02, and the greatest discrepancy is reduced to 0·12.

For *females* the numbers are seen to be constantly lower than for males, but likewise very uniform. The highest point reached was 11·90, the lowest 11·07, and the mean average for

TABLE V.

Showing the influence of SEX on the Mortality from Diseases of the Nervous System in England and Wales.

	MALES.			FEMALES.		
	Deaths from Nervous Diseases.	Deaths from all Causes.	Per-centage.	Deaths from Nervous Diseases.	Deaths from all Causes.	Per-centage.
1847-51	129,196	1,023,926	12·62	110,684	1,000,421	11·07
1852-56	138,843	1,059,646	13·02	119,378	1,022,700	11·67
1857-61	145,413	1,100,671	13·08	126,384	1,067,416	11 84
1862-66	158,080	1,227,064	12·90	136,095	1,190,168	11·63
1867-71	165,591	1,275,707	13·08	142,809	1,201,026	11·90
Average Percentage of five Lustra			12·9			11·62

the five lustra amounted to 11·62. The greatest discrepancy amounted to 0·55; but if we exclude the first lustrum for the reason stated above, the mean average becomes 11·76, and the greatest discrepancy falls to 0·14.

It is therefore proved that *males are constantly more liable to die of nervous diseases than females*, and that the average preponderance of the stronger over the weaker sex amounts in this respect to nearly 1½ per cent. of the entire mortality from all causes.

Table VI. indicates the influence of sex upon the mortality from the *several* diseases of the nervous system, which I shall now consider *seriatim*.

1. *Cephalitis* is seen to be more fatal to males than to females, the mean average during the five lustra, from 1847 to 1871, being 3·73 for the former, and only 3·16 for the latter. It is also shown that the increased mortality from cephalitis, to which I have adverted previously, affected the male more than the female sex, inasmuch as the excess of the last over the first lustrum was 0·57 for males, and only 0·23 for females.

2. Contrary to what has been stated by all previous observers, the fatality of *apoplexy* appears to be only very slightly influenced by sex. It has come to be accepted almost as an established fact that males are greatly more liable to succumb to this disease than females; yet my table, which contains by far the largest number of consecutive cases that has ever been brought together, shows that the mean average for males is 8·32, and for females 8·40; the difference between the two sexes amounts therefore only to 0·08, showing a slightly greater liability of women than of men. Dr. Lidell,(a) who has extracted the deaths from apoplexy in the city of New York from the Annual Reports of the Metropolitan Board of Health of that city, has found a greater mortality for males than for females; but his cases are only a little over 1000, and extend over only three years, while mine amount in the aggregate to more than 200,000, and extend over twenty-five years. Nevertheless, I am ready to acknowledge that there may be differences in this respect between the English and the Americans, which it would be an interesting task to investigate.

With regard to decrease and increase of apoplexy as far as the *sexes* are concerned, it is seen that the mortality of *males* fell in the second and third lustra, and rose in the fourth and fifth—the excess of the last over the first lustrum being 0·66; while that of *females* fell very slightly in the second, remained stationary in the third, and likewise rose in the fourth and fifth—the excess of the last over the first lustrum amounting to 0·79. Apoplexy has therefore increased rather more in women than in men during the last decade.

3. *Paralysis* appears, like apoplexy, only slightly influenced by sex. The mean average is seen to be 8·26 for men, and 8·57 for women, showing an excess of 0·31 for the latter. It appears, however, that the influence of sex, slight as it is, in this case is in the process of being reversed, and that men are becoming more liable to succumb to that disease than are women; for while in the first lustrum the excess amounted to 0·68 on the side of women, this is seen to have gradually diminished, and ultimately disappeared altogether, inasmuch as in the last lustrum there has been an actual excess of 0·17 on the side of men. While paralysis,

(a) A Treatise on Apoplexy. New York, 1873, p. 30.

TABLE VI.

SHOWING THE INFLUENCE OF **SEX** ON THE MORTALITY FROM THE **Several Diseases** OF THE NERVOUS SYSTEM IN ENGLAND AND WALES.

MALES.

	Cephalitis.	Per-cent.	Apoplexy.	Per-cent.	Paralysis.	Per-cent.	Delirium Tremens	Per-cent.	Chorea.	Per-cent.	Epilepsy.	Per-cent.	Tetanus.	Per-cent.	Insanity.	Per-cent.	Convulsions.	Per-cent.	Disease, etc.	Per-cent.
1847-51	8,424	3·52	19,800	8·26	17,141	7·19	2,290	·96	68	·02	4,479	1·86	469	·19	1,223	·51	66,280	21·59	8,239	3·42
1852-56	9,808	3·80	20,756	8·06	20,169	7·81	2,217	·86	102	·03	5,441	2·10	442	·17	1,087	·42	69,070	26·80	9,743	3·77
1857-61	9,529	3·50	21,508	7·93	22,106	8·40	2,041	·75	82	·03	5,972	2·41	.	..	1,055	·38	71,132	26·17	12,815	4·71
1862-66	10,992	3·75	24,704	8·47	24,987	8·77	2,350	·80	93	·03	6,585	2·21	..	..	1,391	·47	73,966	25·25	14,802	5·07
1867-71	12,655	4·09	27,565	8·92	27,593	9·17	1,718	·55	123	·03	6,483	2·10	..	..	1,818	·59	72,781	23·58	16,060	5·20
Mean Average of five Lustra		3·73		8·32		8.26		·78		·03		2·13		·18		·47		25·87		4·43

FEMALES.

1847-51	7,541	3·14	19,521	8·21	18,834	7·87	298	·12	180	·07	4,188	1·74	194	·08	1,377	·57	51,711	21·59	6,840	2·85
1852-56	8,128	3·12	20,925	8·13	21,867	8·47	317	·12	214	·08	3,998	1·55	272	·10	1,325	·51	53,726	20·74	7,706	2·65
1857-61	7,721	2·84	22,106	8·13	23,621	8·69	284	·10	207	·07	5,717	2·10	..	..	1,394	·55	55,470	20·40	10,056	3·70
1862-66	8,816	3·01	24,987	8·57	25,754	8·84	283	·09	246	·07	5,774	1·96	..	..	1,569	·55	57,863	19·76	11,086	3·78
1867-71	10,423	3·37	27,593	9·00	27,792	9·00	230	·08	250	·08	5,805	1·87	..	..	2,043	·66	57,223	18·55	11,665	3·78
Mean Average of five Lustra		3·16		8·40		8·57		·10		·07		1·84		·09		·56		20·21		3·35

therefore, is altogether more frequent in either sex than it used to be, this greater prevalence is more marked for men, in whom the last lustrum shows an excess of 1·98 over the first, while the same for women only amounts to 1·13.

4. *Epilepsy.*—Men are shown to be more liable than women to die from the falling sickness, the mean average for the former being 2·13, against 1·84 for the latter. The minimum for males occurred in the first lustrum; in the second and third lustra a rise, and in the fourth and fifth a fall took place; and there is an excess of 0·27 of the last over the first lustrum. The greatest discrepancy is 0·28. In women, likewise, the first lustrum shows the minimum mortality. There was a fall in the second, a rise in the third, and further falls in the fourth and fifth lustra. There is an excess of 0·13 of the last over the first lustrum, and the greatest discrepancy amounts to 0·29.

5. *Chorea* is decidedly less fatal to males than females, the mean average being 0·03 for the former, and 0·07 for the latter —that is, a proportion of about two to one. The greatest discrepancy for both males and females amounts to 0·01.

6. *Delirium tremens* has by some observers been said to affect only men, not women. Table VI., however, shows that such is not the case, at least in this country, but that many women die of it, the proportion being of about one woman to eight men, the mean average being 0·78 and 0·10. For men there was a steady diminution during the first three lustra, a recrudescence in the fourth, and a further great fall in the fifth; and it is found that the mortality from this disease has diminished by 0·41 as between the first and last lustra. For women the first two lustra showed an identical percentage, viz., 0·12, after which there was a steady fall, the last number being 0·08.

7. *Tetanus* affects men more than women. In the ten years for which the numbers have been given the average was 0·18 for the former, and 0·09 for the latter—that is, two to one.

8. Women are more liable to *insanity* than men, the mean average for them being 0·56 against 0·47 for men, showing an excess of 0·09 for women. The smallest excess was in the first lustrum, viz., 0·06, and the largest in the third, viz., 0·17. In men insanity showed a decided fall during the second and third lustra, while in the fourth and fifth an even more decided rise took place, so that the last lustrum is 0·08 higher than the first. For women the variations have been less striking. There was a slight fall in the second lustrum, a slight rise in the third, the fourth proved to be identical with its predecessor, and the last showed a somewhat more considerable increase.

9. Infantile *eclampsia* or *convulsions* are perceptibly influenced by sex, being much more fatal to boys than to girls. The mean average for boys is seen to be 25·87, and for girls only 20·21, which gives an excess of 5·66 for the former. The influence of sex in this respect has, however, lately somewhat diminished, for while the excess for boys was 6 per cent. in the first lustrum, it has gradually fallen since then, and amounted only to 5 per cent. in the last.

10. *Disease of the brain, etc.*, shows throughout a larger death-rate for males than for females, and this difference between the two sexes has of late years become more marked; for while the mortality of males shows a decided rise in each lustrum, there was for females a fall in the second lustrum, a rise in the third and fourth, and the fifth has been identical with its predecessor. As this last rubric, however, contains a considerable variety of different diseases, it is impossible to draw any general conclusion from these numbers.

The following numbers are therefore obtained for the two sexes in the several diseases of the nervous system:—

	Males.	Females.
Cephalitis	3·73	3·16
Apoplexy	8·32	8·40
Paralysis	8·26	8·57
Delirium tremens	0·78	0·10
Chorea	0·03	0·07
Epilepsy	2·13	1·84
Tetanus	0·18	0·09
Insanity	0·47	0·56
Convulsions	25·87	20·21
Disease, etc.	4·43	3·35
	54·20	46·35

The mortality of males from the several diseases of the nervous system is therefore seen to amount to 54·20, and that of females to 46·35 of the entire number, being a difference of 8 per cent. The sum total gained is 100·55, showing an error of 0·55 which has to be attributed to mistakes of the compilers or printers of the Registrar-General's Reports. The excess of male over female mortality is made up chiefly by convulsions, and only to a slight extent by disease, epilepsy, tetanus, delirium tremens, and cephalitis. The excess of mortality for females

which is observed in apoplexy, paralysis, chorea, and insanity is too slight to counterbalance the far greater excess for males in the diseases mentioned before, for it amounts only to 0·54 in the aggregate; while the excess of males in convulsions and the other diseases just named amounts in the aggregate to 8·37.

(To be continued.)

OBJECTIONS TO THE USE OF SALICYLIC ACID IN THE TREATMENT OF SCARLET FEVER.

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That salicylic acid is powerfully antiseptic, anti-pyretic, and anti-rheumatic is, I think, placed by incontestable evidence beyond a doubt. It therefore has been, and at the present moment is being, employed in the treatment of a very large number of widely different diseases. Its advocates have, with no lack of enthusiasm, extolled its virtues in the treatment of acute rheumatism, ague, enteric fever, typhus, scarlatina, diphtheria, erysipelas, influenza, diarrhœa, dysentery, chronic gastric catarrh, phthisis, acute and chronic pneumonia, pulmonary gangrene, lymphangitis, lymphadenitis, cancer of the pylorus, diabetes, aphthæ, stomatitis, perimetritis, endometritis, parametritis, and other diseases.

When a remedy thus threatens to become a panacea for "all the ills that flesh is heir to" one may apprehend that its use is passing into abuse.

My own experience of salicylic acid has convinced me that although when administered internally it is undoubtedly powerful for good in some diseases, in others it is equally powerful for evil. The reasons which have induced me to test its value in scarlet fever, and the results which I have obtained from its use in that disease, I will now briefly record. I hope that thereby some may be deterred from administering it rashly, in the belief that it can do no harm; and that others who have met with unfavourable results may be induced to publish them. For it is most desirable that the proper limits of the applicability of this really valuable drug should be defined as soon and as clearly as possible.

The favourable results which I had already obtained by the internal administration of the sodium sulpho-carbolate in about 200 cases(a) made me very hopeful, when I read of the success which had attended the treatment of scarlet fever with salicylic acid by Dr. F. Weber, Dr. Julius Steinitz, and others, that the latter drug would prove to be a still better remedy in this disease. For in scarlet fever we have to contend with (1) a fever—probably a germ—poison: (2) an abnormally high temperature; and (3) a marked tendency to rheumatism. Theoretically, then, salicylic acid, which has been proved to be (1) antiseptic, (2) anti-pyretic, and (3) anti-rheumatic, should be almost an ideal remedy. The salicylate of soda has been recommended by some of the highest authorities on the subject as the least irritating form in which salicylic acid can be given. I therefore selected it as best suited for administration in this disease.

It has been employed by me in nine cases of scarlet fever, and the following analysis of these cases will sufficiently explain why the series is not more extended:—

In some of the milder cases only one dose of from thirty to sixty grains was given in the twenty-four hours; in the severe cases, two or three such doses were sometimes given in the same period.

Two of the patients were males; seven females. Their average age was 21·6 years. The average duration of the disease before the treatment was commenced was 3·1 days. Dating from the outset of the disease, convalescence, with normal temperature, commenced in one case on the fifth day, one on the sixth, one on the ninth, one on the tenth, two on the fifteenth, one on the twentieth, and one on the twenty-seventh. In only two very mild cases did the disease run its course without any complication.

Albuminuria occurred in five of the seven remaining cases; in two it was slight, in three it was severe, and in two of the latter it was very persistent. In one of these last two cases the albumen appeared and disappeared, at first, with the use and discontinuance of the drug. In all of the five cases the albuminuria came on after the medicine had been commenced, and salicylic acid had been detected in the urine. In five cases there was marked delirium, which in each case followed the administration of the salicylate of soda, and ceased when its effects passed off. In four cases rheumatism occurred. It is remarkable that whereas in one case the rheumatism had been present for some days before the salicylate was administered, and was evidently benefited by the drug, in the three remaining cases it was not present when the medicine was commenced, but came on during, and notwithstanding, its administration. In two cases severe pharyngitis and tonsillitis occurred. Epistaxis came on the day after the treatment was commenced in one case. Dropsy also occurred in one case.

Profuse perspiration followed the administration of the salicylate in every instance. The drug, as a rule, reduced both the temperature and the pulse. The effects of twenty-two separate doses were carefully tested by observations made every two hours, and with the following results:—The average fall of temperature was 1° Fahr. in six hours. This fall took place very gradually, being most marked in the first period of two hours, and gradually diminishing. Thus it was 0·5° Fahr. in the first period of two hours, 0·3° Fahr. in the second similar period, and 0·2° Fahr. in the third. The maximum fall when the drug took effect was 4·4° Fahr., and where it had no effect the greatest rise in six hours was 1·8° Fahr. The effect on the pulse was less marked, the average fall in the six hours being only five pulsations per minute. The maximum fall was sixteen pulsations. The reduction of both pulse and temperature was very temporary, and the duration of the fever was evidently lengthened rather than shortened by the treatment.

These cases contrast very strikingly and unfavourably in every respect with the fifty cases treated with the sodium sulpho-carbolate, an account of which I published in the *Medical Times and Gazette* of July 24, 1875.

The salicylate of soda employed by me was, I believe, free from any impurity which would account for the unfavourable results, and was the same as that employed by several of my colleagues in the Royal Infirmary with perfect success in the treatment of rheumatic fever and other diseases.

(a) For the first series of fifty cases see *Medical Times and Gazette*, July 24, 1875; or *London Medical Record*, January 15, 1876, p. 37.

The French Veterinary Schools.—The three *écoles* of Alfort, Lyon, and Toulouse receive 607 *internes* and 109 *externes*, and bring to the coffers of the State a sum of 422,000 fr., the product of the payments for the pupils and for attendance upon the sick animals sent for treatment. This sum, deducted from that provided in the Budget of 1877 (769,000 fr.) for the maintenance of these schools, leaves 347,000 fr. as their actual cost to the State.—*Lyon Méd.*, November 26.

Carbolic Spray in Bronchial Catarrh.—Dr. Moritz communicated to the St. Petersburg Medical Society the results of his trials of carbolic acid spray in various forms of bronchial catarrh, relating several examples of its utility. Since he had much to do with this spray he found that bronchial catarrh, to which he was formerly much subject, either ceased to appear or was soon cut short. In as small a room as possible he causes half a pound of a 2 per cent. solution of the acid to be sprayed per diem, the night being the time especially to be preferred. —*St. Petersburg Med. Woch.*, November 11.

German Universities in the Summer Session of 1875-76.—Leipzic is the University which counts the largest number of matriculated students—viz., 2730,—that of Berlin only being 1977; to this last must be added a large number of auditors in the various courses of lectures, making a total of 3666 persons attending. The total number of attendants on lectures at Leipzic was 2803. The teaching body at Berlin consisted of 193 professors, and at Leipzic of 155. The Munich University is third in rank, with 1158 auditors and 116 professors. Next come Göttingen, with 1059 auditors and 119 professors; Tübingen, with 1025 auditors and 86 professors; Würzburg, with 990 auditors and 66 professors; and Halle, with 902 auditors and 96 professors. Rostock occupies the lowest place, with 141 auditors and 36 professors. The number of students in the medical faculties were—at Würzburg 527, Leipzic 378, Munich 347, Berlin 260, and Rostock 29. At Vienna the auditors were 3581, and the professors 247; at Dorpat 844 and 65, at Gräz 804 and 88, at Innspruck 570 and 67, at Zurich 365 and 78, at Berne 351 and 74, and at Basle 236 and 64.—*Progrès Méd.*, Nov. 11.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

THROMBOSIS OF VERTEBRAL AND BASILAR ARTERIES.

(Under the care of Dr. DUFFIN.)

[For notes of this case we are indebted to Mr. Nester J. C. Tirard, M.R.C.S., House-Physician.]

D. B., aged thirty-five, a billiard-marker, was admitted on August 8, 1876. He had been very intemperate. No syphilitic history to be obtained; no gout or rheumatism. The patient stated that his illness had commenced eighteen months previously, with headache and a feeling as of "pins and needles" in his right hand. Subsequently his right leg was affected in the same way. Later he lost motor power in both legs. From the beginning until the time of admission he had kept to his bed.

On admission he was found to be drowsy and stupid. He could not stand; could move his legs, but only to a slight extent. There was impaired sensibility in both legs, especially the right. There was diminished grasping power in the right hand. Speech was hesitating; articulation imperfect. There was no sign of heart disease. Pulse full and incompressible. Urine was free from albumen. His temperature was 96·4° Fahr.

On September 30 it was noticed that he slept with the right side of his mouth closed, the left being open. From that time he became more drowsy, was very emotional, and took his food badly, having to be fed with a spoon, and even then choking at times. Food did not regurgitate through the nose. Tonic rigidity appeared in both arms on forcibly flexing or extending them. He had retention of urine, and passed his fæces unconsciously.

On October 23, at 10 p.m., his breathing became suddenly laboured, being 75 to the minute; temperature 104·8°; pulse 144, very weak. Face flushed.

On October 24, at 1 a.m., the temperature was 104·4°; pulse 156; respirations 86. He was quite unconscious. At 10 a.m. his respirations were found to be 105 to the minute; temperature 104·8°; pulse imperceptible; heart's sounds inaudible. He died at 4.10 p.m., his temperature being 105° just previous to his death, and his respirations still 105.

At the post-mortem the dura mater was found to be slightly thickened, the veins of the pia mater were distended, and following the course of these some serum was found, giving an opaque appearance. There was a large amount of subarachnoid fluid. On removing the brain the vertebral artery on the left side was found to be occluded by a round, firm white plug of fibrin. The artery on the right side contained a similar but elongated plug about a quarter of an inch long. The plug in the left vertebral was quite adherent, and evidently the older of the two. The vessel bulged out a little where the plug was situated. There were some small spots of calcification in the walls of the vessel near the plug. The plug in the right vertebral was also adherent, but there was no naked-eye appearance of change in the walls of the vessel beyond, as in the other. The basilar artery was filled by a recent dark clot, which extended to the junction of the posterior communicating arteries. The brain was somewhat firmer than usual. The grey matter was narrow and sharply defined. Nothing abnormal found to naked-eye observation in pons, medulla, thalami, or corpora striata. The lateral ventricles were large, and contained several ounces of serum, and the veins of Galen were distended. The heart was large and fatty; the right ventricle filled by a partly decolorised clot; the left ventricle and its valves normal. The aorta was very atheromatous five inches above the semilunar valves, and contained many calcareous plates. The lungs were congested.

Remarks.—The insidious onset and ill-defined character of the sensory and motor troubles, the impaired articulation and difficulty in swallowing, led to the diagnosis in this case of some form of bulbar disease. It is true that there were no naked-eye changes observed post-mortem in the pons or medulla; but this is often the case. Extensive degenerative changes may exist in the motor nuclei, only to be made out microscopically, without any coarse disease being obvious, except perhaps a little induration. From the changes found in the vertebral arteries, especially the left, there must have been imperfect blood-supply for some time. Whether the clotting in these vessels was due to embolism or thrombosis is difficult to say. The condition of the aorta five inches above the semilunar valves was enough to give rise to emboli in abundance, but it is not common for the vertebral to be plugged in this way, and the middle cerebral to escape. Thrombosis seems more likely, especially as there was some atheroma and calcification in the walls of the left vertebral. It appears likely that the cause of the patient's final symptoms was extension of the thrombosis along the basilar. The case is especially recorded because of the extreme frequency of the respirations, which ultimately reached 105. The respiratory centre has been located in the calamus scriptorius; the stimulus to the respiratory centre appears to be the presence of imperfectly oxygenated blood, which excites to increased inspiratory movements. It seems probable that the actual cutting off of blood-supply to the respiratory centre which would follow on thrombosis of the basilar might also act as a stimulus in the same way. The occurrence of œdema of the membranes and effusion into the ventricles is very difficult indeed to explain. There was no obstruction to the venous return to be made out, although the veins of Galen were distended.

TWO CASES OF MEMBRANOUS OPHTHALMIA.

MIDDLESEX HOSPITAL.

Case 1.—*Membranous Ophthalmia—Ulceration of Corneæ—Broncho-Pneumonia.*

(Under the care of Dr. SIDNEY COUPLAND.)

[For notes of this case we are indebted to Mr. E. H. Lendon, M.A., M.R.C.S., House-Physician.]

A. T., a boy, aged eleven months, was admitted September 16, 1876.

His brother, when three weeks old, had lost both eyes from some inflammation, in which, according to the mother's account, "skin formed," as in this child's case. Rest of the family healthy. This child still suckled; has had no illness before the present trouble.

September 11.—He was cross, and was thought to have caught cold.

12th.—His eyes were red, and began to run; his breathing was bad.

16th.—When admitted, the boy's lips were blue; he had crepitation at both lower backs—recession at the epigastrium. Respirations 80; pulse 168; temperature 101·4°. There was a thick white membrane on both eyelids of both eyes, which, when stripped off, left a red, swollen, bleeding surface. The ocular conjunctivæ were free from membrane, but were deeply injected; the corneæ were clear. There was an ichorous discharge from the nostrils, but no membrane to be seen anywhere except on the eyelids. An emetic was given to the child, which acted freely; he was then put on carbonate of ammonia, half a grain every two hours. The membrane was scraped off the eyelids, and nitrate of silver (twenty grains to the ounce) applied.

17th.—Chest signs as yesterday. Fresh membrane has formed on the eyelids, but it is not so thick as before. Corneæ clear.

Up to September 21 chest signs varied very little. Temperature ranged from 100° to 102°. Fresh membrane continued to re-form on the eyelids. It was quite thick and coherent, and was stripped off, leaving, as at first, a red, bleeding, swollen surface.

22nd.—The corneæ for the first time were found becoming opaque. There was no membrane on them, or, indeed, on any part of the eyeballs, though there was abundant membrane on the eyelids.

25th.—The corneæ have ulcerated through, and there is a staphyloma of the iris on each side.

27th.—Child's general condition much worse: restless; tallowy; respirations very shallow; evening temperature 104°. There is still fresh formation of membrane on the eyelids.

28th.—Died at 5 a.m.

Post-mortem.—The eyelids are sodden and white, but there is no membrane on them as during life. Both corneæ are quite opaque and perforated. Through the right the lens protruded when the eyelids were separated. Through the left there is

a prolapse of the iris. There is no membrane on the fauces or larynx. Bronchitis and collapse of left lung. Pneumonia of lower two-thirds of right lung, with some dry pleurisy. Other viscera healthy.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

Case 2.—Membranous Ophthalmia, confined to One Eye.

(Under the care of Dr. BARLOW.)

E. W., A GIRL, aged seven, was brought as an out-patient on October 31. Nobody had been ill in the house. She was the only child. She had not had measles or scarlet fever. For more than a week she had had a poor appetite, and looked "out of sorts." There was nothing else definite except that her father thought she had a stye on her right upper eyelid, and that the eye had become sore. The child was pale, and had a slightly furred tongue, but there were no other general symptoms. The right upper eyelid was red and swollen, and at the outer corner was a little moist; but there was no definite "stye." The Meibomian glands, however, for the outer two-thirds of the upper eyelids were swollen, and showed little white spots. Nothing could be stripped from them. On everting the upper eyelid, which it was not very easy to do on account of its swelling, there was some thin coherent membrane, easily stripped off, leaving a very bright red surface. This surface did not bleed, but seemed ready to do so with the least violence. Immediately to the right of the cornea there was a curious wedge-shaped area, not at all like ordinary chemosis, but giving the impression of a circumscribed exudation into the layers of the conjunctiva. There was nothing to strip off; there were some injected conjunctival vessels going over it. The inner part of the conjunctiva was natural. The lower eyelid was natural. There appeared, therefore, to have been some inflammation of the Meibomian glands, followed by membranous exudation *on* the upper palpebral conjunctiva, and some exudation *into* the ocular conjunctiva; but no false membrane formed in any other part of the body.

Mr. Nettleship, to whom the case was sent for an opinion, had seen a similar one a few weeks before, where membranous exudation followed some inflammation of the Meibomian glands. He recommended chloride of zinc lotion (two grains to the ounce). This was applied four times a day. No fresh membrane formed, and in three weeks' time the swelling of the eyelids had gone down, and all that was left on the eye was a little conjunctival injection.

Remarks.—It appears better for the present to designate these cases by the provisional name of "membranous ophthalmia," which leaves the question of their affinity with the acute specific disease known as diphtheria an open point. As Trousseau has pointed out, in order to say that two given cases are examples of the same disease, it is by no means sufficient that there should be the same morbid appearances; we must know that they have a common cause. We should be disposed to restrict the use of the term diphtheritic ophthalmia to cases either where we are able to trace contagion from a typical pharyngo-laryngeal form, or in sporadic cases only where membrane occurs on other mucous surfaces as well as the conjunctivæ, and where the disease runs an acute course or is followed by paralytic sequelæ. In the *Ophthalmic Hospital Reports* for 1873, Mr. Mason, of Bath, gives a valuable record of a child in whom membrane formed on the lids after measles. Subsequently, membrane also formed on the mucous membrane of the gums and on the frænum linguæ. Membrane continued to re-form on the eyelids for several months, and there was destruction of both eyeballs. This case obviously has nothing in common with the acute specific disease diphtheria, except the formation of membrane. In the second case above recorded it is clear that the disease was almost solely a local affair. In the first, although no rash was observed, and no subsequent case of measles occurred in the ward, the association of coryza, ophthalmia, and bronchitis suggests the possibility of measles-poison being at the bottom of it. Whatever the affinities of the disease, the clinical history corresponds very closely in many ways with the admirable account given by M. Sanné in a book just published on Diphtheria.(a) The essential points are that, as a rule, membrane first forms on the palpebral conjunctiva, and of the two the upper lid is affected before the lower. Very often membrane does *not* form on the eyeball, but ulceration of the cornea, etc., often takes place from interference with vascular supply of the front of the eyeball, due to the infiltration of the eyelids. There is an account of the disease in Mr. Bader's book, where diphtheritic and membranous ophthalmia are separated, though, as far as we can understand, mainly on the ground of greater or less severity. In the *Medical Times and Gazette*, September 18, 1875, there is a record by Mr. Nettleship of four cases occurring in his practice.

(a) Sanné, "Traité de la Diphthérie."

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Medical Times and Gazette.

SATURDAY, DECEMBER 2, 1876.

ANTI-VIVISECTION AGITATION.

SOME time ago we had occasion to comment on a few of the utterances of an obscure portion of the population, who have assumed to themselves the function of criticising the actions of scientific men with regard to vivisection. For some months the existence of a more popular agitation, based on more certain evidence, has caused the tender-hearted protectors of animals from imaginary cruelties to direct their attention to other topics; but recently a depression in the Eastern atrocity market has again allowed the minds of the hyperæsthetic to settle down upon the question of what they call "the torture of the lower animals." Everyone is aware of the wide-spread existence of that infantile type of intellect which resembles the juvenile physical type in its ardent desire for a rattle. For many months the favourite rattle of this amiable portion of the community was a smudgy toy constructed against the principle of the Contagious Diseases Acts, which in course of time became too black for public exhibition, and gave place to admit of the reappearance of the anti-vaccination rattle. This toy, however, wanted the recommendation of novelty, and was not in great demand except amongst capricious boards of guardians, who were sunk in such geographical and mental obscurity as to require a miracle or a *mandamus* to bring them into public notice; but the eighty-one-ton rattle, so to speak, of modern times has undoubtedly been that employed by agitators against vivisection, which, however, in keeping with the analogy drawn from the progress of artillery, sank for a time into oblivion to make way for the two-hundred-ton toy of the Bulgarian atrocities.

Leaving this line of illustration to be followed up by sociologists, we come to speak of the revival of the crusade against vivisection which has burst upon the capital, and made its first appearance in the neighbourhood of Kennington. This eruption occurred in the Horns Assembly Rooms, and was inaugurated by a few volcanic utterances by a Rev. Dr. F. G. Lee. Unfortunately the press has not taken much notice of this social crisis, but sufficient intelligence has been recorded to enable us to judge that the hysterical part of the population have not wasted so much of their hyperæsthesia on the foreign Bashi-Bazouks, that they have none to spare for those whom they believe to exist in hospitals and laboratories at home. It seems that there is an International Society for the Total Suppression of Vivisection, whose aim is said by Dr. Lee to be a very definite one. To this, of course, there can be no objection, but the method in which this reverend gentleman tries to propagate his views is open to the most decided and emphatic criticism. His words alone stand up as sufficient evidence against him. We quote them from the *Daily News*:—"Give the right to torture animals, and the torture of man would follow; and there were already some rather disagreeable rumours of what was done in hospitals. He could speak of two facts which he could not relate in a public meeting, but he would give the names, dates, and places in private."

Were it not for the wide-spread public element which is thrown into a ferment by such covert insinuations to the detriment not of the interests of agitators, but to the prejudice of the best interests of the poor who are benefited by finely organised hospitals, the medical profession could readily afford to laugh at such insinuations; but when legislators avow that they are and must be influenced by the current of public opinion, which is originated and augmented by such statements, they demand public reprehension. Nothing could be more liable to instil a spirit of strong prejudice in the minds of the ignorant than such a form of agitation. The speaker insinuates that in a hospital or hospitals things have been done to patients which are too awful to be told to a public meeting. Has Dr. Lee communicated with the governing bodies of the hospital or hospitals about his alleged facts? Has he written to the medical journals about "facts," which, if they are of the nature which he cunningly ascribes to them, would at once meet with general disapproval, and lead to condign punishment? Apparently he has not; and still he finds it compatible with the character of his profession to hint at things too horrible to mention, in such a way as to prejudice the minds of the poor against the administration of hospitals, where alone they can secure proper maintenance and medical treatment during the hours of their greatest need. We cannot think that a man presumably devoted to the teaching of the highest doctrines would "by such ambiguous giving out," or "by pronouncing of some doubtful phrase, as 'Well, we know,' or 'We could, an' if we would,' or 'If we list to speak,' or 'There be, an' if there might'"—cause unspeakable injury to the interests of the poor for the sake of producing by the same stroke a trivial injury to the feelings of the medical officials of hospitals. Of the other proceedings at this meeting we have little to say, except that it is amusing to find in the wording of resolutions and speeches how completely the speakers seem to ignore the fact that a Royal Commission has entered into the question, and that in the Evidence and Report published by the Commission they are almost completely answered in the most convincing manner. If they cannot be convinced by such evidence it is only because they are actuated by an admiration—not of the truth, but of their favourite social rattle.

THE MAINTENANCE OF SCHOOL DISCIPLINE.

The "death from fright" which we recorded in our issue of last week opens up a subject, the importance of which is far beyond the mere school question of keeping order and quiet. Compulsory education is of too recent a date to be either wholly acceptable to, or fully appreciated by, the classes which it most nearly touches and concerns; hence the necessity, not only of discretion in enforcing, but also of care in imparting this education. There are, no doubt, great hardships connected with the carrying out of the Act of Parliament, and if, in addition to these, which are in part unavoidable, should be added others which result from want of wisdom in management, and which can be avoided, the whole scheme will, practically, be a failure. We can well understand that the task of keeping order is no easy one: we are well aware that in every school there will be found some unruly pupils, and even one or two thoroughly incorrigible ones, almost beyond the reach of correction. Unfortunately, these are not the subjects who are put into dark cupboards; the teachers well know that such punishment would be simply useless, and therefore adopt others which appeal more directly to the feelings. It is the small timid children, generally, who are in danger of being subjected to the so-called milder means of "black holes and dark cupboards."

Those who have much to do with children's hospitals are quite familiar with cases in which disease has been brought on by sudden or prolonged fright, and the screams which follow. Many cases of hernia in children are directly due to screaming, and the straining of the abdominal muscles which this gives rise to; just in the same way as straining efforts in adults are, in eight cases out of ten, the immediate cause of hernia with them. Mothers, when bringing their children to the hospital, frequently assign fright as the cause of St. Vitus' dance, and, with our present views as to the pathology of the disease, we concur in their opinion. Indeed, not a few cases have come under our own observation in which sudden fright has undoubtedly been the immediate cause of severe chorea. Some of these cases have been the result of shutting up children in dark cupboards, and one at least by a School Board teacher. Other cases resulted from sudden fright in the streets. A cab-horse dashing into a large shop-front was assigned as the cause of one severe case. One child was frightened by a little savage cur running after it; another was butted by a goat. Cases of so-called idiopathic anæmia have also been known to follow shortly after a severe fright; but we are not prepared to say that they were caused by the fright.

We simply mention these cases to show the great danger which sometimes attends such accidents, and we especially draw the attention of our London School Board to this fact, seeing that the evidence brought forward at the inquest before Mr. Payne, if not absolutely conclusive, was at all events next door to it. It strongly suggested that shutting up children in cupboards was not at all an uncommon practice; and if so, the death of this child, though not traceable to the individual who inflicted the punishment, must nevertheless henceforward weigh somewhat on his or her conscience; and will, we trust, be a lesson and a warning to all those who are engaged in tuition, to abstain from such a thoughtless, cruel, and dangerous practice for the future. Nor should the lesson be lost on others; and especially should the school authorities take it to heart, and absolutely forbid any such punishment. Compulsory education will never become popular as long as circumstances occur which lead to inquests and to an open verdict such as was returned last week. One such case, even though not fully supported by facts, will produce a prejudice among the poor and ignorant which years of successful teaching may fail to remove. As we have already said, there are always incorrigible children on whom punishment seems to produce no effect; but there are also teachers whose temperaments and habits of mind render them utterly unfit for the office of teaching and training the young. In no other capacity of life is self-control so much needed as in a school for young

children; in none are unwearying patience and gentleness, combined with firmness, more important. In teaching the young untutored mind the greatest of all lessons—the necessity of controlling itself—there is no power so strong as the example of a teacher who never fails in self-control. The measure of fitness of a teacher for his or her duties may best and most appropriately be gauged by the order and discipline maintained in school without the necessity of corporal or other punishments. That order can be maintained without the rod or its equivalent has long since been practically demonstrated, and therefore we abstain from further remark on this subject. We think that the life of a school-teacher is an exceedingly arduous one, and one which ought to command not only good remuneration, but also long holidays. Nothing tends more strongly to try the temper and harass the mind than confinement in schoolrooms, where, even in those which are best and most efficiently built, the air is far from being fresh and pure. Let the School Board officers bear this in mind while on their autumn tours in Switzerland or in Scotland; and while spending the enormous funds over which they have command let them bear in mind that there are, or should be, still higher and more worthy aims than the erection of Gothic school-buildings, or the forced attendance of the largest possible number of what would otherwise be truant children. Nothing will so well repay outlay as engaging experienced and well-tried teachers; they ought to be well paid, and ought to have an opportunity of getting into the country or to the seaside at least once every year.

We should be glad to see a medical element on the School Board. We think it could not fail to add considerably to their influence if they had medical men to advise them on many matters in which special knowledge is required, as for the settlement of many questions respecting the fitness of schoolhouses for occupation, the attendance of children coming from districts which are known to be infectious, and many other matters of a like kind.

In conclusion, although the jury were unable to fix on the individual who shut up this little girl aged four, they agreed that its death was accelerated by fright. It only remains, therefore, for the school authorities to sift the matter thoroughly, and not to rest until they have discovered the delinquent, or proved that the alleged shutting up was untrue.

THE RELATION OF ALGOUS VEGETATION TO MALARIA.

The microscopical investigation by Dr. Lanzi, of Rome, of the fauna and flora of the marshes in the Roman Campagna, and of those of the Pontine Marshes, has led to the discovery of a peculiar alteration which the algæ undergo in these localities. Dark granules are found embedded in the endochrome or the chlorophyll of the algæ cells; and as the algæ die these granules become more and more abundant, until they completely fill the cells, and the algæ no longer appear green under the microscope, but black, while at the same time they pass over into a state of putrefaction. This process, which Signor Lanzi has carefully watched in his aquaria, occurs every year on a large scale in the Roman Campagna. The swamps which form during the winter are covered in the spring with a very abundant growth of algæ. In the summer, when the water dries, large surfaces of country are covered with a continuous layer of decaying algæ. In the autumn they die and decay also on the surface of any water that still remains, and everywhere the microscope reveals in their *débris* the existence of the above-mentioned dark-coloured granules. According to Lanzi's view, these granules possess the properties of a ferment. They are found abundantly disseminated in the dust of the Roman Campagna, or can be freely developed out of it by cultivation. Lanzi considers that they are identical with the pigmented spherobacteria of Cohn and the *Bacteridium brunneum* of Schroeter. Now, the pigment-granules which are found in the liver and spleen of persons suffering from malarial cachexia are identical in their properties with those which develope out of decaying algæ; and Lanzi strongly maintains the identity of the so-called "malaria melanine" of pathologists with the vegetable granules. He has succeeded, indeed, in growing zoöglœa-like vegetation from the pigment of malarial livers. The great carrier of these granules appears to be the wind, which disseminates them with the dust throughout the atmosphere of the Campagna district.

Signor Terrigi, who assisted Dr. Lanzi in his microscopical observations, made use of special apparatus to determine the vertical elevation above the surface of the ground which the granules can reach, and he found it to be about fifty centimetres—a height at which the wind could easily take them up. The remedial measures which Signor Lanzi suggests to subdue the malaria of the Roman Campagna consist in drawing off the water from the larger swamps, in draining wet land, in planting trees, and in adopting a system of scientific agriculture.

The *Eucalyptus globulus* appears not likely to answer the expectations which were at first formed of it, for it can only live in specially sheltered situations, and is not hardy enough to grow indifferently in any part of the Campagna.

THE WEEK.

TOPICS OF THE DAY.

The attendance at the last two free lectures given in connexion with the Loan Collection of Scientific Apparatus at South Kensington shows that the interest taken in them is by no means decreasing. At each of them the numbers present have been over 400, in spite of the disagreeable weather. The last free Saturday lecture was delivered by Dr. Lauder Brunton, F.R.S., the subject chosen being Digestion. This was illustrated by some of the models and chemical apparatus in the collection; in fact, each statement was, as far as possible, demonstrated to render it comprehensible to the audience. The "artificial stomach" lent to the Collection by Warmbrum and Quilitz was shown, and the way in which the chemical part of digestion is imitated was explained. Although Dr. Brunton did not profess to bring forward any new scientific facts on the occasion, his lecture proved highly interesting from the way in which so much of it was illustrated by experiment. A few years ago such a lecture would have been an impossibility.

At the annual meeting of the subscribers to the Guest Hospital, Dudley, held last week, a scheme was adopted for applying the income to be derived from the investment of £2350 given by the family of the late Mr. Alexander Bredie Cochrane for the benefit of poor convalescents. The money is to be vested in trustees, and the income to be devoted to the welfare of four patients in the Guest Hospital, the attendance of deserving nurses to improve their health, and the contribution or subscription of sums of money.

At the first ordinary meeting of the Statistical Society for the present session, the President, Mr. James Heywood, F.R.S., announced that six essays were sent in to compete for the Howard Medal this year on the subject of the "Mortality of Hospitals (General and Special) in the United Kingdom, in times past and present," and the referees have decided that the highest commendation is due to Dr. Steele, Superintendent of Guy's Hospital, to whom the Council have consequently agreed that the prize (with £20) should be awarded. In 1861 Dr. Steele contributed to the Statistical Society a numerical analysis of the patients treated in Guy's Hospital from 1854 to 1861; he is also the author of papers on the Vital Statistics

of Guy's Hospital, on Hospital Dietaries, and on Nursing and Nursing Institutions.

It was stated that at Burnley last week, within forty-eight hours, twenty-one fresh cases of small-pox were reported. On Saturday week there was a wedding-party at a public-house in the town, where there was a case of small-pox which had been kept secret. Nine of the wedding-party are now suffering from the disease.

The Thames Conservancy Board have obtained a summons against the Hampton Wick Local Board for non-compliance with a notice to discontinue the flow of sewage from the district into the river Thames. The penalties claimed amount to £122,300. These proceedings are looked upon as somewhat harsh, seeing that the members of the Hampton Wick Local Board are the movers in a combined scheme of drainage, which it is confidently expected will shortly be carried into effect.

If any testimony were required to substantiate the necessity for the Commission on Noxious Vapours, a recent article in the *Newcastle Courant* would convince the most sceptical of the dire effects to which the neighbouring country is exposed from the fumes of chemical and other manufactories on the banks of the Tyne. It appears that at Hebburn and Dunston, down to the year 1840, thick hawthorn hedges flourished where even the grass is now completely destroyed; that land, which formerly let for 25s. per acre, can hardly be let now for 10s., or even 7s., notwithstanding that at one time it produced some of the finest crops of wheat grown on Tyneside. Even the cattle dislike herbage grown on the land, it having no nourishing effect, and producing diarrhœa in the animals grazing on it. So terribly destructive are the alkali fumes, that in 1868, on the Ravensworth estate, 500 trees, each of a growth of sixty years, were marked off which had been killed or hopelessly injured by the gases from the works three or four miles away. It is said that proprietors and tenants have a remedy against the manufacturers; but when the name of the latter is legion, it is impossible to bring the offence home to one particular offender, and more than one case at law has resulted in expense and disappointment, because the courts have been unable to assess the damages against any particular manufacturer. It was mentioned before the Commission that an open window, although common enough in Carlisle and Alnwick, is rarely seen in Newcastle; which implies that the inhabitants of the latter town prefer to live in cloac rooms and breathe impure air rather than inhale the poisonous gases which are given off from every kind of manufactory. It was further stated that these obnoxious gases are of value to the manufacturers, and their loss is attributed to careless workmen and insufficient inspection. If the Commission have received corroborating evidence from other localities, it would seem that one of the first Acts of the forthcoming Parliament should be directed to the amelioration or removal of such a lamentable state of things.

At Guildhall, last week, Benjamin Smithkin, a farmer at Dumbledon, in Gloucestershire, was summoned for sending unwholesome beef to the London market. The defendant told the inspector that some time ago the animal met with an accident, and being lame it was put in a stall and fed upon oil-cake to fatten it, but that, as it was thoroughly ill, he had it drenched with medicine some four days before it was killed. On the morning it was slaughtered a butcher was sent for, who pronounced it fit for market, and it was accordingly sent. The butcher's excuse for giving such an opinion was that he had not been told the animal had been drenched. The defendant was fined £20 and £5 costs, and the butcher, being considered much to blame, was refused his expenses. W. H. Wood, a butcher, of Alpiston, Sussex, was then charged with a similar offence. He had bought an ox suffering from some wasting disease, killed and dressed it, and sent it up to London for sale as human food. The meat was found to be wet, emaciated, diseased, and smelling strongly of physic. The carcase was sent to the salesman without any tally on it to tell where it came from. Alderman Figgins fined the defendant £10 and £3 costs.

A meeting was recently held at the Society of Arts, at which it was resolved to call for next month in London a meeting of commanding and medical officers of volunteers, to consider a proposal for drilling a certain number of men in each volunteer regiment, or establishing a special corps in centres like London, for the duty of conveying wounded and sick men from the field of battle to the field hospital. It was stated that the number of men trained for this duty in the regular army is far from being large enough to afford any help to the volunteers in the case of emergency, and that the responses to a circular issued by the Provisional Committee showed a very strong feeling in favour of the course proposed. Dr. Sandford Moore, Surgeon Army Medical Department, Dr. Harvey Hill, Dr. Corrie Jackson, Dr. Milner, Dr. Halsham, Dr. Lacey, Major Burgess, and Mr. A. Macluro were among those present at the meeting, and it was stated that the 36th Middlesex have already taken steps to train men for carrying the sick and wounded men out of action.

Our contemporary the *Medical Press* states that the Conference Committee appointed by the University of Dublin and the Colleges of Surgeons and Physicians of Ireland have approved of a scheme for a Conjoint Examination. The University is to make the examination compulsory on its medical graduates, and to be content with a share in the Arts examination, and a reduction in the lectures on Anatomy, Physiology, and Surgery to two courses each; with, however, an *equivalent increase of fee to compensate the professors*. The scheme has still to be submitted to the Fellows of the Colleges; and it will be observed that it does not include either the Queen's University in Ireland or the Apothecaries' Hall.

We think it right still to abstain from commenting on the disastrous outbreaks of scurvy that occurred among the sledging parties of the Arctic Expedition. One of our contemporaries has lately positively stated, on what seemed very good evidence, that the attack of the disease may be directly attributed to, or connected with, two causes—viz., the excessive weight of the loads the men had to draw, and the extremely deficient provision and use of lime-juice. It has, however, been as positively denied by Mr. Clements Markham that either of the alleged causes existed; and it appears to us, therefore, only just to wait for an authoritative statement, which must come, and ought to come without delay, from the Admiralty, of all the facts affecting the sledging expedition before we express any judgment on the matter.

HYDROPHOBIA IN GLASGOW.

THERE have recently occurred in Glasgow three cases of hydrophobia, which have given rise to a good deal of excitement, and which were the subject of discussion at a recent meeting of the Medico-Chirurgical Society of that city. The first case was narrated by Dr. M. Charteris, under whose care at the Royal Infirmary the patient came; this was on October 16. The patient, aged about fifty-six years, whilst going to his work, three months and a half prior to admission, was bitten by a dog on the hand. The wound bled, and, after some time, healed without causing any uneasiness. Nothing more was thought about it until the patient read an account of a case of hydrophobia in the newspapers, after which he became alarmed, did not sleep, and lost appetite. He also complained of a stinging pain in the wound, and on washing himself with cold water he was seized with spasms. When admitted into the hospital he was a good deal excited, and as the case progressed he became very sensitive. The

least breath of air caused spasms of the muscles of the pharynx and larynx. He then became maniacal, and was put in a strait jacket. Vomiting set in, the prostration became extreme, and at 11 a.m. on the day after admission he died. The treatment consisted in giving atropine injections and beef-tea enemata. As a last resort, and about two hours before death, two ounces of warm water were injected into the median basilic vein. In tretaing another case of hydrophobia, Dr. Charteris proposed to bleed the patient to syncope, and then transfuse healthy blood.

The second case narrated was admitted into the Glasgow Royal Infirmary two weeks previous to the preceding case, and was under the care of Dr. James Dunlop. The patient was bitten by a dog between the finger and thumb. The premonitory symptoms set in after reading the account of a similar case in the newspapers, and were accompanied by itching of the wound. On admission the patient was much agitated, and there was marked difficulty in swallowing. When asked why he could not swallow, he replied that his tongue adhered to his palate. He could, however, swallow water out of a spoon. After deglutition he invariably drew a long sighing inspiration. The least breath of air upon the face caused spasms of the facial and pharyngeal muscles. The patient became at one time maniacal. Two pustules were observed underneath his tongue. The pupils (as in the preceding case) were widely dilated. Latterly he became rational, but the prostration was extreme, and he succumbed eight days after admission. Narcotic injections, beef-tea enemata, and the administration of chloroform constituted the chief treatment in this case.

The third case was admitted into the Western Infirmary about the beginning of November, under the care of Dr. Alexander Patterson. The patient, a sergeant of police, aged twenty-six, strong and healthy, was bitten by a dog on the thumb about five weeks before admission. The wound healed kindly. The patient happened to read in the newspapers accounts of cases Nos. 1 and 2, but did not seem to be affected by them, remaining cheerful and happy. About four weeks after the infliction of the bite he complained of itching and pain in the wound, the pain being described as of a "crampy" character, and being relieved on the application of water. About a week afterwards the patient was seized with vomiting, and complained of difficulty in swallowing. He was at once removed to the Western Infirmary. After admission he manifested an extraordinary dread and suspicion of every person. When offered some liquid he made a determined effort to swallow it, and, failing, threw it from him. There was also extreme sensitiveness, the least breath of air setting up spasms. The case ended fatally.

Dr. Morton, Dr. G. B. Macleod, Professor McCall, Dr. James Adams, Dr. George Buchanan, Dr. John Reed, Dr. Finlayson, Dr. Joseph Coats, Dr. Scott Orr, and the President, Dr. Eben. Watson, took part in the subsequent discussion.

VACCINATION AND SMALL-POX.

The Registrar-General, in his last week's Return, after noticing the number of deaths from small-pox in the metropolis, goes on to make some valuable observations on the proofs given of the high protective efficacy of vaccination. He has unfortunately to lament, week after week, the frequency with which the medical certificates of deaths from small-pox contain no information as to vaccination. He remarks that with reference to the calculated rates of mortality among the small-pox patients in the Metropolitan Asylum Hospitals at Homerton and Stockwell during the present year, published in the last Weekly Return, which were 13 per cent. among the vaccinated, and 57 per cent. among the unvaccinated cases, it may be stated that of the 687 completed cases dealt with, only seven, or scarcely more than 1 per cent., were of infants under one year of age. In order to estimate satisfactorily the protective power of vaccination, it would be necessary to know the numbers of vaccinated and unvaccinated persons exposed to risk from small-pox. This information as regards the adult population is, unfortunately, not available; but recent vaccination reports issued by the Medical Officer of the Local Government Board show that at least 91 per cent. of the children living under five years of age in London are successfully vaccinated. It may thus be estimated that of the 348,441 children living in London in the middle of this year between the ages of one and five years, 317,081 had been successfully vaccinated, and 31,360 were unvaccinated. At these ages fifty deaths from small-pox were registered in London between January 1 and November 18, 1876; of these, one was certified to be a vaccinated case, thirty-five to be unvaccinated, and in fourteen cases the medical certificates did not furnish any information as to vaccination. Disregarding the "not stated" cases, it appears that only one death from small-pox occurred among the 317,081 vaccinated children between one and five years of age living in London, whereas thirty-five deaths from this disease were recorded among the 31,360 unvaccinated children at the same ages. Thus, in equal numbers living, 372 deaths from small-pox occurred among unvaccinated, to one death from the same cause among vaccinated children at these ages.

SMALL-POX IN LONDON.

The deaths from small-pox, which had been 21, 48, and 52 in the three preceding weeks, declined, in the week ending November 25, to 43, of which 9 were certified as vaccinated, and 20 as unvaccinated; in 14 cases the medical certificates did not furnish any information as to vaccination. One of the unvaccinated cases was of a male aged seventy-two, described as having been inoculated in early life. Of the 43 fatal cases, 19 were registered in the three Metropolitan Asylum District Small-pox Hospitals at Homerton, Stockwell, and Hampstead, and 1 in the Highgate Small-pox Hospital; the remaining 23, or 53 per cent. of the total cases, occurred in private dwellings. Twelve of the deceased small-pox patients had resided in Hackney and Homerton, 3 in Mile-end, 6 in Lambeth, 3 in Clapham, and 3 in Camberwell; in all, after distributing the hospital cases, 1 belonged to the West, 17 to the North, 2 to the Central, 7 to the East, and 16 to the South groups of districts. The three Metropolitan Asylum District Small-pox Hospitals contained 433 patients on Saturday last, against 185, 231, 269, and 350 at the end of the four preceding weeks.

The subject of hospital accommodation for small-pox cases was brought before the Marylebone Vestry at a recent meeting by Mr. Sims, who called attention to a paragraph in the report of the medical officer of health, to the effect that in a very large number of tenements it was quite impossible to procure isolation of infectious cases, and that the powers of the sanitary or other authorities were very limited. He thought they ought to consider the propriety of building refuges or extra hospitals for the people generally; and that the Vestry ought to have its own ambulance for the removal of patients thither, although they were not paupers. Dr. Whitmore pointed to the fact that small-pox was becoming epidemic in London; and said that in his opinion a very large amount of additional accommodation would be required. The pauper classes had asylum hospitals available at Stockwell, Homerton, and Hampstead; for the middle classes there was no accommodation except at the Small-pox Hospital at Highgate—limited as to the number of its beds; but for the upper classes there was absolutely no accommodation whatever. The ambulance in use now was for paupers only. To borrow the ambulance from the Middlesex Hospital cost 12s. or 15s., and thousands of persons would be deterred from seeking isolation from that very fact. Finally, notice was given that at the next meeting it would be moved—"That a meeting be appointed, to take into

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consideration the provision which exists for the treatment of small-pox patients."

THE SEWAGE QUESTION AT BIRMINGHAM.

On the 17th ult. the Duke of Sutherland, Sir Henry Cole, General Scott, and other directors of Scott's Sewage Company, together with the Mayor and Corporation of Birmingham, paid a formal visit of inspection to the works which have been recently erected by the above Company at Saltley, near Birmingham, for the purpose of practically testing General Scott's method of dealing with that portion of town excreta which is collected in pails instead of being conveyed away from houses by water-carriage in the form of sewage. At present about 15,000 pails are collected weekly in Birmingham, and the number of pails is increasing every week. Hitherto the pail stuff has been deodorised by mixing it with about three times its bulk of ashes, so as to absorb the liquid portion, and form a compost stiff enough to be moved with a shovel. This compost has been sold to farmers, but at such a low price as to realise only a few pence per ton profit. A cheap kind of charcoal has been substituted for the ashes, but with even less satisfactory results commercially. By General Scott's system the pail stuff is treated chemically as collected, without any admixture of ashes or charcoal. First, chemicals are added to coagulate the greasy matters, and to render the solids porous, so that the more liquid portions can readily be separated from them; then by process of distillation the ammonia is separated from the excreta, being collected in sulphuric acid, and afterwards crystallised out as a sulphate. The separation of ammonia is continued as long as the liquid that is being treated contains a sufficient amount to render the process remunerative, after which phosphoric acid is added, and a phosphate of magnesia is formed, which absorbs the remainder of the ammonia, and also assists in rendering the solids friable and inoffensive. After this treatment the solids can be readily dried, and in their dry form they constitute a manure which is worth from £4 to £5 per ton; but if mixed with the sulphate of ammonia formed in the earlier stage of the process, the resulting manure is said to be worth £8 per ton. The works at Saltley are only capable of dealing with 500 pails of excreta weekly, but if, after a fair trial, the process is proved to be a success, it is intended to enlarge the works so as to deal with the whole of the excreta of the town not conveyed away by water-carriage. We shall be glad to hear that the expectations of the promoters of the Scott system have been fully realised, and that the question how to deal with the sewage of our large towns has been satisfactorily settled.

TRIAL FOR PERSONATION AT AN EXAMINATION.

It will be within the recollection of some of our readers that the Faculty of Physicians and Surgeons, Glasgow, some time ago instituted proceedings against certain individuals hailing from Sheffield for personation at examinations. Two were arrested, but one escaped arrest. The trial of the two individuals thus arrested came on before Sheriff Guthrie and a jury, at Glasgow, on Tuesday. The accused were named Arthy and Dearden respectively. Arthy was a teacher or tutor in Sheffield, and Dearden was a student; the accusation being that Arthy had passed the preliminary examination at Glasgow for Dearden. The officials and examiners were unable to identify either, and the main bulk of the evidence was supported almost entirely by an individual named Hewer, whose conduct in the whole matter seems to have been somewhat questionable. In the result a verdict of "Not proven" was found on one count of the indictment, and "Not guilty" on the rest, so that both prisoners have thus been set at liberty. Southan, Southern, or Southam—for the gentleman seems to have had various *aliases*—has never been arrested. The following letter, which was found on Arthy after his arrest, seems, however, to refer to him. Neither the style nor the substance of the letter needs comment. It was addressed to "Dear Nat" (Nathaniel being Arthy's christian name), and was signed "Jno." In that letter the writer said:—"I am in a rather strange predicament. On calling at the Faculty for examination, or at least to put in my name for that, I gave my name as Southan. At the preliminary examination you spelled it Southern. They have that in their books, and not Southan. I adopted the name of Southern some eight years ago on account of family disturbance. I continued with that name, being fond of it, and following up Lord Dundreary, the great actor. Unless I convince them they will probably cancel my certificate. Appeal to the President and Council of the Faculty of Physicians and Surgeons, and tell them my reason, which was pure and simple, and assure them that I was present in body. Send me this by return of post without any failing, as it is of the utmost importance for the meeting on Tuesday. Say how awful my position will be failing to do so. I swore positively I was there. That they don't doubt but was substantial reason why I changed my name."

DR. BROWN-SÉQUARD.

This eminent physiologist and neurologist has delivered a course of three lectures before the King and Queen's College of Physicians in Ireland. On each occasion the new hall of the College in Kildare-street, Dublin, was thronged by a large assemblage of the profession and of students, a limited number of whom received tickets of admission. The first lecture was on Thursday, November 23. The subject was "Anæsthesia as an Effect of Brain Disease." On Saturday, November 25, the lecturer treated of "Amaurosis as an Effect of Brain Disease"; and the third and concluding discourse was delivered on Monday, the 27th, on "Aphasia as an Effect of Brain Disease." Dr. Brown-Séquard's views must be regarded as revolutionary in a certain sense, but they are so ably advanced, and the mass of evidence brought against the truth of the doctrines he opposes is so great, that his statements must be received with respect and carefully studied. He maintains that the doctrine of the localisation of brain-function—whether of sensation, motion, sight, or speech—is untenable in the face of numerous clinically observed facts and of equally numerous experimental researches. So far he destroys, but in the room of "localisation" he places what may be called the doctrine of "diffused cell function and inhibition." According to him, there are *scattered throughout* the brain, and connected with each other by nerve-fibres or conductors, nerve-cells endowed with the same function, whether of sensation, motion, sight, or speech. An irritation, peripheral or central, of these cells (or of a large number of them) may act upon them so as to inhibit or suspend their function, just as the heart is stopped by inhibition during galvanisation of the par vagum. The last lecture concluded with valuable remarks on treatment based upon this "inhibitory" theory. The lectures are to be published in consecutive numbers of the *Dublin Journal of Medical Science*, commencing with next January.

PATHOLOGICAL SOCIETY OF DUBLIN.

The first meeting of the session 1876-77 was held on the afternoon of Saturday, November 25, in the Anatomical Theatre of the School of Physic, Trinity College, Dublin. The chair was taken, at 4 p.m., by the outgoing President, Dr. Henry Kennedy. Dr. Lombe Atthill showed a large myxomatous tumour removed from the left labium of a young healthy married woman, the mother of three children. Dr. Boyd exhibited the lacerated brain of a man who died of cerebral compression on the twelfth day after the receipt of the injury which killed him; secondary hæmorrhage had caused compression; there had been no symptoms from the second to the tenth day. Dr. Thomson showed a fibrous tumour, and

cyst with curious organised trabeculæ traversing its cavity from wall to wall, which he had removed from the glutæal region of a male adult. Mr. Croly presented the urinary organs of a man, aged seventy-nine, who suffered from retention of urine due to stricture and enlarged prostate; there were present chronic cystitis, dilatation of the ureters, and renal abscess. The President announced that the Council had selected as the subject for competition for the Society's Gold Medal, to be presented at the end of the session, "The Pathology of the Œsophagus." The following officers of the Society for the session were elected:—*President:* Thomas Hayden. *Vice-Presidents:* Samuel Gordon, M.B.; Robert McDonnell, M.D.; Sir Dominic J. Corrigan, Bart., M.D.; George H. Kidd, M.D.; John T. Banks, M.D.; Edward Hamilton, M.D. *Council:* A. H. Corley, M.D.; Alfred H. McClintock, M.D.; James Little, M.D.; Thomas Evelyn Little, M.D.; Arthur Wynne Foot, M.D.; Benjamin G. MacDowel, M.D.; John Mallet Purser, M.D.; William Stokes, jun., M.D.; Henry G. Croly; James H. Wharton, M.B.; Henry Kennedy, M.B.; George F. Duffey, M.D. *Honorary Secretary:* William Stokes, M.D. *Secretary and Treasurer:* Edward H. Bennett, M.D. *Secretary for Foreign Correspondence:* Robert D. Lyons, M.D.

ON THE BLOOD IN ANÆMIA.

Considerable attention has been paid of late to the microscopic examination of blood in various diseases. The accurate method of counting the number of blood-corpuscles after dilution with a definite quantity of serum, etc., will doubtless prove very valuable; but M. Hayem has pointed out (Société de Biologie, November 4, reported in the *Gazette des Hôpitaux* of November 7) that in anæmia this is only half the inquiry. In anæmia we have to do with the altered ratio between the number of the corpuscles and what may be called the "colour-richness" of the blood—in other words, the quantity of hæmoglobin. To estimate the latter, M. Hayem has used a microscopic cell of known dimensions, alongside which he places a wafer, the tint of which is equal to that of the blood richest in corpuscles and colour. A scale is obtained, in which a given number of corpuscles corresponds to a given colour. Having given the number of corpuscles and the "colour-richness," it is easy to determine the value of each corpuscle. In the normal state this value is found pretty constant. M. Hayem does not find any marked difference in the colour-richness of the blood of the two sexes; but he finds a very marked difference between the adult and the new-born child in this respect. In the latter the real value of the corpuscles is greater than in adults. This explains why there is a smaller number of corpuscles. In chronic anæmias the real value of the blood is very inferior to that which is observed in the normal state. But in extreme anæmia the corpuscles undergo a notably hypertrophy, and in general gain in volume what they lose in number. Thus the real value of the corpuscle tends to approach the normal state, or even go beyond it. M. Gubler stated that amongst all the cachexias he had only observed the hypertrophy of the corpuscles, with diminution in their number, in Addison's disease. To this M. Hayem replied that the above held good of all anæmias, whatever their origin, if only the anæmia were severe. It is greatly to be desired that the details of the method may be explained, and these results tested by other observers.

ST. THOMAS'S HOSPITAL.

At a special general court of the Governors of St. Thomas's Hospital, on the 29th inst., Mr. Francis Mason, F.R.C.S., of Brook-street, Grosvenor-square, was unanimously elected full Surgeon to this institution, in the vacancy occasioned by the retirement of Mr. John Simon, C.B., F.R.S. Mr. Mason will still continue to be one of the lecturers on Anatomy in the medical school of the Hospital.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Three very interesting papers were read at the ordinary meeting of this Society on Tuesday last. Owing in great part to the length of time taken up by the papers, there was little time for discussion. We would suggest that it might have been wise to have postponed one of these papers until the next meeting, in order that Mr. Baker's paper on "Tracheotomy-Tubes," and Mr. Hulke's case of "Lodgment of a Tracheotomy-Tube in the Right Bronchus, and its Extraction," might have been fully discussed. As it was, the two last-named papers had to be hurried through in a most unsatisfactory manner. When the reading of the papers was ended there only remained about twenty minutes for discussion, and of these Mr. Durham occupied about fifteen in discussing the merits of his own tube, or rather, we should say, in pointing out its defects as ordinarily manufactured. This was quite foreign to the subject of the evening, and prevented many surgeons from joining in the discussion—a really important one—on the relative advantages of flexible elastic tubes, and of the ordinary rigid metal ones. We can well appreciate the delicacy which often prevents the President from interrupting a speaker who is wandering from his subject; we cannot, however, but censure a speaker who takes advantage of this delicacy, and occupies the limited time of a meeting which is just about to close, in discussing a question which is not before the meeting, and that, too, in spite of manifold signs of impatience, such as were heard on Tuesday night. If Mr. Durham is anxious to discuss the value of his so-called "lobster-tail," by all means let him bring the subject forward, but not during the debate on, and to the exclusion of, another subject.

OBSTETRICAL SOCIETY OF DUBLIN.

The opening meeting of the thirty-ninth session of this Society was held in the Hall of the College of Physicians, Kildare-street, Dublin, at 8 p.m. on Saturday, the 18th ult. A large number of members attended; and amongst the visitors were the Right Hon. the Lord Mayor (Dr. G. B. Owens), the President of the Royal College of Surgeons, the Governor of the Apothecaries' Hall, the President of the Pathological Society, etc. The chair was occupied by the Master of the Rotunda Lying-in Hospital, Dr. Lombe Atthill, the outgoing President. Dr. J. R. Kirkpatrick, Honorary Secretary, read the report, which showed that the roll of the Society now included 140 names (including honorary members), that eleven new members had been elected, while seven members had died. The report having been adopted, the President delivered what was at once an inaugural and a valedictory address. The ballot for officers of the session 1876-77 was declared, with the following result:—*President:* Thomas Darby, F.R.C.S.I. *Vice-Presidents:* Thomas More Madden, M.D., and S. M. MacSwiney, M.D. *Council:* John Denham, M.D.; George Johnston, M.D.; Geo. H. Kidd, M.D.; Alfred H. McClintock, M.D.; and Lombe Atthill, M.D. *Honorary Treasurer:* William Roe, M.D. *Honorary Secretary:* J. Rutherford Kirkpatrick, M.B.

THE CLINICAL SOCIETY.

The importance of the papers read before this Society last week, on the Treatment of Leukæmia by Phosphorus, attracted a large attendance of members. Owing to the great length of the papers, the discussion had to be postponed until the next meeting. We venture to contrast the short, pithy, pointed notes of the President with the lengthy papers which were read in full, and to call attention to one of the regulations of the Society, which says that "the Council are of opinion that, as a rule, no communication should be of such a length as to require more than ten minutes for its delivery." It is a very wise regulation; and though it is apt to be forgotten, it has worked very well, and, we think, ought to apply with

double force when there is more than one communication. Far be it from us to say anything to disparage the value of the papers read; on the contrary, we think the cases were reported admirably, and that they will both be valuable contributions to the volume of *Transactions* for next year. We would suggest, however, that all such communications be made in abstract, and would hold out Sir William Jenner's notes as models of what these abstracts might and ought to be. The regulations also point to what should be done in this way:—"In narrating any case, the author is at liberty to abbreviate it by the omission of such details as do not appear to him indispensable for its elucidation." The point under discussion was the therapeutic value of phosphorus; and though the details of the cases are valuable for record, they were not wanted for the discussion.

ANDERSON'S UNIVERSITY, GLASGOW.

A MEETING of the trustees of Anderson's University was held in the University-buildings, on November 15, for the purpose of considering a Bill which the managers propose carrying through Parliament. The principal object of the Bill is to alter the name of the institution from "University" to that of "College," and so remove the cause of jealousy which has existed between it and the University of Glasgow. The Bill will also alter the qualification for trustees, and will render members of the Town Council and Professors in the University of Glasgow eligible for election. Several trustees having expressed their approval of the proposed Bill, the managers were authorised to proceed with it, subject to such alterations as might be found necessary under the direction of the solicitor.

FATAL ACCIDENT TO A MEDICAL PRACTITIONER.

DR. LUMSDAIN, Gilmerton, who has latterly acted as Sanitary Inspector for the Liberton Parish, has unhappily met with an accident which has terminated fatally. The deceased gentleman left his house at Gilmerton about 7.30 p.m. to make a call at Parkburn. About an hour and a half afterwards, one of the workmen at Venturefair Colliery, when passing an adjoining quarry, thought he heard moans from below. Assistance was speedily obtained, when Dr. Lumsdain was found lying at the bottom of the quarry in an unconscious state. He was immediately taken home and medical aid procured, but he never rallied, and died early the following morning. Deceased, who was between sixty and seventy years of age, was somewhat defective in his eyesight, and it is supposed he had mistaken his way in the dark.

OBSTETRICAL SOCIETY.

WE understand that at the next meeting of the Obstetrical Society, which will be held on Wednesday next, the 6th inst., a demonstration of transfusion of blood from the living subject will be made by Dr. Roussel, of Geneva. Opportunities for seeing this operation are so few that probably a considerable number of gentlemen will avail themselves of the occasion now afforded them for witnessing it with the most improved apparatus. At the same meeting Dr. Langdon Down will read a paper "On the Obstetrical Aspects of Idiocy," a subject to which he is known to have devoted much attention.

LIVERPOOL MEDICAL INSTITUTION.

FOR some time past it has been felt by the members of the Liverpool Medical Institution, who now number nearly 200, that the smaller theatre, in which their ordinary meetings are held, did not afford adequate accommodation; while the larger theatre, though affording space enough, was by its interior arrangements and defective ventilation unsuitable for large meetings. It has been recently resolved, therefore, to rearrange and otherwise adapt this theatre at a cost of £400. Nothing could better demonstrate the growing importance of this, which is now one of the chief of the provincial medical societies, than the demand for increased space and the power to meet the required demand out of the ordinary funds derived from the subscriptions of its members. At the fifth ordinary meeting, held on November 2, two cases—one of labour associated with subcutaneous emphysema; and the other, which terminated fatally, of pregnancy and labour associated with acute Bright's disease—were detailed by Dr. Francis Imlach. The cases themselves, though interesting, do not demand any special notice here; but in connexion with the former of the two Dr. Imlach described the results of twenty-five experiments made by him in 1873-74 on animals, chiefly guinea-pigs, to observe the physiological and mechanical effects of the subcutaneous injection of various vapours and gases. The following is a brief abstract of the results:—Little or no pain is caused by the necessary distension, and respiration is mechanically impeded only by extreme distension. Injection of the vapours of such substances as chloroform and ether has an immediate effect several times greater than that of an equal quantity in the liquid state, doubtless from the greater area of absorption. Oxygen has a distinct physiological effect similar to that obtained when the gas is inhaled—*i.e.*, the animal becomes excited, the pulse increases in rapidity, the blood becomes highly arterialised, and the temperature is slightly raised. Carbonic acid has no obvious anæsthetic or other effect. Common coal-gas and nitrous oxide give similar negative results. Less than half a cubic inch of sulphuretted hydrogen causes death in two minutes, and the blood after death is found dark-stained and with characteristic odour. Dr. Shearer then read a paper entitled "Some Effects of Lead-Impregnation," illustrated by cases, from which he deduced several practical propositions, concluding by pointing out that the great object of treatment is to get the poison out of the system. Nervine tonics, galvanism, chalybeates, and blood-restoratives are all useless until elimination has been effected. Iodides, the purgative sulphates, and sulphuretted baths are the most reliable. In general the sulphates are best adapted for acute cases, and the iodides for chronic ones, but an alternation of the two is commonly desirable.

HYDROPHOBIA COMMUNICATED BY A NON-RABID DOG.—Dr. Moritz related to the St. Petersburg Medical Society the case of a boy who died with well-marked symptoms of hydrophobia six weeks after being bitten by a dog, the dog up to the time of the boy's death never having exhibited any sign of rabies. A similar case was communicated to him by a colleague, of a boy who also died hydrophobic after being bitten by a cat, the cat remaining to all appearances well. Dr. Severin had also met with a case of a child dying who had been bitten by a dog that continued well. He had inoculated rabbits with saliva, blood, and pus taken from this child, without producing any results.—*St. Petersburg Med. Woch.*, November 11.

STATISTICAL SOCIETY.—The first monthly meeting of the present session was held on the evening of the 21st ult., at the Society's rooms in the Quadrangle of King's College, Strand, and was numerously attended, the President, James Heywood, F.R.S., in the chair. After a long list of candidates had been unanimously elected Fellows of the Society, the President delivered his opening address, in the course of which it was stated that the Howard Medal for 1876 (with £20) had been awarded to Dr. J. C. Steele, Medical Superintendent of Guy's Hospital. At the close of the address, the medal referred to was presented to Dr. Steele, and the subject of the essay for next year's medal was announced to be—"On the Condition and Management—past and present—of the Workhouses and similar Pauper Institutions in England and Wales, and their effect on the Health, Intelligence, and Morals of the Inmates." Afterwards, Dr. F. J. Mouat, the Foreign Secretary, read a report on the International Statistical Congress recently held at Buda-Pest, to which several Fellows had been appointed delegates of the Society. The address and report in question will be published in due course in the journal of the Society.

ROYAL COLLEGE OF SURGEONS.

The half-yearly examination for the Fellowship of this institution, which was brought to a close on Saturday last, resulted in eleven candidates out of fifteen passing; but as one of these gentlemen had not passed any *medical* examination, he will not be admitted until he possesses a recognised medical licence. All the candidates were Members of the College, the dates of their diplomas as such ranging from November, 1864, as a senior, to the junior of August last. Until the names have been submitted for approval to the Council we cannot publish the list of new Fellows.

A greatly improved plan of conducting this examination was introduced on the present occasion by the Court of Examiners, and contrasts very favourably with the former method. By the present plan no candidate is examined a second time by the same examiner,—he appears before each as a fresh candidate at the different tables; and this is so fully carried out that not even the papers at the written examinations are read by the same examiner.

The following full account of the improved mode of conducting this examination will be read with interest by intending candidates, as well as by our readers generally. And here may be again noticed that visitors properly qualified are at once readily admitted on sending in their card to the chairman of the Court, Mr. John Birkett, the senior Vice-President of the College; there were several such on the present occasion. We are now speaking only of the final or pass examination, which was commenced on Friday, the 23rd ult., in the theatre of the College, when the following questions on Surgery and Pathology—all of which were required to be answered between 1.30 and 5 p.m.—were submitted to the fifteen candidates, viz.:—1. Describe from the commencement, and in its several stages, the anatomical characters of the affection commonly known as disease of the hip-joint in childhood; and discuss the pathological changes that occur. 2. Mention the principal cases in which the condition known as hæmophilia becomes of surgical interest. Discuss the pathology of that affection; and describe the treatment, local and general, which you would adopt in particular instances. 3. Discuss fully the question, In what cases is it justifiable to perform the operation of castration? Describe the operation, its accidents and complications. 4. Describe the various forms of internal acute intestinal obstruction; and the surgical treatment that you would adopt in each case.

The answers to these were then distributed amongst the members of the Court, none of whom read those of pupils from their respective hospitals; and this was the case throughout the long examination. On the 24th ult. the candidates assembled again in the theatre, where eighteen patients (selected from a large number sent from the various metropolitan hospitals) were placed separately in compartments with the candidate, who was provided with materials for writing, describing, and diagnosing each particular case, half an hour being allowed, at the end of which the candidate was conducted to another patient, similarly placed, with the same time allowed. The written papers were then submitted to the Court for consideration. The following were the cases sent from St. Bartholomew's, St. Thomas's, Guy's, St. George's, University College, and St. Mary's Hospitals, viz.:—Syphilitic eruption (lupus), hernia and varicocele, double hydrocele, fluid tumour of the leg, chronic abscess of the thigh, encysted hydrocele, syphilitic disease of bones of the foot, epithelioma of the palate, tumour of the tibia, ulcer of the tongue, papilloma of the tongue, enlarged testis and hydrocele, syphilitic eruption and periostitis, disease of knee and fracture, node on the arm, syphilitic testis, and hernia. After which each candidate was examined orally by two members of the Court on four patients, none of whom he had previously seen.

On Saturday, the last day of this ordeal, the members of the Court and the candidates again assembled in the theatre for examination in Practical Surgery. Two subjects were provided, on which each candidate was required to perform two operations. These consisted principally of amputations, tying arteries, trephining, etc. This over, the candidates proceeded, four in number, to as many tables in the library and council-room, which were covered with a selection of good practical cases from the museum. Here they had each fifteen minutes' oral examination at three tables, and this completed the examination.

FROM ABROAD.

Mortality Returns of the Paris Hospitals.

Dr. E. Besnier, in his report (*Union Méd.*, November 4 and 7) for the third quarter of 1876, states that this quarter was remarkable for the extreme irregularity of the atmospheric conditions, as shown in the excessive degree of the variations of temperature, the wide separation between the maxima and minima; the alternations of considerable dryness with prolonged humidity. The prevailing winds were S.W. and N.E. during July and August, and S.W. during September. During the quarter variola underwent its customary seasonal attenuation, while typhoid fever increased at the regular epoch, but was marked by quite an extraordinary severity; dysentery acquired a considerable development, especially among the military, but it always was benign in character; and diphtheria continued its ravages. The general mortality in the civil hospitals and hospices, without attaining the amount of the worst years, nevertheless approached these in a notable manner, for the total deaths rose to 3129, being an excess of 490 over the mean mortality of the same quarter for the four preceding years, and of 581 over the same quarter of 1875.

1. *Affections of the Respiratory Organs.*—The acute affections of these organs, especially pleurisy and pneumonia, were more numerous and more grave than in the corresponding mean quarter of prior years. Thus, of a total of admissions of 3742 of these affections, 914 deaths took place, being a percentage of 24·42 as compared with 22·55—the mean of the same quarter for the seven preceding years. The percentage of deaths from phthisis was, however, much less (38·88 as compared with 49·03), but that of pneumonia (30·38 to 28·93) and of pleurisy (10·76 to 9·40) was greater.

2. *Diphtheria.*—This, though undergoing its habitual attenuation for the summer season, has yet prevailed more extensively and more severely than at the corresponding period of any of the seven preceding years. As to the seasonal attenuation, there were 148 cases with 118 deaths during the first quarter of 1876, 149 cases with 106 deaths during the second quarter, and 140 cases with 100 deaths during the third. And while the admissions have been 140 with 100 deaths (or 71 per cent.) during this quarter of 1876, the means of the same quarter of seven preceding years have been 83 admissions with 53 deaths, or 64 per cent. The deplorable practice continues of allowing the children suffering from diphtheria to mingle promiscuously with other sick children; and thus it happened that of 11 cases which came under Dr. Labric's care only 2 came from outside the hospital, 9 contracting the disease within its walls, and 7 of them dying!

3. *Variola.*—This underwent during the summer quarter the attenuation which (contrary to what happens in typhoid fever) is habitual to it. The disease is, however, taking the entire year into account, on the increase, the total cases for the first nine months of 1874 having been 31; of 1875, 219; and of 1876, 298. The deaths during the first quarter of 1876 were 102, during the second 120, and during the third 76. In a communication from Dr. Leudet it is stated that of 621 cases of variola treated at the Hôtel-Dieu of Rouen, 132 (21 per cent.) contracted the disease within the walls of the hospital; and of the 119 deaths which occurred, 34 were from among those who had thus contracted the disease.

4. *Typhoid Fever.*—This prevailed during the quarter with an intensity and gravity that are quite exceptional, the number of deaths which it gave rise to in the entire city having been more than twice as large as the mean of the same period of the four preceding years. Thus, while the deaths of the quarter from typhoid were 256 in 1872, 309 in 1873, 286 in 1874, and 220 in 1875, they were 655 in 1876. Of course these returns of deaths for Paris do not show the number of cases, so as to enable us to judge of the comparative severity of the disease, but as regards the hospitals we are enabled to state the proportions. Since 1867 the mean annual number of patients admitted during this quarter has been 363, furnishing a mortality of 93, or 25 per cent.; but in the same quarter

of the present year there have been admitted 714 typhoid cases—*i.e.*, double the mean of the quarter,—and the mortality has been 35 per cent., or 10 per cent. above the annual mean. In judging of the efficacy of various methods of treatment, we must always bear in mind the enormous difference in the gravity of different epidemics at different times and places.

The discovery, demonstration, and interpretation of typhogenetic conditions, which are sometimes very easy in small and uniform localities, in isolated places, or among restricted communities—as, *e.g.*, in a convent, a hamlet, a farm, a prison, a barrack, an army, or a camp—are always attended with great difficulty in a complication of circumstances so vast and so varied, in all points of view, as arises from so great an agglomeration as exists in Paris. Dr. Besnier states that he is as well aware of this as anyone can be, but he does not think it a reason for not undertaking the investigation, that the results obtainable may not be at once clear, precise, and indisputable. He thinks that practitioners do wrong in neglecting this side of the question too much. In Paris, as in all places where typhoid exists permanently, the disease undergoes in the æstivo-autumnal period a considerable and constant exacerbation, variable in degree, but invariable in its chronological regularity. This exacerbation does not take place slowly by a progressive increase of the permanent epidemic, but occurs suddenly, nothing in the anterior course of the disease enabling us to predict whether the increase will be slight or considerable. During the first two quarters of the present year the cases were fewer in number and less in gravity than the means of the corresponding period of former years; but in the third quarter they mounted up from 165 cases, with a mortality of 25 per cent., to 714, with a mortality of 35 per cent. This regular but variable exacerbation is peculiar to typhoid fever, not being met with in either relapsing or typhus fevers; so that, contrary to what is observed in these two diseases, elevation of temperature and all the conditions of intra- and supra-telluric fermentation which heat induces in putrid germs may favour the development or the paroxysmal aggravation of typhoid epidemics, independently of the fact of agglomeration. In the present case the aggravation of typhoid coincided with the existence of excessive dryness and a high temperature, and when these ceased to prevail the mortality of the disease diminished, even when the number of cases increased. It is incontestable that the diminution of the subsoil water, exposing a series of centres of putrefaction at the time when an excess of heat favours their fermentation and an excess of evaporation favours their diffusion, must operate as a typhogenetic cause of great importance; but to transform this telluric condition into a general and exclusive theory of typhoid genesis, is to go very much farther than facts will as yet warrant us in doing. However this may be, one fact of great importance arises from this consideration of geological conditions, not less than from epidemiological observations, properly so-called—viz., that typhoid fever is an affection in respect to which it is no longer necessary to invoke the virtual epidemic genius, but one which is produced, developed, exasperated, or abated under the influence of individual or local conditions—the absolute formula of which cannot yet be given, but the idea of which has passed definitively from the speculative period into the domain of scientific investigation, properly so-called.

If the general conditions of the air exercise a universal influence in giving rise at the same epochs in different towns or in different countries seasonal epidemic paroxysms, they do not produce such paroxysms in a very high degree, except in concurrence with local conditions realised in a region, a town, a house, etc. Epidemics of typhoid fever are local epidemics, and their exacerbations are also absolutely local. When, a while since, typhoid prevailed at Lyons with excessive severity, at the same time it existed in Paris in a simple and benign form; and now, during the quarter under consideration, when the atmospheric conditions have been completely alike, while the disease in Paris has committed such ravages, in most other localities it has been rare in prevalence and mild in character. This is shown by the reports which Dr. Besnier has obtained from Lyons, Bordeaux, Rouen, Havre, and Toulouse, in all which places, although there has been the usual summer exacerbation, the numbers of cases have been below the mean. At Caen, on the contrary, the disease was very prevalent, but while it was more fatal than usual in the garrison, the mortality was inconsiderable among the civil population.

Dr. Besnier terminates his report by a review of the prevalence of the epidemic in the different arrondissements. In the normal condition of the typhoid which prevails permanently at Paris there is but little difference among the arrondissements, either as regards the number of cases or their mortality in proportion to population. But when an epidemic paroxysm appears, this equality undergoes great disturbance. Thus, while there were 100 deaths in the eleventh arrondissements there were but nine in the fourteenth—a difference which is not explicable by the greater population of the former of these, although it is two and a half times greater than the latter. Nor was the disease found to prevail in proportion to the density of population as measured by the superficies occupied. Altitude seemed to cause somewhat more difference, the more elevated arrondissements suffering, as a general rule, less. While the relative richness or poverty of the different arrondissements was not without some action on the mortality from typhoid, it exerted less influence than it does on the ordinary mortality.

We regret to find that Dr. Besnier complains that so slight is the co-operation he receives from his colleagues and the hospital authorities in the performance of his laborious task, that he doubts whether he shall long be able to continue to issue these valuable reports.

REVIEWS.

Infant Feeding and its Influence on Life. By C. H. F. Routh, M.D., M.R.C.P.L. Third Edition. London: J. and A. Churchill. Pp. 510.

The lectures on Rickets delivered by Sir William Jenner in 1859-60, and reported in this journal, form the most substantial contribution in our time to the knowledge of children's diseases. We have only to look at the books written since then to see how faithfully, for the most part, succeeding workers have followed in Sir William Jenner's lines. Thanks to those lectures, it is no longer common to hear medical men speak of teething as a distinct disease and as the parent of all "the ills that a child is heir to." Even the lay public are beginning to see that late teething is itself a sympton, and not a cause, of the malnutrition induced by bad feeding. To Dr. Routh must be apportioned a fair share of the credit of disseminating common-sense views about the bringing-up of infants. The fact that his book has now reached a third edition is a proof that it has fulfilled a want.

We confess in general to a dislike of books written partly for the profession and partly for the public, but infant feeding is one of those neutral territories where it is desirable to enlist the intelligent help of all benevolent persons. If the book had been free from sentiment we should have liked it better.

In the first part Dr. Routh establishes the extraordinary mortality of children under one year old. We doubt whether all the statistics are of absolute scientific value, but we do not doubt for a moment the soundness of the view that bad feeding and gastro-enteric disturbance enter into the causes of children's diseases to a far greater extent than appears in the Registrar's Report.

It was shown by Sir William Jenner, and subsequently at greater length by Dr. Gee, that rickets is an all but constant condition in laryngismus and so-called teething convulsions. Moreover, it will be found that at the time of a convulsion if there is not diarrhœa there are frequently fetid stools.

The second part of the book, where Dr. Routh discusses the whole subject of lactation, is excellent. The remarks on the food of nursing mothers are especially good. Dr. Routh has great admiration for lentil-powder; but we are sorry that he has found no space for the mention, amongst vegetable foods, of a homelier preparation—viz., oatmeal. It is cheaper than Revalenta—which for poor people is a consideration,—and, taken as porridge with milk, not only is an excellent food, but effectually counteracts the constipation which milk alone often induces.

The author does not meet the real difficulty in his paragraph with respect to syphilis and lactation. If the mother shows signs of active syphilis, there can be no doubt about the propriety of the rule enunciated—"The mother must be treated, and the remedies which cure her will equally cure the child." We will venture to add that, even in such a case, considering the small amount of mercury which will find its way into the mother's milk, it is desirable also to treat the child. But in a

large number of cases the mother shows no signs of syphilis at the time when the child has marked signs. There is no doubt that in many cases the syphilitic infection of the mother is mild in its manifestations, and the subsequent health is little affected, although she brings forth children who successively show signs of congenital syphilis.

This form of syphilitic infection has been well compared by Mr. Hutchinson to vaccination (*Pathological Transactions*, 1876, page 459). At no time has a woman received a chancre from her own child, although the cases of wet-nurses receiving chancres from syphilitic infants are well known.

Now, if the mother has no manifestation of active syphilis, why should she be mercurialised, and thereby run the risk of profound anæmia, for the sake of her child, who can be effectively treated by mercurial inunction or grey powder? The French writers, who advocate the indirect method, as they call it, seem to ignore the health of the mother altogether.

Dr. Routh devotes a whole chapter to the question of the propriety of selecting wet-nurses from fallen women. With his general conclusions as to the inexpediency on moral grounds of so doing we entirely agree. The only criticism we have to make is that the argument that the "mere substitution of a hired wet-nurse increases the mortality" is quite a *petitio principii* (page 242). The question at issue is not whether the milk of a wet-nurse is better than that of a mother, but whether the milk of a wet-nurse is better than hand-feeding, however scientifically done.

With respect to the "correction" of cow's milk as a food for babies, we are sorry to find that Dr. Routh gives a qualified approval to Dr. Merei's plan of adding thin arrowroot (page 354). In other parts of his book Dr. Routh has given such cogent arguments against the use of starch in any form before dentition has set in, that we are surprised that he should not have put his veto upon the above. In cow's milk, no doubt, *the difficulty* is the coagulation *en masse* of the excessive quantity of casein; and it is for the purpose of mechanically modifying this coagulation—that is to say, distributing it into smaller portions—that the addition of arrowroot was suggested. But if lime-water, or saccharated lime-water, be not sufficient for this purpose, Mellin's malt extract ought to be tried. The effect of this addition to cow's milk in altering the character of the fæces and in arresting vomiting, as we can testify, has been in some cases quite striking. Dr. Routh's physiology is not always up to the mark. It is extraordinary (page 404) that he should quote Dr. Richardson's theory of the cause of coagulation of the blood being the escape of ammonia—a theory which the candid and accomplished author has himself relinquished.

The fourth part of the book, which treats of the forms of disease met with in defective assimilation, is the least satisfactory.

Tuberculosis probably is a result of mal-assimilation, but we are not justified in asserting it so broadly as Dr. Routh does. Tabes mesenterica—if by that term be meant caseation of the mesenteric glands, with or without ulceration of the intestines, and tubercular peritonitis—is by no means so often found as diagnosed. This has been repeatedly pointed out by Sir William Jenner, but with many practitioners the combination of wasting, distension of the abdomen, and diarrhœa is quite sufficient to make the diagnosis. Those who make post-mortems know that tabes mesenterica is rarely found in children under three years old, and that tuberculosis in any form under ten months is sufficiently rare to deserve special record.

We are astonished that Dr. Routh should state (page 419) that in the "variety where diarrhœa has existed the alimentary canal from its beginning to its termination is lined with red patches and aphthæ." For one such case surely there are a hundred where nothing is seen post-mortem, except extreme thinning and pallor or softening of the mucous membrane of the intestinal canal. Aphthæ beyond the fauces are rare. Dr. Routh must be aware that even in a healthy child Peyer's patches are more prominent than in an adult.

The observation (page 472) that "hydrocephalus or water on the brain is often due to imprudences in wearing caps" in the house, strikes us as original, if not profound. On the whole, the directions, hygienic and otherwise, as to the treatment of mal-assimilation are good and judicious; and throughout it may be said that if Dr. Routh's reasonings are not always correct, his conclusions are generally sound. For this reason we doubt not that this book, which needs no recommendation from us, will maintain the reputation it has earned.

Common-Sense Management of the Stomach. By G. O. Drewry, M.D., author of Treatises on Dyspepsia, Cholera, Typhus, etc. London: Henry S. King and Co. 1875.

This work professes to enlighten the public (for it assuredly can never have been written for professional men) on the way the digestive organs can best be kept in good working order at the various periods of life from infancy upwards. It is adorned with a diagram of the stomach, which is described as "a single *closed* bag"; and the author undertakes to give a "general idea of the physiology of circulation and digestion" in the short space of two pages. His views with regard to treatment will be understood when we say that he is an ardent advocate of the gum-lancet in teething; that an emetic, followed one hour after vomiting has ceased by an aperient powder, is a safe remedy "in the derangements of the stomach at the onset of feverish attacks in children (measles, scarlet-fever, etc.)"; and that "a very large proportion of the fearful diseases and displacements of the womb common among women have their origin in the neglect of the syringe both as an enema and a vaginal douche." Although in the preface he declares that he has made no attempt to furnish prescriptions for self-treatment "in cases which demand professional assistance," yet he gives a number of formulæ at the end of the book, several of which contain opium and other drugs, which certainly ought not to be administered without special medical advice. The formula for a cough syrup (No. 14), containing one-eighth of a grain of acetate of morphia in each dose, appears to us especially objectionable.

The varieties of dyspepsia which Dr. Drewry enumerates are enough to make one shudder to think of them, but a little examination will show that he has sometimes described the same variety under several heads. The author is rather too prejudiced in some of his views to be a safe adviser. His violent dislike of home-brewed beer, and the praise he bestows on Burton ale, almost make us think he must be interested in some brewery on the Trent; and our own experience leads us to doubt whether claret and red wines of the claret order are not as easily digested in this country as on the Continent. It is right that when an author seeks to enlighten the public he should not mislead their uninstructed minds by making them fancy (page 41) that the synovial membranes of the joints are examples of *serous* membranes. On the whole the work before us is too evidently written less to advance science than to attract patients to the author's consulting-room. The advancement of science scarcely requires that the author's full address should appear both at the beginning and end of the volume. The get-up of the book is "elegant," but a would-be purchaser might well protest against the *seventy-two* pages of advertisements which lie hid under the handsome cover.

Picturesque Europe: The British Isles. London: Cassell, Petter, and Galpin.

There is now in course of issue by the well-known and active firm of Cassell, Petter, and Galpin a work, which, though not in any sense medical, is nevertheless well worthy of the notice of our professional brethren. This publication, should its design ever be fully worked out, will be one of the finest works of art, as applied to the reproduction of scenery and natural objects of all kinds, ever devised. Each part as it appears consists of many beautiful illustrations—woodcuts, most of them in the finest style of art,—accompanied by descriptive letterpress. A good number of parts have now been issued, each of them at the wonderfully low price of half-a-crown. As a book for the drawing-room table it is simply unrivalled, especially if we take the price into consideration. We would advise those of our readers who care to make the trial to spend a half-crown on the first number, which deals exclusively with Windsor Castle, and we think they will have no reason to repent of their bargain.

A Hyde druggist has been fined 5s. and costs by the magistrates in that town for selling adulterated milk of sulphur. The article contained only 39 per cent. of milk of sulphur, the remainder of the bulk being a substance identical in its constituent parts with plaster of Paris. Dr. Newton, who presided on the bench, said this drug was given by mothers to their children, and if a dose of the mixture before the court were given to a child the probable result would be inflammation of the bowels, and even death.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

November 27.

Removal of the Royal Infirmary: Proposed Reform in its Constitution and Government—Meeting of the British Medical Association in 1877: Names of the Readers of Addresses—Dr. James Ross on the Morbid Histology of the Lung.

The trustees of the Royal Infirmary will meet on December 4, to receive the report of the Sites Committee, and to adopt or reject the various recommendations which that report contains. It is well known that some members of the Committee, and a considerable number of the general body of trustees, are strongly opposed to the removal of the institution from its present central position in Piccadilly; and the result of Monday's meeting is looked forward to with great interest. In the meantime, the party of opposition to the Committee's proposals has found an able and eloquent spokesman in Dr. F. Renaud, one of the consulting physicians to the Infirmary. In a long letter, of which a printed copy has been forwarded to every trustee, he strongly advocates the retention of the present site, which he regards as possessing overwhelming advantages. He calls upon the trustees to consider whether these advantages do not "much more than outweigh every other consideration, and whether that which has been proved to be wrong is incapable of being set right, without recourse being had to the radical method of removing the building." He thinks the present agitation is to be in great measure attributed to the inconvenient distance between the Hospital and the Medical School, now that the latter has been removed to Owens College; and he asks whether the Infirmary "shall be made the handmaiden to the Medical School, or whether the Medical School shall not rather wait upon the conveniences of the Infirmary." Altogether the letter is a very powerful appeal; what influence it will have upon the trustees remains to be seen. The whole of the present Infirmary staff have expressed themselves strongly in favour of removal, and this fact will no doubt have considerable weight.

The trustees will also have before them on Monday a resolution of the Weekly Board, recommending the appointment of a committee to consider "whether any, and if so what, alterations should be made in the constitution and government of the Infirmary." At present every annual subscriber of three guineas is a trustee, and is entitled to attend the weekly meetings and take part in the management. As a matter of fact, however, the actual management has devolved upon a small number of gentlemen who attend regularly. It is now intended to propose that the managing body shall be appointed annually, by election—a reform in the constitution of the Hospital which, it need scarcely be said, is exceedingly desirable.

There is every indication that the welcome to the British Medical Association next year will be hearty and unanimous; every day witnesses the addition of fresh names to the Reception Committee, not only from Manchester and Salford, but from the many important towns in their vicinity, as well as from the country districts. The Committee of Council has decided that three addresses shall be delivered at the Manchester meeting—viz., in Medicine, Surgery, and Obstetrics; and it is now known that the following gentlemen have accepted invitations to read them in their respective departments:—Dr. William Roberts, of Manchester, in Medicine; Mr. Spencer Wells, in Surgery; and Dr. Robert Barnes, in Obstetrics.

At the monthly meeting of the Microscopical Section of the Medical Society, held on November 21, Dr. James Ross read a paper on the "Morbid Histology of the Human Lung," and exhibited a beautiful series of microscopic sections. Amongst the rest were specimens of catarrhal pneumonia, red hepatisation or croupous pneumonia, grey hepatisation, fibroid phthisis, and pulmonary tuberculosis; the last-named contained several good examples of the so-called giant-cell. In a few introductory observations on the normal histology of the lung, the existence of an alveolar epithelium, and the presence of a quantity of adenoid tissue in the vicinity of the smaller bronchi, were especially alluded to as facts of considerable importance in pathology; slides were shown exhibiting both these tissues. The characteristic histological features of the principal morbid processes met with in the lungs were then briefly sketched, the changes within the alveoli being distinguished from those in the septa and interalveolar tissues. In the course of his remarks Dr. Ross took occasion to protest against the indiscriminate use of the phrase "cell-proliferation," as involving a theory of cell-derivation which, in some instances at least, is extremely questionable. For example, a section was placed under the microscope from a tuberculous lung, in which a vessel had been cut longitudinally and lymphoid cells were seen to be distributed along its outer wall. By the side of this were placed two other slides—one from the mesentery of a frog, in which pyæmia had been induced by exciting severe inflammation in the thigh; and the other from the pia mater in a case of tubercular meningitis. Each of these showed a mass of leucocytes collected around the outer walls of the vessels, presenting a precisely similar appearance to the arrangement of lymphoid cells in the section from the tuberculous lung. Now, in the mesentery, Dr. Ross had watched some of the cells passing through the walls of the vessels during life. Hence he suggested as possible that the lymphoid cells of tubercle are due to a similar transudation rather than to cell-proliferation.

GENERAL CORRESPONDENCE.

SUICIDAL STRANGULATION.

Letter from Surgeon-General C. R. Francis.

[To the Editor of the Medical Times and Gazette.]

Sir,—Referring to the rarity of cases of "suicidal strangulation," alluded to by Dr. Francis Ogston in the lectures now being published in your journal, the particulars of a case which came under my observation a few years ago at Saugor, in the Central Provinces of India, when I was Deputy Surgeon-General there, may not be without interest.

Two lunatics (Hindoos), the one comparatively a giant, the other a stripling, occupied the same room in a gaol.(a) There were no other occupants. During the temporary absence of the attendant the giant contrived to strangle himself thus:—Unweaving a piece of the stout thread with which the matting supplied to the prisoners for bedding was made, and twisting two or three coils of it round his neck, he attached the ends securely to his wrists, and then extended his arms to their utmost limit. The attendant was absent (ostensibly to procure the lunatics' dinner) about ten minutes, according to his own account, and on his return found the big man fallen to one side from a kneeling position, with his back against the wall, quite dead. An alarm being raised, the officials of the gaol rushed to the spot, and the civil surgeon was sent for; as I was living with the latter, I accompanied him to it. The first impression conveyed to the minds of all was that it was a case of murder, but on investigation it became evident that this idea was altogether untenable, for the following reasons:—

1. The inability on the part of the stripling to thus successfully grapple with his companion, independently of the absence of all ill-feeling between them. The appearance of the lad, moreover, afforded no evidence either of a recent conflict or of unusual exertion. He was found sitting quietly on the edge of his bedstead, smiling the smile of an imbecile, and his pulse and respiration were quite normal.

2. No one else could have entered the apartment, which was left locked.

3. The mode in which death had been caused being one that a murderer would *not*, but that a determined suicide *might*, select. I am, &c., C. R. Francis, M.B. Lond.,
Surgeon-General H.M.'s Indian Army (Retired).

Sutton, Surrey, November 25.

(a) Suspected lunatics are, in India, usually kept under observation in the gaol in stations where there is no insane asylum. Eventually they are either forwarded to one, or discharged. In the former case a long interval of delay sometimes occurs, and the lunatics are, of necessity, detained in the gaol, which is not, of course, a place suitable for them. Such was the state of things in the present instance.

MEDICAL TEACHERS' ASSOCIATION.

Letter from Messrs. Henry Power and Christopher Heath.

[To the Editor of the Medical Times and Gazette.]

Sir,—As the Honorary Secretaries of the "Medical Teachers' Association," we have received from the executors of the late

Dr. Sibson, who was Treasurer of the Association, the sum of £18 14s. 1d. which was lodged in his hands. The Association has been practically defunct since the last council-meeting on November 17, 1871, when it was resolved—"That as the Association had satisfactorily performed during the last four years the objects for which it was originally instituted, and as it did not appear that there were any points connected with medical education requiring the special attention of the Association, it would be expedient that the Association should for a time suspend its meetings." Owing to the deaths of the President, Mr. Campbell de Morgan, and the Treasurer, Dr. Sibson, we are the only officials left, and we request that you will allow us to give notice through your columns to the members of the Medical Teachers' Association, that, failing any expression of opinion to the contrary, we shall on January 1, 1877, pay the sum in our hands to the Treasurer of the "Medical Benevolent Fund," for the benefit of that charity.

We are, &c., HENRY POWER,
CHRISTOPHER HEATH.

TRACHEOTOMY IN DIPHTHERIA AND CROUP.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you allow me to say a word on your leading article on the above subject in your last week's issue? In that article it is stated that "each of these diseases tends to kill rapidly by suffocation, and that this suffocation is due to two causes—first, to the mechanical obstruction offered by the diseased state of the mucous membrane; and secondly, to the laryngeal spasm excited by this diseased membrane." I quite agree that in a large number of cases death results from mechanical obstruction in the larynx; but is death from "laryngeal spasm excited by this diseased membrane" at all common? I venture to think that death from this cause is exceedingly rare in diphtheria.

It seems much more in accordance with clinical observation, as well as with pathological experience, that what is erroneously called spasm is more nearly allied to paralysis, and that this paralysis is due to inflammatory œdema, and corresponds in its pathological anatomy to the failure of the heart which results from pericarditis or endocarditis, or to the distension of the intestines in peritonitis. This doctrine was, I believe, first taught by the late Professor Niemeyer.

The article goes on to say that "the time at which the operation ought to be performed is when the voice is extinct, and the difficulty of respiration continues and increases; when the skin is becoming livid, the extremities are cold, and the anterior thoracic wall—especially the lower end of the sternum—sinks in on inspiration." Here again I am unable to agree. I should not consider a case very hopeful if the operation were postponed until the skin was livid and the extremities were cold. For my own part, I should advise tracheotomy in cases where there is much recession of the chest, with laboured breathing, and especially where the voice has become extinct, and where other means have failed to relieve. When we consider the small size of the rima glottidis in children, and the great danger of its becoming suddenly plugged by the partial detachment of a false membrane, I fancy the symptoms above mentioned supply sufficient indication for tracheotomy, seeing how free from danger it is *per se*, in a very large proportion of cases, if carefully and skilfully performed. I enclose my card, and am

Portsmouth. Yours, &c., M.R.C.S.

CRUSADE AGAINST "DOCTORS" IN GREENOCK.—At the Sheriff Court, on Monday last, several individuals were brought up charged with practising as physicians without holding the necessary qualifications. Archibald Chalmers, residing in Gourock, who has been through the medical curriculum, but has not obtained a certificate, was fined £5, with £5 expenses. James Edwards M'Guire, Greenock, was similarly dealt with. The Fiscal stated that M'Guire was simply a quack, who professed to cure everything on the shortest notice and most reasonable terms. M'Guire said he held an American diploma, which, however, he had lost in the course of his travels. A similar penalty was inflicted in the case of Samuel Loudon, known in Greenock as the "old army surgeon." He said that he had been twenty-one years in the Ambulance Department of the Army, and had had a good practice. The Sheriff said that experience in nursing did not qualify him to act as a surgeon. The damage that he and others like him did with a community was incalculable.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 14.

Sir JAMES PAGET, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

ON A FORM OF CHRONIC INFLAMMATION OF BONES (OSTEITIS DEFORMANS).

SIR JAMES PAGET, Bart., read a paper on the above subject. It contained a description of cases of a form of chronic osteitis, of which the following were given as the chief characters:—Chronic inflammation of bones begins in middle-age or later, is very slow in progress, may continue for many years without influence on the general health, and give no other trouble than those which are due to the changes of shape, size, and direction of the diseased bones. Even when the skull is hugely thickened, and all its bones exceedingly altered in structure, the mind remains unaffected. The disease affects most frequently the long bones of the lower extremities and the skull, and is usually symmetrical. The bones enlarge and soften, and those bearing weight yield and become unnaturally curved and mis-shapen, suggesting the proposed name "osteitis deformans." The spine, whether by yielding to the weight of the overgrown skull, or by change in its own structures, may sink and seem to shorten with greatly increased dorsal and lumbar curves; the pelvis may become wide; the necks of the femora may become nearly horizontal. But the limbs, however mis-shapen, remain strong and fit to support the trunk. In its earlier periods, and sometimes through all its course, the disease is attended with pains in the affected bones—pains widely various in severity, and variously described as rheumatic, gouty, or neuralgic, not especially nocturnal or periodical. It is not attended with fever. No characteristic conditions of urine or fæces have been found in it. It is not associated with any constitutional disease, unless it be cancer. The bones, examined after death, show the consequences of an inflammation affecting—in the skull, the whole thickness; in the long bones, chiefly the compact structure of their walls, and not only the walls of their shafts, but in a very characteristic manner those of their articular surfaces. The changes of structure produced in the earliest periods of the disease have not yet been observed, but it may be believed that they are inflammatory; for the softening is associated with enlargement, with excessive production of imperfectly developed structures, and with greatly increased blood-supply. Whether inflammation in any degree continues to the last, or whether, after many years of progress, any reparative changes ensue after the manner of a so-called consecutive hardening, is uncertain. Microscopical examinations of the diseased bones by Mr. Butlin are reported, and the altered shapes of two persons suffering with the disease are shown in photographs. The diagnosis of the disease from various forms of hyperostosis and osteoporosis is pointed out, and an attempt is made to indicate the variety of diseases which have given rise to different examples of the great porous skulls found in museums.

Mr. BRUDENELL CARTER said the patient first mentioned by Sir James Paget had been seen by him. At that time there were small hæmorrhages along the margin of the retina. Dr. Andrew Clark also saw him at that time, and carefully examined him. He thought there was some hypertrophy of the heart. Mr. Carter did not again see the patient.

Sir JAMES PAGET said he had endeavoured in vain to find out what ophthalmic surgeon had seen this patient, he having been very anxious to find out whether there was any compression of the optic nerve.

Mr. CARTER said there was none. His idea was that the hæmorrhages were due to the strong heart and weak vessels.

Mr. BARWELL remarked upon the analogy of the disease to rheumatic arthritis, which he considered was really an osteitis. He also spoke upon the subject of the nature of the bone apparently produced.

Sir WILLIAM GULL had had the opportunity of watching one of these cases. Sir James Paget called it an ostitis; this might be its true nature, but the whole subject required careful study. In his patient there was no pain; the bones grew gradually, and there was no appearance of inflammation in the ordinary sense of the word. But why was this a general affection? Nearly all

parts of the body were affected; the phalanges were not so, but the hyoid bone was. The flat part of the scapula was not thickened, but the rest was. The man died from thickening of the ribs so that he could not breathe. True, there was dilated right heart, and a generally bloody condition of the bones, but the condition of the respiration would account for all that. Was there anything peculiar in the history of such cases? Did it depend on ancestral inheritance from some long defunct animal race? He had given this man nothing; all others who had treated him had given him iodide of iron.

Dr. Goodhart remarked that most of the cases recorded had died of cancer. Out of five of the cases reported in the President's paper three had thus ended. Was there any definite connexion between the two? Might it not depend on some general tumour of the bone connective-tissue, something like molluscum as affecting the subcutaneous connective-tissue?

Sir James Paget, in reply, said that the weight of the bone had been taken, but he could not tell what was the specific gravity of healthy bone; his impression was that the weight of these bones did not vary much from the normal. He thought the malady an osteitis, degenerating the quality and increasing the quantity of the bone; its real pathology was still in doubt. He could not form a guess as to its origin; but as to rheumatic arthritis, who could say what was its cause and origin? If anyone, Adams of Dublin would have found out. At all events, both this malady and rheumatic arthritis could long exist without permanent injury to health. Nevertheless he could not think the two diseases similar. In no record of rheumatic arthritis was there any mention of osteitis of the shaft. In this way the two were broadly distinguished. Certainly the malady could not be called a tumour from an anatomical point of view. In three cases it was quite true there was cancer, but in only one was there cancer found near the diseased structure, and then it was quite separate from it. He quite admitted the coincidence, but in his opinon it was a coincidence and nothing more.

Drs. Barnes and Hare and Mr. Brudenell Carter, who had been appointed as delegates to the Philadelphia Medical Congress, had sent in a report of their reception there, which was next read, and the Society adjourned.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, November 17.

Dr. Dudfield, Vice-President, in the Chair.

The minutes of the previous meeting having been read and confirmed, a letter was read from Dr. Burge, of Egham, explaining that his resignation is due to his inability to attend the meetings now that he resides so far from London. Mr. Jessop, of Cheltenham, was proposed as an extra-metropolitan member. Mr. Hugh Rees, of the Carnarvonshire Combined Districts, was unanimously elected an extra-metropolitan member.

The Report of the Council was then read upon the three questions here subjoined:—1. That of "Tenure of Office" by Medical Officers of Health. In replying to a letter received from the Secretary of the North-Western Association of Medical Officers of Health in reference to this subject, the Council consider that the appointment of Poor-law Medical Officers being permanent, or only terminable by the consent of the Local Government Board, the tenure of office of Medical Officers of Health should be to the same extent independent of the Local Authority, and that no District Board should have the power of voting a reduction of salary. 2. The Action desirable for the Society to take in consequence of the Prevalence of Small-pox in London. The Council consider it most desirable —(*a*) that Medical Officers of Poor-law districts, and other parochial Medical Officers, should report systematically every case of small-pox under their care as completely as possible; (*b*) that householders should give information to the Medical Officer of Health of the occurrence of small-pox or other infectious disease as soon as possible; (*c*) that means should be provided for the more efficient isolation of non-pauper patients in case of spread of the epidemic. 3. The Council postponed the question respecting the desirability of periodically publishing the Transactions of the Society.

Dr. Tripe then rose to move an amendment to the Report of the Council, on the first head, to the effect that the rule for "tenure of office" be applicable only to extra-metropolitan members, which was carried.

With reference to the second question, Dr. Dudfield explained that the Society of Arts had discussed the difficulty which had been suggested as to the disability of the medical attendant to act as "common informer," and remarked that it was most desirable to have instant and decisive action in the present state of the law, and not to move for fresh legislation on the subject of epidemics generally.

Dr. Tripe complained that the Council had merely expressed an opinion that certain things were desirable, instead of reporting upon the action desirable for the Society to take, with a view to requiring parish officers to give information to the board of guardians. Parish medical officers may be asked to furnish the clerk to the guardians with any information he may require for the efficient supervision of the parish; the officer of health would then be in a position to act upon this information.

Dr. Dudfield concurred in this suggestion as being one of the duties of a Poor-law medical officer to report any particular cases of interest, especially during the prevalence of epidemic disease.

By mutual consent, the further debate upon this important subject was postponed until after the reading of Mr. Cross's paper, of which we here give an abstract.

A Few Remarks on Contagion and its Prevention.

Mr. Cross, after some introductory remarks, said: The point to be submitted to your consideration is this, "Who is the proper person to convey to the sanitary authority the notice of the existence of any contagious disease in a family?" By way of illustration he referred to the deaths of several children living in a row of cottages, the circumstances of which were duly reported to the Town Council. The first child (T. H.) attacked attended school on July 3, and was taken with a "rash" the following day. His little sister was then ill, and said to be suffering from bronchitis. She slept with her brother during his illness, fell ill with scarlet fever on the 9th, and died on the 14th of the month. The brother died on the 22nd, in consequence of abscesses which supervened upon the fever. Altogether six children died in the locality; and there was no difficulty in tracing the progress of the contagion from one house to another. In the report Mr. Cross drew attention to two points—first, the great advantage that would arise to the community if the principle of "isolation" was thoroughly understood and carried out upon the first appearance in a family of so contagious a disease as scarlet fever. It was reasonable to conclude that if T. H. had been taken to the Iron Hospital on the day when the rash first appeared, where his own medical man could still have looked after him, his own chance of recovery would have been improved, and the lives of his sisters and of his playmates have been spared. Secondly, to the desirability of appointing some official in all children's day-schools, whose duty it should be to obtain accurate information as to the cause of absence of any of the scholars. A child, R. P., attended a public elementary school ten times in the week ending September 29, fell ill with scarlet fever on the 30th, and died on October 12. The brother of this child, A. P., attended another public elementary school in the city, while his sister was under medical treatment, ten times in the week ending October 6, was attacked with scarlet fever on the 7th, and died on the 11th. Thus for more than a week this boy was attending school with about 150 other boys while in constant communication at home with a child suffering from an attack of scarlet fever which proved fatal. To prevent the recurrence of such a common means of spreading disease, the School Board officers should obtain accurate information respecting the cause of absence of children from school. It is the *presence* of a child at school, not his *absence*, which caused the danger adverted to. Who is the proper person to communicate to the sanitary authority the existence of contagious disease in a family? A feeling is gradually gaining ground that this duty should be entailed upon the householder, and not upon the medical attendant. Mr. Cross urged the importance of such an inspection as to the cause of absence of children from school, because it was apparent that if the reason of the absence of the child R. P., who ceased to attend on September 29, had been ascertained, the presence of the brother at another school in the city subsequent to that date could easily have been prevented. The duty sought to be imposed upon the medical profession by the School Board of Norwich embraces the subject of

"disease reporting" generally. That such reporting is desirable in the interest of the common health cannot be disputed; but who is to undertake it and carry it out? It must come from one of three sources—either from a paid inspector, the medical attendant, or the householder. To pay anyone to hunt up the necessary details would entail a system of espionage that must be most repulsive to all classes of society, and nothing would be easier than to evade such inquiries. To make the medical man the legal informer would subject him to much unpleasantness, and tend to destroy that friendly intercourse and mutual confidence between himself and his patients which is of the greatest comfort and solace to him in discharging the arduous duties of his profession. Is it not a well-established fact that in many cases among the poorer classes the advice of the medical man is sought for after the trial of some antique family nostrum, after the failure to do any good of medicine procured from the neighbouring chemist, and when the inconvenience arising from the want of the necessary certificate to produce to the district registrar, or the prospect of a coroner's inquiry, stares them in the face? It is the householder who should be held responsible to convey the necessary information to the sanitary authority. Mr. Cross then read an extract from a report on the Registration of Diseases, presented at the recent meeting of the British Medical Association at Sheffield, as follows:—"The authoritative declaration of the nature of the disease must necessarily come in the first instance from the medical attendant, and it would probably be unnecessary to make any enactment for the purpose of insuring that this declaration should be made, since it is a part of the unwritten law that guides the profession in their dealings with their patients. Compulsion on this point might, however, in some cases prove a help to the medical attendant. On the other hand, to be obliged to furnish information to a public official with regard to sickness occurring in a family might reasonably be resented by the medical profession. It would be regarded by many not only as an unnecessary addition to their work, but as an inquisitorial test of the extent of their practice, and as leading to a breach of professional confidence that might cause much annoyance both to doctor and to patient. To make the householder responsible for the declaration of the presence in his house of diseases likely to be injurious to the community would, indeed, be in accordance with the precedent set in the Public Health Act of 1875, which enacts (Clause 84) that the keeper of a common lodging-house should give notice of the presence of fever or any infectious disease not only to the medical officer of health of the local authority, but also to the Poor-law relieving officer of the union or parish in which the house is situated." Supposing the conclusion has been arrived at that the information is to be required at the hands of the householder, and confining the diseases to be reported on, for the present, to typhoid, typhus, and scarlet fevers, small-pox, cholera, and diphtheria, it remains to be determined—first, What penalties ought to be enforced for neglect of the duty? and secondly, What are the best means to secure early legislation on the subject? The wilful exposure of persons suffering from a dangerous infectious disorder, and all those who neglect to give the necessary information to the proper quarter, should be rendered liable to pains and penalties on conviction. The Statistical Society this year presented a petition to both Houses of Parliament, signed by a large number of the physicians and surgeons of the metropolis and many provincial towns, praying for a further extension of a clause in the Public Health Act, and asking for an amendment in which there should be inserted a clause "making it a misdemeanour for persons to endanger the lives and health of their fellow-creatures by wilfully spreading either contagious or infectious diseases in the manner already provided against, or in any other way," and some joint action with the Statistical Society should be sought and might doubtless be obtained. An influential deputation should wait upon the Home Secretary, including amongst their number not only the heads of the medical profession and the presidents of the learned societies, but any other persons interested in sanitary work and improvement, whose presence it might be thought would give weight to the proceedings.

Dr. Dudfield, commenting on Mr. Cross's paper, referred to some cases showing the rapidity with which small-pox may spread where the conditions of overcrowding and neglect of sanitary precautions favour the propagation of the disease. In one house in the Kensington district several cases occurred, and there were two deaths. The disease spread to the adjoining house, probably through the exposure of infected soiled bed-linen in the garden at the back of the house. It is most essential that the householder be required to convey the information to the local authority.

Dr. Tripe said that he agreed almost entirely with the author of the paper.

Mr. Liddle remarked that in the district of Whitechapel the schoolmasters are most careful to forbid all children coming to school from infected districts. He doubted if it was possible, in a densely populated district especially, to carry out a proper system of isolation. The children will play and mix together in the streets. In the case of shopkeepers, such as milkmen, it was impossible to prevent them from plying their trade, and frequently germs must be carried about in that way. Those who worked for tailors and dressmakers frequently carried fomites of contagion.

Dr. Jacob applauded the readiness with which medical men in the country districts report cases of fever in their practice, and he thought it most desirable that there should be a general law to oblige such cases to be reported to the local authority if the information was not sent voluntarily. There would be unnecessary circumlocution if the information were conveyed first to the householder, and through him to the local authority. There would, likewise, be many mistakes and delays from the householder having other calls upon his time. If it were not a compulsory law many medical men would withhold the information from fear of offending their patients.

Dr. Dudfield referred to the possibility of cases occurring where no medical man was in attendance, and gave reasons why many paupers neglect to seek medical advice from the district medical officer, fearing lest they should be drafted off to the fever hospital, or in some other way be required to put their house in order. It would be a grand step in the right direction if the householder were required to give the information. Often a case of small-pox is diagnosed first by the friends. On the other hand, it is desirable for the information to be brought from the medical man in attendance, because the householder will not be aware of the danger and the precautions necessary to be taken in such cases.

Dr. Danford Thomas, Deputy Coroner for Middlesex, said that he only remembered holding one inquest upon a case where no medical man had attended. He suggested that a printed form be filled up by the medical attendant, similar to the vaccination paper, when attending fever cases.

Mr. Cross, in replying to the criticisms upon his paper, said: One thing we are agreed upon, and that is that some legislation is desirable. All the advantages of isolation and control of epidemics would be acquired by education, or, in other words, "citizenship in sanitary work." An Act should be passed, making it a misdemeanour to neglect due precautions for the prevention of the spread of fever. Another reason for not requiring the medical man to furnish the information was that so many patients are attended by unqualified practitioners, and the officer of health could not depend upon information received from such a source.

Dr. Tidy, referring to the outbreak of small-pox in Islington, said that twenty-one cases occurred in July last before he was communicated with, and if the last case had not died he might still have been unaware of the existence of a serious epidemic. The first case was at a grocer's shop. The patient was treated at a provident dispensary, and this was the fourteenth case treated by a Mr. Dowd, who, he believed, resided at Camberwell. It is most important that speedy legislation should put a stop to such a process of inaction. Merely because, as an occasional thing, no medical man attended the case, must not deter us from acting. The law is not made to govern exceptional cases. The doctor has a duty to his patient, first to diagnose the disease, then to treat it; but the patient has a duty to the parish in which he resides, and that is to check as far as possible the further spread of the disease. We must move for fresh legislation, or throw the onus of neglect upon the Home Secretary, who should be requested to receive a deputation from the Society before next Parliamentary session. He would therefore conclude by moving the following resolution:—"That this Society request an interview with the Home Secretary, to urge the paramount importance either of amending some existing Act of Parliament, or of legislating in some other way as may be deemed necessary, to make it compulsory on every practitioner of medicine, so soon as a case of infectious or contagious disease occurs in his practice or under his professional care, to inform the householder, or

person in charge of the case, of the existence of such disease in the house, and that the householder or person in charge of the case be required, under penalty, to convey this information within twenty-four hours to the local authority."

The motion was carried with one dissentient.

Dr. Dudfield put the question to the Society whether more hospital accommodation was needed, and it was agreed that the vestries be requested to provide additional accommodation for infectious diseases among non-paupers.

The Society then adjourned.

NEW INVENTIONS AND IMPROVEMENTS.

VASELINE, OR SAXOLEUM PURIFICATUM.

Messrs. Corbyn, Stacey, and Co. (High Holborn, London) have sent us some very perfect samples of this substance, which has gained a high and well-deserved repute as an emollient application, and as a basis for ointments. It is obtained from the residue of the distillation of American petroleum, but is itself perfectly without odour; is soft and smooth; it possesses very great indifference to chemical reagents—that is, it is not at all affected by most chemical bodies, and only slowly by the more powerful among them; and it does not become rancid on exposure to air, even under circumstances highly favourable to the development of rancidity. It is, in short, bland, inodorous, unchangeable, and agreeable to the eye and the touch; and is, unquestionably, a valuable addition to our therapeutical agents.

LIEBREICH'S PEPSIN ESSENZ.

The many forms of pepsine which are produced show very clearly the general belief in that substance as an aid to digestion, and Dr. Liebreich's Pepsin Essenz is likely to prove a popular preparation. It is, we believe, a solution of pepsine in some kind of light German wine, and is directed to be taken in doses of from one to three teaspoonfuls after meals. The proportion of alcohol present is said to be very small, and the digestive power of the preparation, as proved by experiments with it in artificial digestion, to be unusually great. It is agreeable to look at, and pleasant to the taste, and in some cases in which we have employed it the result has been highly satisfactory. We think it well worthy the attention of the profession. The sole agents for the preparation, in England and Ireland, are Messrs. Corbyn, Stacey, and Co., London.

NESTLÉ'S MILK FOOD.

The manufacture of a perfect, convenient, and not too expensive artificial food, suitable for young infants and children, is still one of the problems of the day, and our thanks are due to those who devote themselves to the solution of this difficult question; though it is hardly to be supposed that we shall ever be able to produce artificially that which nature, through the mother, provides for the infant; as, no doubt, there are subtle differences, even in the healthiest milks, which neither science nor art can fathom, and still less imitate. An exceedingly good artificial food is prepared by Mons. Henri Nestlé, of Vevey, in Switzerland. Its chemical analysis shows it to contain all the elements required for nutrition and growth. It is very agreeable to the taste, and being in the form of powder can be easily and safely carried about from place to place, while it is quickly prepared for use by the addition of water only. Our own trials of this food lead us to pronounce very favourably on it, and we recommend those mothers who are unable, or ought not to suckle their children, to try it. We remember, very many years ago, a nursery in which the artificial food used for numerous infants was almost exactly the same in composition as M. Nestlé's, consisting of well-baked wheaten flour, sugar, and cow's milk. It was an excellent and acceptable food, and M. Nestlé happily supplies it in a most convenient and handy form. The food is good, not only for infants and children, but it may also be taken with great advantage by those who are suckling, and anxious to improve the quality and increase the quantity of their milk. Lastly, invalids and convalescents will find it a simple, nourishing diet, and one which, while it pleases the palate, will materially aid their restoration to health and strength. The London depôt for "Nestlé's Milk Food" is at 3, Barbican, E.C.

OBITUARY.

CHARLES MAYO, F.R.C.S., of Winchester.

It is our duty to record the death of this eminent surgeon, which took place on November 27, at his house in St. Peter's-street, Winchester, which he had inhabited for nearly sixty years. Charles Mayo was the third son of the Rev. James Mayo, M.A., Head Master of Queen Elizabeth's Free Grammar-School, at Wimborne Minster, in the County of Dorset, and Rector of Avebury, in Wiltshire, as his father and grandfather had been. Wiltshire seems to have been the home of the family, where several members of it flourished as country clergymen and schoolmasters, from whom the Rev. Dr. Mayo, of Beechingstoke, the Rev. Dr. Herbert Mayo, of St. George's-in-the-East, the late Thomas Mayo, M.D., President of the Royal College of Physicians, Herbert Mayo, the physiologist, and others of considerable literary repute, are descended. Charles Mayo was born on December 29, 1788. In his father's house he received a good education, calculated to fit a boy for any position in life. As there is now a raid upon the old grammar-schools by the Endowed Schools Commissioners and Charity Commissioners, it may be well to mention that the boys at the Wimborne Grammar-School in the last century read Cicero and Virgil in Latin, Xenophon and Homer in Greek, and arithmetic up to simple equations; whilst French was taught so well, that the subject of this sketch delighted in having a French novel read to him up to within a short period of his death. It will be difficult to find in any modern school a better type of a sound middle-class education, and it may be doubted whether the affectation of teaching "science" to young children instead of grammar will turn out boys better qualified for everyday life. Whilst speaking of French, there comes to our mind an anecdote we have heard Mr. Mayo relate, illustrating the manners of the time and the predilections of the boy. It is sometimes supposed that boys who are destined to become surgeons show their tastes early by dissecting dogs and cats, and by prying into anatomical matters which most people think repulsive. Now, it so happened that French was taught at Wimborne by a Mons. Leprince, said to be a French *émigré* of good family, who lived at the neighbouring town of Ringwood, whence he made professional journeys to all the towns around. As Ringwood was nine miles from Wimborne, the schoolmaster lent Mons. Leprince his horse to ride halfway back to Ringwood, whilst young Charles Mayo was sent on before to walk to some appointed spot, whence he had to ride the horse back whilst Monsieur dismounted and finished his journey on foot. But it so happened that, some short time before, a frightful murder had been committed at Parley, a desolate village a mile or two to the south of the road between Wimborne and Ringwood, and the bodies of the two murderers were hung in chains from a gibbet on a heath within a very short distance from Parley, where, although the gibbet has vanished, the memory of the affair survives to the present day. On one occasion young Charles Mayo, when he was sent as usual to take the horse from the Frenchman, was tempted to leave the high road, and go and inspect the remains of the murderers, whose bones and rags swung and creaked horribly in the wind; but when he returned to the high road, the Frenchman, not seeing him at the accustomed spot, had gone on towards Ringwood, and the truant did not return to Wimborne with the horse till long after the appointed time, and with no small fear of the consequences, for his father, amongst other accomplishments, was thought to excel in the use of the birch. Whether or not, however, this anatomical pilgrimage was considered to mark out his future destiny, the profession of medicine was chosen for him, and he began, at the age of fifteen, by being apprenticed to Mr. Brown, a city apothecary, who flourished and kept a shop at the corner of Raven-row, Bethnal-green, just on the east of Bishopsgate-street. Mr. Brown was a member of the Society of Apothecaries—a body of men at that time of good culture and social position, amongst whom were many good botanists. The Society kept up the ancient and decent custom of examining the pupils of all its members in Latin at the beginning of their apprenticeship, and gave them the opportunity, by means of herborising excursions, of cultivating a practical acquaintance with botany, a taste for which was preserved by the subject of this sketch up to a late period in life. In truth, the change from the life of the Wimborne

schoolboy to that of the apprentice in Bishopsgate required some compensation. The business of an apothecary was a kind of compound between a trade and a profession, in which the professional skill supplied dignity, but the trading element supplied the means of living. Remuneration was obtained by supplying draughts, mixtures, and other forms of drugs, which were supplied profusely, and formed the items in a long bill of charges sent in at Christmas. That a medical practitioner shall supply his patients with medicine, is reasonable and convenient; but that he shall make the medicine supplied the basis of remuneration, instead of his time and skill, is derogatory to himself and injurious to his patients. We have heard Mr. Mayo describe the weak parts of this system, which were—the multiplicity of bad debts which crowded the ledger of the Bishopsgate apothecary, and the heavy cost of drugs, and particularly of bottles, in proportion to the receipts.

Meanwhile the young apprentice's life was not a cheerful one. The errand-boy slept under the counter, the apprentice had a bed in an adjoining closet, and the family lived in a dingy back-parlour; whilst a drawing-room upstairs, where the carpet and furniture were covered with brown holland, was used only about twice a year.

The apprentice had the recreation, if he chose, of accompanying the mistress once a week in a hackney-coach to hear a Calvinistic preacher at Clerkenwell. He had a book called "Tyrocinium Medicum; or, the Duties of Apothecaries' Apprentices," which will give some idea of the trade element amongst the general practitioners of the time. The dusting of shelves and bottles was held to be the chiefest of duties, and the writer enforces it on the medical apprentice in the terms in which Ovid excites the young men of his day to brush away the dust of the amphitheatre from off the clothes of the young ladies—

"Et si nullus erit pulvis tamen excute nullum."

It is easy to imagine the joy which the apprentice felt, when after about three years of this kind of life he entered as a student at St. Bartholomew's Hospital, and became acquainted with medicine and surgery in their most elevated and dignified form. He threw himself with great ardour into the study of anatomy, and was dresser for a considerable period to Sir Charles Blicke, then one of the leading London surgeons, whilst he became known to Abernethy, Lawrence, Stanley, Wormald, and others, who had attained, or were attaining, repute.

After passing with credit through the course of instruction at St. Bartholomew's Hospital, he became a member of the College of Surgeons in 1811; and very soon afterwards, hearing that the Governors of the County Hospital at Winchester desired to increase their staff, he came down, and was elected Surgeon to that Hospital. Of course this could not be expected to be altogether pleasing to the existing functionaries, who for a time gave him, as he thought, no cordial co-operation. The following letter from Mr. Abernethy, dated August, 1812, at the time when Mr. Mayo was preparing for his first operation of lithotomy, will tell its own tale as to the state of feeling at the time. It will also show how thoroughly Abernethy was prepared to back his old pupil:—

"My dear Sir,—If the governors of any hospital entrusted me with the care of the patients, I would take care to do my duty to the best of my ability. I would not bleed and purge a patient repeatedly, prior to an operation for lithotomy, to the extent you describe, at the suggestion of any man, if it did not appear to me proper. There is but one general rule for a man's conduct: Do as you would be done unto. I would not defer the operation beyond that time when it seemed most conducive to the patient's welfare to perform it. You know I use a gorget, which cuts as well as any knife that ever I tried, and has the advantage of being a conductor for the forceps. If I used a knife, it should be such a one as Mr. Cooper uses. I know not what to advise you to do. You represent your patient as much reduced, and if the subject were unfavourable for an operation, I would rather send him to a London hospital than run the risk of his dying after an operation, however well you might perform it. This is the beginning of lectures; I have scarcely time to write. Had it happened at any other season I would have gone to Winchester.—Yours most sincerely, J. Abernethy.—August, 1812."

The operation was performed, and the patient recovered.

From this time forward, up to the year 1870, Mr. Mayo's life was one of the busiest professional work. He gained considerable repute as a lithotomist, which was brought to a climax by his successful extraction of one of the largest stones on record, weighing more than fourteen ounces, in December, 1818. The writer cannot undertake to say what was the entire number of operations of this sort that he performed, but he did two in one day in 1848—both, unluckily, fatal. The last was on a man of his own age (seventy-four), in 1861, which ended happily. As a lithotomist his manner of proceeding and instruments were bold and simple, in imitation of Cheselden. He performed several capital operations for axillary and other aneurisms, some of which were made known through the *Medical and Chirurgical Transactions;* a case of complete transposition of the viscera, cases of deep encysted tumours in the neck (*Lancet*), and cases of epispadias. Hernia in all its varieties came under his notice, and the last entry in his case-book is one of obturator hernia, entered in 1873, at the age of eighty-four. His experience, too, in the obstetric department was very large. During many years his practice was a very large one, although he never succeeded amongst the great county families and clergy. On coming to Winchester he found all the best practice in the hands of gentlemen who were not his inferiors in professional skill, and probably his superiors in knowledge of the world and suavity of demeanour,—who were far too well-established and too judicious to afford a loop-hole to a younger rival; hence, as we have said, so far as "The Close" and the country seats around were concerned, his practice was limited; but amongst the middle and lower orders his popularity was unbounded. He exhibited in the strongest possible degree that incongruous combination of professional work which linked together Raven-row and St. Bartholomew's Hospital. At one time of the day he would be tying the subclavian artery or diagnosing an obscure fracture, whilst at another he would be busily superintending the dispensing of medicines for sick paupers or club patients, for he took all the practice that offered itself. He was a thorough lover of professional work (though too often unremunerative), allowed nothing to interfere with the discharge of his duties, and showed a genuine kindliness to all who were in real distress or trouble; nor was he a bit the less popular amongst the less fastidious classes, that he was supposed to have copied or improved on the manners, not to say the eccentricities, of his eminent master, Mr. Abernethy. He was blunt, outspoken, and testy to the greatest degree, and when made angry, as he often was, he relieved himself and amused his hearers by a stream of half-humorous vituperative epithets of the quaintest and most original description. He was a man of exuberant health and activity, up early and late, and never seeming to feel hunger or fatigue—so, at least, some of his pupils used to think when he summoned them to make post-mortem examinations, dress compound fractures, and do other unsavoury work at the hospital before breakfast.

He had many pupils—in fact, for many years Winchester was quite equal to one of the smaller London hospitals in the extent of its practice and means of professional education. His old pupils became lifelong friends, and soon forgot the caustic epithets with which their master irritated their self-esteem, especially when they thought they had done something clever. They forgot the rough surface, and valued the sterling metal underneath. The practice of the hospital in Mr. Mayo's hands was homely but effective. It would be difficult anywhere, with any apparatus, to turn out better set fractures than Mr. Mayo turned out with simple wooden splints. There was one thing which comes to the remembrance of the writer pretty vividly—the air of the Hospital: a compound of bad breath, unwashed skins, and ulcerated legs, which could be tasted as well as smelt the moment anyone entered the Hospital door. Thirty or forty years ago people lamented the frequent deaths after operations from pleurisy or other apparently eccentric causes; but it is easy to see now that, in a purer air, Mr. Mayo would have had a much larger percentage of successful lithotomy cases, whilst many a life might have been spared which was sacrificed to puerperal fever and erysipelas in the hospital and town.

Mr. Mayo was at one time Mayor of Winchester. He married, in 1835, Miss Dennis, the daughter of a clergyman deceased, by whom he leaves four children—Charles, M.D., now at Fiji; James, a clerk in holy orders; and two daughters unmarried. In 1851 the citizens gave him a grand entertainment in honour of the fortieth anniversary of his hospital appointment. He was a man of great power and activity—some of it wasted in eccentricities, and some in a set of inferior professional duties, which he did manfully, shirking

nothing, however distasteful. His last notes, in his own hand, on Obturator Hernia (which, we believe, were published in the *British Medical Journal*) show as careful a collation of authorities as if written by the youngest student. He never could believe that he was growing old, and disliked the honour done him of removing him from the active to the consulting staff of the Hospital in 1870, when in his eighty-third year. In 1874 he became blind, but even then believed himself quite fit to practise. However, he soon found occupation and solace in daily attendance at the Cathedral service; he became quieter, less restless, but still was in possession of a vigorous memory, and delighted in telling the account of his early days, which furnished the materials to the writer of the present sketch. At last he became feeble and wandering, though he never took to his bed, used to talk of "going home"—a wish which was, we hope, gratified, when he sank into his last sleep on November 27, 1876, having nearly completed his eighty-eighth year.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are the lists of candidates who have passed the Second M.B. Examinations for Honours:—

MEDICINE.

First Class.—Pepper, Augustus Joseph (Scholarship and Gold Medal), University College; Hunt, Joseph William, (Gold Medal), University College; Pinnell, Thomas Mark, University College; Hellier, John Benjamin, Leeds and University College; Ferrier, John Christian, Guy's Hospital.

Second Class.—Rogers, Thomas King, University College; Burton, Samuel Herbert, University College; Jones, Arthur Henry, Guy's Hospital; Kidd, Walter Aubrey, Guy's Hospital; Parry, Thomas Sharp, University College.

OBSTETRIC MEDICINE.

First Class.—Hellier, John Benjamin (Scholarship and Gold Medal), Leeds and University College; Pepper, Augustus Joseph (Gold Medal), University College; Ferrier, John Christian, Guy's Hospital; Pughe, Rhinallt Navalw ap Joan, Liverpool Royal Infirmary; Jones, Arthur Henry, Guy's Hospital.

Second Class.—Burton, Samuel Herbert, University College; Rossiter, George Frederick, St. Thomas's Hospital; Edwardes, Edward Joshua, St. Mary's Hospital; Rogers, Thomas King, University College; Kidd, Walter Aubrey, Guy's Hospital.

Third Class.—Duke, Herbert, Guy's Hospital; Langley, John Geoffrey, University College; Lamb, William Henry, Guy's Hospital.

FORENSIC MEDICINE.

First Class.—Pepper, Augustus Joseph (Scholarship and Gold Medal), University College; Kidd, Walter Aubrey (Gold Medal), Guy's Hospital; Jones, Arthur Henry, Guy's Hospital.

Second Class.—Langley, John Geoffrey, University College; Harrison, Charles Edward, St. Bartholomew's Hospital; Parry, Thomas Sharp, University College; Rogers, Thomas King, University College.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations of the College, held on Tuesday, Wednesday, and Thursday, November 14, 15, and 16, the following candidates were successful:—

For the Licence to practise Medicine—

Beatty, John William. | Cummins, Henry Royse.
O'Reilly, Peter.

For the Licence to practise Midwifery—

Beatty, John William. | Cummins, Henry Royse.
O'Reilly, Peter.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 23:—

Powell, John, Ewgas Harold, Hereford.
Dring, William Ernest, Beacon-hill, Camden-road.
Taunton, Wm. Whitchurch, Redlynch, Wilts.
Merriman, Wm. Semple, Knutsford, Cheshire.

The following gentlemen also on the same day passed their primary professional examinations:—

Richardson, Richard Tippets, London Hospital.
Shipton, Arthur, King's College Hospital.
Hoole, Henry, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

MANOERS, HORACE, M.R.C.S.E., L.S.A.—House-Surgeon to St. Peter's Hospital, Berners-street, W.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon Michael Waistell Cowan, M.D., has been promoted to the rank of Fleet-Surgeon in her Majesty's Fleet, with seniority of November 9, 1876.

WAR OFFICE—MEDICAL DEPARTMENT.—Deputy Surgeon-General Stanhope Hunter Fasson, M.D., retires upon temporary half-pay; Surgeon-Major Robert Gillespie, M.D., retires upon temporary half-pay; Surgeon-Major Alexander Scott Fogo, M.D., retires upon half-pay, with the honorary rank of Deputy Surgeon-General; Deputy Surgeon-General William Johnston, M.D., Madras Army, to be Surgeon-General.

BIRTHS.

CARMICHAEL.—On October 28, at Fort William, Calcutta, the wife of J. C. Gordon Carmichael, M.B. Aber., and C.M., Bengal Medical Service, of a son.

CORFIELD.—On November 27, at 10, Bolton-row, Mayfair, the wife of W. H. Corfield, M.D. Oxon., Professor of Hygiene and Public Health at University College, London, of a son.

DAVIS.—On November 1, at Shahjahanpur, North-West Provinces of India, the wife of J. Norman Davis, M.D., Army Medical Department, of a daughter.

MARRIAGES.

COOK—CLAXTON.—On November 23, at All Souls, Langham-place, Joseph B. Cook, M.R.C.S. Eng., to Malvina, only daughter of the late Jesse Claxton, Esq., solicitor, of Ely, Cambs.

DOUGLAS—RAM.—On November 22, at All Saints, Notting-hill, Justyn G. D. Douglas, M.D., of Bournemouth, to Augusta Mary, third daughter of the Rev. Stopford Ram, late vicar of Pavenham, Beds.

ELLIOTT—RUTTLEDGE.—On November 23, at St. George's, Bloomsbury, Henry George Elliott, L.R.C.S.I., of Gateshead-on-Tyne, to Mary Withers, eldest surviving daughter of the late T. Ruttledge, Esq., of Ingatestone, Essex.

GARROLD—DAVIES.—On November 22, at Christ Church, Ebbw Vale, Monmouthshire, Richard Henry Garrold, Esq., of Kilforge House, Ross, Herefordshire, to Cecilia Mary, eldest daughter of John Davies, M.D., J.P., of Hill-side House, Ebbw Vale.

MOSELEY—COOKE.—On November 21, at All Saints Church, Kennington-park, W. A. Moseley, M.R.C.S., L.R.C.P., third son of Edwin Charles Moseley, Esq., of Nassau, Bahamas, to Grace Helena, second daughter of Major Thomas Cooke, late Bengal Army.

PHELPS—JONES.—On November 29, at the parish church, St. Marylebone, William Phelps, M.R.C.S., L.S.A., of Freshwater, Isle of Wight, to Maria E. S. Jones, daughter of Major-General Jones, Retired Bombay Staff Corps.

WHITTAKER—ASKIN.—On November 25, at St. Peter's Church, Dublin, Surgeon-Major John Henderson Whittaker, L.R.C.S.I., 20th Regiment, to Hannah Sophia, eldest daughter of Paul Askin, Esq., of 31, Mount Pleasant-square, Dublin.

WINN—GORDON.—On November 14, at St. James's Cathedral, Toronto, William Winn, Esq., Captain 1st (The Royal Scots) Regiment, son of James M. Winn, M.D., of Harley-street, Cavendish-square, to Helen, daughter of the late Honourable James Gordon, of Toronto.

DEATHS.

BATTY, EDWARD, M.R.C.S., at 34, Stafford-street, Liverpool, on November 22.

CRESPIN, EDGAR REGINALD LEGASSICKE, M.B., of Modbury, Devonshire, at 1, Harrington-square, on November 24.

HOOPER, JOHN, M.D., late of Aylesbury, Haddesdon, and Buntingford, at View Point, Ararat, Australia, on October 4, in his 78th year.

RICHMOND, CATHERINE, the wife of Thomas Geodier Richmond, F.R.C.S., late of Manchester, at Ford House, Prestbury, Cheshire, on November 21.

THOMSON, ELLEN JANE DOUGLAS, wife of J. Roberts Thomson, M.D., at Dunedin, Bournemouth, on November 24, aged 31.

WILLIAMS, GEORGE HARVEY, M.D., late of Rhyl, at Wrexham, on November 26, aged 57.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Honorary Physician. Candidates must be graduates in medicine of a university, and be Fellows or Members of the Royal College of Physicians, London, or Fellows of the King and Queen's College of Physicians, Ireland, or Fellows of the Royal College of Physicians, Edinburgh. Applications, testimonials, and certificates of registration, under cover, to the Secretary of the Hospital, on or before December 2.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Candidates, who must be unmarried, and registered members of the medical profession in accordance with the terms of the Act 20 and 21 Vict., cap. 90, must send in their applications, with their diplomas and certificate of registration, to be accompanied by references, and addressed to the Medical Committee, Children's Hospital, Steelhouse-lane, Birmingham, not later than December 8.

BOURNEMOUTH GENERAL DISPENSARY AND COTTAGE HOSPITAL.—Resident Surgeon. Candidates must be registered, unmarried, and possess a qualification in medicine and surgery. Testimonials, diplomas, etc., to the President of the Bournemouth Dispensary, care of A. A. Johnston, Esq., Hon. Sec., on or before December 31.

CHESTER GENERAL INFIRMARY.—House-Surgeon. Unexceptionable testimonials will be required of moral conduct, and candidates must possess a double qualification and be duly registered. Testimonials to the Chairman of the Board, on or before December 4.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Cheltenham Union.—Mr. Charles J. Newton has resigned the Third District; salary £30 per annum.

Chesterfield Union.—Mr. Siddall has resigned the Shirland District; area 6663; population 4004; salary £17 per annum.

APPOINTMENTS.

Biggleswade Union.—Samuel E. Walker, M.R.C.S. Eng., L.S.A., to the Potton District.

Bury Union.—Wm. B. Taylor, L.R.C.P. and L.R.C.S. Edin., to the Workhouse.

Mutford and Lothing and Incorporation.—John P. Smith, L.R.C.P. Edin., L.R.C.S. Edin., to the Lowestoft District and the Workhouse.

Nottingham Union.—Enoch Snell, F.R.C.S. Eng., L.S.A., to the Third District.

Preston Union.—John Holden, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Fourth District.

ILLEGAL CAUTERISATION.—A quack of Bordeaux having disfigured one of his patients by unskilful cauterisation, has been condemned to fifteen days' imprisonment, and to the payment of a fine of 300 fr. and of damages 600 fr.—*Lyon Méd.*, November 26.

DISLOCATION OF THE FEMUR IN AN INFANT.—Dr. Johnston exhibited to his clinic at Jefferson Medical College a child, seven years old, with dislocation of the head of the femur upon the dorsum of the ilium. The dislocation was produced by a fall when the child was only six months old.—*Philadelphia Med. Times*, October 14.

A SINGULAR CASE.—Dr. Ball communicated a case to the Biological Society which seems unique in scientific literature. A syphilitic woman, aged forty-one, was seized in February, 1875, with hemiplegia of sensibility and motility of the right side. He only saw the patient in February, 1876, when the hemiplegia had much diminished, but there was strabismus and paralysis of the left external ocular motor, with contraction of the left pupil, and mydriasis of the right. All these symptoms pointed to the diagnosis of a syphilitic cerebral tumour. Under the influence of specific treatment the symptoms had diminished in intensity by March 20, when there was observed a painful swelling, accompanied with redness and heat of the lower half of the right side of the face, the pulse being accelerated, but there being no glandular enlargement. Next day all these phenomena had disappeared without desquamation. On April 10 they were reproduced, to disappear again as rapidly. This painful erythema should be viewed in conjunction with the strabismus and the pupillary phenomena, and may be attributed to the great sympathetic. This is a clinical reproduction of the famous experiment of Claude Bernard on the ear of the rabbit.—*Progrès Méd.*, November 11.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Suburban.—Mr. Albert Napper, M.R.C.S., Guildford, was the founder of Cottage Hospitals.

Electrician.—Electro-therapeutics, as a branch of applied science, it is said, dates really from the time when Faraday placed the induction coil in the hands of Duchenne.

Rahere, Exeter.—Mr. Macready, who is a son of the celebrated tragedian, is a Fellow of the College of Surgeons. Mr. Luckerstein, as stated in the advertisement sent us, is *not* a Fellow.

As Drunk as a "Beast."—This expression was justly objected to by Dr. Patten, an American. While he was dining in London with some clergymen, one of them remarked, after turning off his glass of wine, "I do not think I am called upon to give up my glass of wine because some men, by using it to excess, make beasts of themselves." The doctor replied that he thought great injustice was done to the beasts by the comparison—that quadrupeds might be taken in *once* by strong drink, but very rarely the second time.

P., Gravesend.—It is on record that Dr. Lush was the member who pointed out the objection to the division into urban and rural authorities, on the second reading of the Public Health Act, 1872. His observation was—"The two sets of authorities frequently came into collision, especially in the outskirts of boroughs; and the Bill contains no provision by which their respective powers could be blended in such cases. In a city or borough under municipal control, the sanitary arrangements might be excellent, yet around it there might be a district built over, or partially built over, with hardly any sanitary provision."

A Perplexed One.—You can obtain *advice* at any of the children's hospitals in London without any cost. We do not understand what you mean by *assistance*.

Materfamilias.—The meetings recently held in Philadelphia of the "American Free Dress League" had for their object "the desire to abolish all unhealthy, cumbrous forms of female clothing, and to substitute styles which agree with the natural laws of hygiene." Some of the ladies were attired in the new style, which is described as "loose-fitting trousers and sack."

A Medical Artist.—The first Professor of Anatomy to the Royal Academy was Dr. William Hunter, the brother of the celebrated founder of the Hunterian Museum. He held the appointment from the foundation of the chair, in 1768, until his death in 1783. He was succeeded by John Sheldon, who also retained the office until his death in 1808. He gratuitously dissected a horse, and had casts made from it, for the sole use of the students: it is not the one in the hall of the College. Sheldon was succeeded by Sir Anthony Carlisle, twice President of the College of Surgeons, whose lectures were highly attractive. He resigned in 1824, and was succeeded by Joseph Henry Green, also twice President of the College. His lectures, though not so popular as Carlisle's, were more philosophical. Green resigned in 1851, and was succeeded by Richard Partridge, another President of the College, on whose death the present learned gentleman, Professor John Marshall, F.R.S., was appointed. He commenced his annual course on Monday last.

A "CAUTION."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—You very kindly inserted a letter from me a fortnight back, thereby putting my fellow-practitioners on their guard in reference to a man calling on me, and requesting my attendance "in about an hour's time," etc., at a certain address, which, upon visiting, I found to be a hoax, the object of which has since been pretty clearly shown. Well, sir, I am sure you and your readers will be pleased to hear that my letter has been the means by which Dr. Wallace, of Hackney-road, has very nicely captured this scoundrel. I had the immense satisfaction of identifying this very anxious "patient" at Worship-street Police-court this morning, where I understand his very interesting and extensive career will be further investigated on Wednesday next. Thanking you very much for publishing my letter,

I am, &c.,
F. G. LARKIN.

44, Trinity-square, S.E., November 29.

MILK OF SULPHUR.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I enclose a bit cut out of a recent *Globe*, by which it seems that a druggist has been harshly dealt with, and a false alarm raised by Dr. Newton. In the first place, "milk of sulphur" is not a definite chemical compound, but a commercial mixture of old standing. If people choose to buy it, or chemists to sell it, why should they not? It is not the Pharmacopœial "sulphur precipitatum," and does not pretend to be. May I not go to a chemist and buy the old paregoric, the old pil. cochiæ, or any other old compound prepared by the old formulæ in the old pharmacopœias? Secondly, the magistrate has to learn the distinction between sulphate of lime and plaster of Paris, which is calcined and anhydrous. Is chalk the same as quicklime? The old "lac sulphuris" causes no inflammation of the bowels: the idea is absurd. One sanitary mistake like this throws discredit on all attempts to secure purity of food and drugs.

ADEPT.

INEBRIATES IN THE ISLE OF MAN.

The repression of drunkenness is so fertile a subject for suggestions at the present time, that it may be of some utility to take notice how the law of some of our island dependencies deals with the habitual drunkard. It is announced that, for the first time, action was taken in Douglas, Isle of Man, on the 13th ult., under the Habitual Drunkards clause of the Isle of Man Licensing Bill. Six notices were served on each of the six hundred licensed drink-shops in Douglas; four referred to women and two to men. These notices recite that the persons named therein have been convicted of drunkenness three times within twelve months, and prohibit the sale of intoxicating liquors to them for the period of twelve months. It may be asked, Is the reclamation of the habitual drunkard to be effected through the public-house? Must it not rather—if to be permanent—be attained by the elevation of the moral condition of the delinquent? Repressive laws may stop drinking in public, but this habit of the habitual drunkard is too deeply rooted not to be indulged in in secret.

SPIRIT AND BEER LICENCES IN MIDDLESEX.

The Middlesex magistrates are exercising considerable caution in granting licences to public-houses in the county. It was stated at their last meeting that there was now one public drinking-place to every 550 persons. The magistrates have therefore nearly come to the position advocated by the teetotalers in the Bill promoted in Parliament—namely, that one public-house to every 500 persons would be taken as a reasonable number.

BOOKS AND PAMPHLETS RECEIVED—

Charles Meymott Tidy, M.B., F.C.S., Report on the Sanitary Condition of the Parish of St. Mary, Islington, during the Year 1875—Elizabeth Thomas, Great St. Benedict's—Clifton E. Wing, M.D., Vaginal Ovariotomy—Rev. Edward Marshall, M.A., F.S.A., On the Early Traces of Institutions resembling in some particulars the Modern Hospital—John Smith and Co., The Physician and Surgeon's Visiting List—E. D. Force, M.D., A Lecture on Specialism in Medicine.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—Transactions of the Odontological Society of Great Britain—Newcastle Courant—Proceedings of the Medical Society of the County of Kings, Brooklyn, N.Y.—Richmond and Louisville Medical Journal—Nordiskt Medicinskt Arkiv—Leisure Hour—Sunday at Home.

COMMUNICATIONS have been received from—

Dr. Henry Oliver, Boston; The Secretary of the Harveian Society; Mr. Balmanno Squire, London; Dr. A. Lawrence, Clifton; Mr. Eo. Gaay, Oxford; Mr. J. Whittall, London; Dr. J. W. Moore, Dublin; Mr. Harold Dillon, London; Mr. Jas. Macnab, Stirling; The Secretary of the Clerical, Medical, and General Life Association, London; Dr. A. Buchanan, Glasgow; Dr. Carter, Liverpool; Mr. Rosmton Parker, Liverpool; Dr. Balding, Royston; Mr. Maunder, London; The Secretary of the Obstetrical Society, London; The Secretary of the Clinical Society, London; Mr. James Bara, Liverpool; Messrs. J. Smith and Co., London; Mr. Alfred Pain, London; Dr. Milroy, Richmond; Mr. E. R. Hipkins, Prewse's End; The Secretary of the Royal Microscopical Society, London; Dr. Esenezea Hughes, Liverpool; Dr. Henry Lawson, London; Mr. Pavea, London; Mr. Banner, London; Dr. Wiltshire, London; Mr. F. G. Larkin, London; Mr. T. M. Stone, London; Dr. A. Ernest Sansom, London; Dr. W. M. Ord, London; Mr. R. Davy, London; Mr. B. R. Wheatley, London; Dr. Julius Althaus, London; Dr. Bruce, London; Mr. R. J. Godlee, London; The Secretary of the Pathological Society, London; Dr. David J. Brakenridge, Edinburgh; Our Manchester Correspondent; Dr. James Russell, Birmingham; Dr. R. Lawson, Wakefield, Yorkshire; Dr. Henry G. Sutton, London; Mr. J. Chatto, London.

APPOINTMENTS FOR THE WEEK.

December 2. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

4. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Adjourned Discussion on Dr. Edmunds' Case of Cæsarian Section.

5. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Lediard—Aneurism of Thoracic Aorta (two cases). Mr. Walsham—Unobliterated Ductus Arteriosus. Mr. Alban Doran—Fracture of both Sesamoid Bones of Forefeet of a Horse. Mr. Holmes—Stricture of Œsophagus. Mr. Butlin—A Fatty Tumour. Mr. Godlee—Granulation Material from White Swelling of Knee. Mr. Howse—Ossification of Axillary Artery following Injury. Dr. Ord—Spontaneously Fractured Vesical Calculi. Mr. Gould—1. Sarcoma of Thigh; 2. Tumour of Buttock. Dr. Barlow—Brain of Microcephalic Infant. Dr. Coupland for Mr. Balding)—Sequel to Case of Tumour of Sciatic Nerve. Dr. Coupland—Biliary Calculi encysted in Peritoneal Adhesions. Dr. Goodhart (for Dr. Lewis Marshall)—Aneurism of Aorta.

6. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Dr. Langdon Down, "On the Obstetrical Aspects of Idiocy." Dr. Boudin (of Paris), "On a Diagnostic Sign of Vaginal Hæmorrhage during Parturition." And other Communications.

Royal Microscopical Society, 8 p.m. Rev. W. H. Dallinger, "On Navicula Crassinervis, N. Rhomboides, and Frustulia Saxonica as Test Objects."

7. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. First Harveian Lecture—Mr. James Lane, "On Syphilis."

8. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Discussion on Leukæmia. Dr. Hermann Weber, "Cases illustrating the Treatment of Rheumatic Fever and other Febrile Diseases by Salicine and its Congeners." Mr. Brodhurst, "Cases of Subcutaneous Section of the Neck of the Thigh-Bone."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 25, 1876.

BIRTHS.

Births of Boys, 1169; Girls, 1198; Total, 2367.
Average of 10 corresponding years 1866-75, 2221·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	761	743	1504
Average of the ten years 1866-75	805·2	788·7	1593·9
Average corrected to increased population ...	...	...	1705
Deaths of people aged 80 and upwards ...	...	...	71

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	6	2	2	...	4	1	2
North	751729	21	2	11	4	11	...	5	...	1
Central ...	334369	2	1	...	1	2	...	2	...	...
East	639111	3	6	11	1	4	1	10	2	...
South	967692	17	16	14	2	4	2	4	1	4
Total	3254260	43	27	42	10	23	3	25	4	7

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·742 in.
Mean temperature	43·6°
Highest point of thermometer	56·1°
Lowest point of thermometer	36·4°
Mean dew-point temperature	39·3°
General direction of wind	S.E.
Whole amount of rain in the week	0·30 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 25, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Nov. 25.	Deaths Registered during the week ending Nov. 25.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2367	1501	56·1	36·4	43·6	6·45	0·30	0·76
Brighton	100632	42·7	44	22	56·0	36·9	45·1	7·28	0·55	1·40
Portsmouth ...	124867	27·8	80	56	56·3	38·2	46·3	7·95	0·68	1·73
Norwich	83430	11·2	56	34	53·9	38·8	45·0	7·22	0·34	0·86
Plymouth	72230	51·8	44	37	57·0	36·0	47·5	8·61	1·22	3·10
Bristol	199539	44·8	157	76	53·0	31·1	43·8	6·56	1·02	2·59
Wolverhampton ...	72549	21·4	67	41	52·0	33·6	41·7	5·39	0·61	1·55
Birmingham ...	371839	44·3	303	151	54·8	34·6	42·7	5·95	0·66	1·68
Leicester	113581	35·5	104	46	53·5	35·2	43·1	6·17	0·77	1·96
Nottingham ...	93627	46·9	58	36	54·6	35·2	43·7	6·50	0·67	1·70
Liverpool	521544	100·1	384	253	50·7	35·5	41·9	5·50	0·54	1·37
Manchester ...	357917	83·4	230	163	52·0	33·0	41·6	5·34	0·61	1·55
Salford	138425	26·8	101	105	53·4	30·9	40·4	4·66	0·73	1·85
Oldham	88609	19·0	80	59	...	...	...	...	...	...
Bradford	173723	24·1	131	86	52·4	35·0	43·6	6·45	0·65	1·65
Leeds	291580	13·5	214	118	53·0	36·0	44·2	6·78	0·41	1·04
Sheffield	274914	14·0	200	138	54·0	31·5	42·6	5·90	0·86	2·18
Hull	136933	37·7	109	69	52·0	37·0	43·1	6·17	0·77	1·96
Sunderland ...	108343	32·8	66	46	55·0	34·0	42·6	5·90	0·41	1·04
Newcastle-on-Tyne	139929	26·1	122	51	...	...	...	...	...	...
Edinburgh	215146	51·3	131	67	...	...	...	...	0·34	0·86
Glasgow	545144	90·4	385	237	51·4	32·2	41·9	5·50	0·67	1·70
Dublin	314666	81·3	148	142	51·5	30·5	45·7	7·61	0·43	1·09
Total of 23 Towns in United Kingdm	8028595	37·7	5591	3537	57·0	30·5	43·5	6·39	0·66	1·68

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·74 in. The highest reading was 30·10 in. on Wednesday evening, and the lowest 29·19 in. on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

ON COLLES' LAW, AND ON THE COMMUNICATION OF SYPHILIS FROM THE FŒTUS TO ITS MOTHER.(a)

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital, Surgeon to the Moorfields Ophthalmic Hospital and the Blackfriars Hospital for Skin Diseases.

The subject to which I have to ask attention in the present paper is one in part connected with speculative, or even with transcendental pathology, and in part with the observation of everyday facts. That it has exceedingly important practical bearings I do not despair of making evident to all.

By way of introduction, it may be well briefly to state a few preliminary facts. Starting from the elementary assertion that specific diseases are propagated by specific poisons, we have to note that there is reason to believe that these diseases may be modified as regards their evolution, course, and severity in relation with different modes of introduction of the infecting virus into the system. The specific fever known as small-pox offers us the best example of this. If the poison of small-pox be received into the organism through the medium of the atmosphere, febrile phenomena are produced which are different both in duration and severity from those which follow when the virus of the same malady is implanted, in a fluid form, amongst the solid cell-structures of any part of the recipient's body. Amongst other proofs that the fever produced is different, we observe a widely different ratio of mortality in the two. Whilst small-pox received by aërial infection has a mortality of one in four, small-pox received by inoculation has one of only one in 500. The facts as to vaccination, although not exactly of the same kind, may yet afford us important help towards realising the important lesson that a virus, which is essentially the same, may be made to vary very much in its results. In this instance the modification is produced, not by availing ourselves of different modes of transference of the virus, but by transmitting the virus through the body of a different animal. By this means most astonishing results are obtained, and a malady of a very severe and frequently fatal character is converted into one which is never the cause of death, and, as a rule, produces only trivial discomfort. Respecting any possible modifications of the other exanthemata we have much less knowledge, and I will pass by such fragments of fact as might perhaps be obtained, in order to come at once to the subject in hand. That subject is the possible nature and extent of modifications in character which the specific fever known as syphilis receives in consequence of different modes of reception of the virus. Nor do I propose this evening to trouble you with the whole of this subject, but shall, after a few sentences, narrow our work to the examination of the facts as to one only of the several methods possible. It is customary to assume, and probably with good ground, that this slow-staged exanthem never rises to a sufficient height of virulence to become infectious through the air. Although, however, we lose in this way one of the possibilities of difference, yet from the fact of its very long persistence we gain several others. The most common mode of transmission of syphilis is, I suppose, analogous in all respects to the inoculation of small-pox and to vaccination. The virus, in a fluid form, is implanted in the tissues of the recipient, and produces in the first instance local results. It matters not in the least whether this implantation is by the surgeon's lancet or by accidental contact of parts,—the result is just the same. In all cases of communication in this way, a local lesion is an essential stage; and this lesion has a definite life-period, there being every reason to believe that the virus undergoes certain important processes of evolution in the cell-structures which first received it. But it is quite certain that syphilis may be communicated by other means than by inoculation. It is beyond doubt that it may be communicated by the parent, in whose blood it exists, to his or her offspring, and that in this instance it developes itself in the infant's blood and tissues without the intervention of any local lesion. Briefly I may say, in passing, that when syphilis is thus obtained as a direct inheritance, it both closely resembles and widely differs from the syphilis which follows a chancre. In the early periods of infantile life it closely resembles the secondary stage of chancre-syphilis, in that a rash on the skin is the most frequent phenomenon, and that iritis, condylomata, etc., may happen. But in the relative frequency of the several symptoms the two differ, even at this stage, very greatly, and as soon as the infantile stage is past we witness still more important differences. Very prolonged periods of latency are now witnessed; and then occur, with tolerable frequency, certain inflammations of a most special and characteristic kind, which are extremely rare in chancre-syphilis, and which, when they do follow it, always come within short periods of the secondary stage. I allude chiefly to inflammation of the internal ear, resulting in deafness, and to interstitial keratitis. Perhaps there is no single lesion which occurs in chancre-syphilis and not in the inherited form, or the reverse; but it is most certain that very wide differences are witnessed as regards the severity and the frequency of them, and, above all, as regards the periods at which they show themselves. Some of these remarkable differences may perhaps be explained by referring to the different age of the recipients,—to the fact that the tissues of the infant are in process of development. I suspect, however, that this mode of explanation will go but a very little way, for although the examples of chancre-syphilis occurring in infancy are but few, yet they do not, so far as I know, support the opinion that age makes any great difference in the character of the malady. The remarkable differences noted between acquired and inherited syphilis are, then, in all probability due to the peculiarity in the manner in which the virus is received.

We come now to a third method of reception of the virus—that, namely, in which a woman bearing a child to a tainted husband acquires the virus from that child during its intra-uterine life. This subject, adverted to, I believe, for the first time by Gardien, and soon afterwards by Dr. Ramsbotham, Dr. Montgomery, and others, has since attracted some attention from numerous investigators. Just twenty years ago (1856), I had the honour of reading before this Society a paper upon it, which was, if I remember right, the subject of discussion at several subsequent meetings. My paper consisted chiefly in the citation of cases which were, I believed, instances of syphilitic poisoning derived by mothers by intra-uterine absorption from a tainted fœtus. My conclusion was that this mode of communication was of frequent occurrence, and that the disease thus acquired was considerably different from that obtained by a chancre. I had never seen a free outbreak of secondary symptoms (rash, etc.) in connexion with this mode, and believed rather that the woman became liable to slight irregular manifestations, such as sore tongue, psoriaris palmaris, and gummata of the cellular tissue. Other observers recorded, with great circumstantiality of detail, cases in which copious outbreaks of secondary symptoms had occurred, the disease being in all respects exactly like chancre-syphilis. I was myself inclined to distrust the evidence in these cases as to the absence of a chancre, knowing how difficult in women it often is to be certain on this point. The same doubt ought, I am well aware, to extend to many of my own cases, for their subjects were mostly women in humble life, whose narratives were open to doubt, and who might have either wilfully or unintentionally deceived me as to the absence of primary and secondary stages. But, as I urged at the time, it was from the sameness in the testimony of many women that my confidence resulted; and if we allowed the evidence to be reduced one-half on the score of fallacious statements, it would still remain abundant and important. As the special object of my paper was to convince the profession that this mode of receiving syphilis was not only possible, but in frequent operation, and that the taint thus obtained was peculiar, and, for one thing, far milder than that which follows a chancre, it may be inferred that I did not neglect the citation of any fact which I thought to support my statements. It was not until I was engaged last winter in again going over the same ground in connexion with the debate at the Pathological Society, that it occurred to me that I had not laid sufficient stress on a line of argument which is, perhaps, more important than all the rest put together. I refer to the asserted immunity of women who have borne syphilitic children from the direct contagion of syphilis. As it is to Abraham Colles, of Dublin, that we are indebted for the first observation on this point, we may, I think, conveniently speak of it as "Colles' law." I include, perhaps, under that term somewhat more than Colles himself intended; for his observation was simply to the effect that the mother of a syphilitic infant might suckle it with impunity, and would never contract chancre of her nipple; whilst that occurrence was very common

(a) This paper was read at a recent meeting of the Hunterian Society.

in wet nurses. Here, however, is the gist of the whole matter, and we may, I think, conveniently understand by "Colles' law" the fact that *immunity from subsequent syphilis is invariably obtained by a woman who bears a child to a syphilitic husband*. It follows, without much doubt, that, if free as regards her own infant, she will be free as regards other sources, though this, I must admit, is more than Mr. Colles asserted.

Before proceeding to examine as to the validity of this law, its extent of bearing, and the inferences from it, it may be convenient to quote the precise words of the author in question.

Whilst treating of cases in which nurses had received syphilis from infants, Mr. Colles writes(b):—"The following fact appears to me very deserving of notice: I have never seen or heard of a single instance in which a syphilitic infant (although its mouth be ulcerated), suckled by its own mother, had produced ulceration of her breasts; whereas very few instances have occurred where a syphilitic infant had not infected a strange hired wet-nurse, and who had been previously in good health." In the next sentence the same statement is repeated—"It is a curious fact that I have never witnessed nor even heard of an instance in which a child deriving the infection of syphilis from its parents has caused an ulceration in the breast of its mother."

Our first task obviously is to inquire as to whether this statement is in accordance with fact. My belief is that it is so. Colles wrote in 1837, and most authors on syphilis since his day have adverted to this assertion, and none have confuted it. On the contrary, several writers—Diday, Baumes, Egan, among the number—have expressly stated that their experience was in conformity with it. M. Diday has devoted considerable space to an examination of the evidence respecting it, and has shown himself fully alive to its importance.

In my reply to the various speakers in the debate on syphilis last year at the Pathological Society, I took occasion to advert to the important bearings of the law in question. During the six months which have since elapsed, I am not aware that any adverse facts have been recorded. If there is on record a single case in which the mother of a syphilitic infant is proved to have contracted a chancre from her own child, it has escaped my reading. M. Diday, as I have just said, has cited and examined a certain number of supposed exceptions, none of which are of any validity. With much acuteness he draws attention to the fact that Cullerier has unwittingly given it valuable support by citing, as proof that infants with secondary lesions could not infect nurses, a number of cases in which the "nurse" was not only nurse, but mother also. This negative fact becomes exceedingly strong as evidence in support of the belief that such women are not liable, if we recollect all the circumstances. Syphilitic children are very common, and in a large majority of instances they are born to mothers who have not had chancre-syphilis. Chancres on the nipple are also not very infrequent. Let us bear in mind that it is a very unusual thing to put a syphilitic infant out to wet-nurse, and that probably for one so nursed a hundred are suckled by their own mothers. Further, let it be added that the mothers of syphilitic children often bear and suckle two or three in succession; that they not only suckle them, but dress them, fondle them, and in various ways expose themselves night and day through long periods to every sort of risk. Those who take the trouble to realise the facts as regards the matter will, I think, feel that there can be but one conclusion, and that is, that in some way the mothers of such children have ceased to be liable to syphilis.

My own experience may be briefly stated. I have seen many chancres on the nipple obtained by contagion from the lips of diseased infants, but I have never, in one single instance, seen a mother so affected by her own child. Some time ago a medical man consulted me about his own child, a boy of ten, who bore the most unmistakable traces of severe infantile symptoms. Of the nature of the disease the father was well aware, and he gave me a full and candid history. The most important fact communicated in reference to our present subject was that in the child's infancy he infected his grandmother and one of his aunts, but that his own mother, who suckled him, never suffered anything. A lady who came to me some years ago with a chancre on the conjunctiva told me that she had occasionally nursed a friend's child which had subsequently died, and that the certificate given mentioned syphilis as the cause of death. In this instance, also, the mother had escaped, but I do not know for certain that she had never had the disease previously.

(b) "Practical Observations on the Venereal Disease," page 285.

If, then, we admit that all recorded facts support the belief that the mothers of syphilitic children have in some way become proof against the contagion of syphilis, the question arises, How has such immunity been obtained? Clearly it must be held to imply that they have had syphilis in some form. Those who hold that syphilis cannot be transmitted by the father alone, but that in all cases in which inheritance occurs it must necessarily be from the mother, will hail the establishment of the general fact just asserted as a strong support to their opinion. But, opposed to the belief that all mothers of syphilitic children have really gone through chancre-syphilis, there appear to me to be a large phalanx of facts. In such cases there is usually no history whatever of either primary or secondary symptoms. Case after case occurs, in which, the father being known to have had syphilis, a tainted child is born, and the mother remains throughout quite free from symptoms. If these were rare events we might reasonably suspect the evidence; but they are not so,—they are matters of everyday experience. In a few special cases the evidence becomes additionally strong: as, for instance, when a married surgeon contracts a finger-chancre, and continues to cohabit with his wife. In several such cases I have known syphilitic children (it may be more than one) born, the mother remaining throughout apparently in perfect health, and certainly never suffering from primary disease. I may allege further, that not only is there usually an absence of all history of primary and secondary symptoms, but that no sequelæ follow. It is to me inconceivable that sequelæ should be absent, in the case of the mother, so almost constantly as they are, if chancre-syphilis had gone before. I am firmly of opinion that, in a large majority of instances in English practice, inheritance of syphilis is from the father, the mother having never suffered before conception. Secondary syphilis in the ordinary form is not a light affair, and if it occurred frequently to young married women we should certainly hear of it. If the hypothesis which I am endeavouring to confute were true, the number of cases of secondary syphilis in young wives ought to be nearly equal to that of syphilitic first-borns; whereas the disproportion is most marked, and for healthy mothers to bring us diseased children is a common event.

Admitting, then, the truth of Colles' observation, and, next, that it cannot be explained by asserting that all mothers of syphilitic infants have had chancre-syphilis, we are driven to the conclusion that they must have had the disease in some other way. The method suggested is that of direct blood-contagion by the influence which the fœtal blood exerts on that of its mother. I next have to invite the attention of the Society to the circumstance that this mode of communication appears to produce a kind of syphilis very different from the ordinary chancre form. In my former paper I made use of Colles' law in corroboration of the doctrine that it is possible for a mother to derive a taint from her fœtus, but I did not quite see the full bearing of the fact. Not only does it prove that the fœtus, not sometimes, but invariably, infects its mother, but it seems to prove that it conveys to her syphilis in its entirety. On re-reading the paper referred to, I find that I was then under some sort of vague impression that it was possible to communicate to the maternal blood larger or smaller doses of the poison, or even repeated ones. Since then my opinion as to the specific nature of the syphilitic virus and the laws of its development have become much more definite, and I should now regard as an error such a doctrine. In all probability there is no such thing as less and more in the communication of the virus of a specific fever. If the contagium passes at all, it must be allowed its full potentialities of development. That the mother of a syphilitic infant has had the disease as a whole, and not in part or in small degree, is proved by her total immunity afterwards; and we must observe that this immunity is exactly the same in the numerous cases in which the woman has never shown the slightest symptom, as it is in those in which she may have suffered severely.

Have we not here a new chapter in the natural history of syphilis opened to us? It being proved that a third mode of communication of the virus is possible, and that to chancre-syphilis and inherited syphilis we must add syphilis by blood-contact between fœtus and mother, we have to inquire, What are the special features of the disease when obtained in the last-named way? A considerable number of facts suited for furnishing an answer to this have already been recorded, but more are needed, and it will henceforth be matter of great interest to observe, in every case in which a woman has borne a syphilitic infant without being herself the subject of acquired

syphilis, in what way the indications of taint show themselves.

As far as the facts on this point go at present, they seem to imply that syphilis by fœtal-blood-contamination is an exceedingly different thing from syphilis by a chancre or by inheritance. It appears to differ from both the latter quite as much as vaccinia does from variola. In a considerable ratio of cases—perhaps in half—the woman never knows that she is ill. She has neither primary, secondary, nor tertiary symptoms, but remains throughout apparently in perfect health. Something happens in her blood and tissues which gives her immunity as regards the syphilitic virus. The skin of her nipple cannot take on the chancrous condition; every cell in her body has undergone a change, and is no longer susceptible to this most potent poison; and yet she has never known an hour's illness. Remembering how severe a disease chancre-syphilis usually is, this fact is even more astonishing than the parallel one that vaccinia can substitute variola.

As regards the relative frequency with which the mothers of syphilitic infants wholly escape symptoms, I cannot offer any very accurate statistics, but my impression is that it is large. In the paper to which I have already referred I inserted a tabular statement, by which it appears that out of sixty-eight there were seventeen who were in good health and had never had any symptoms, fourteen others who had had no symptoms but were cachectic, whilst in thirty-seven some symptoms, for the most part only slight (and in no case a well-marked outbreak of secondaries), had occurred. Thus we have thirty-two without definite symptoms, and thirty-seven with. My impression is that my experience since that table was drawn up, and amongst a class of society in which as a rule more trustworthy evidence is to be obtained, would show a much larger proportion of cases in which no symptoms whatever occurred. It would be tedious and unprofitable to cite individual facts in illustration of what is so common, and I will content myself by stating that in case after case the statements have been most clear that the young mother of a syphilitic infant had never since her marriage been ill in any way.

The events which are possible after fœtal-blood-infection may perhaps be conveniently arranged under three groups:—

I. It has been asserted by some writers that an outbreak of severe secondary symptoms identical with those which follow chancres may occur. I have already hinted a degree of doubt as to these, on the score that it is often very difficult to exclude the possibility of a chancre having been present. Most of the cases supposed to illustrate this have happened to wives whose husbands had only very recently recovered from syphilis, and in whom the possibility of still existing lesions, capable of infecting, could not be ignored. Without denying that fœtal infection is sometimes followed by secondary syphilitic rash, sore throat, fever, iritis, etc., we may yet safely assert that such events are very rare.

In group II. we may comprise cases in which the patient suffers slightly from symptoms which are specific, but much modified. In many of these, during the first pregnancy, the patient is somewhat ailing, and possibly loses hair, and subsequently, perhaps months or years afterwards, shows slight but definite indications of taint: sores on the tongue, patches in the palms, or gummata in the cellular tissue are amongst the more frequent of these. At still later periods such patients are probably liable to all the forms of tertiary disease, but I do not think that they often suffer from them.

Group III. will contain the cases in which the patient never displays any symptoms whatever, and never, so far as she is aware, loses health. This group, as we have already seen, probably comprises a large half of the cases. It may be suggested as probable that if the patient's condition during her pregnancy were narrowly watched, some evidences of disturbed health might be detected, but for all practical purposes she remains well. It is obvious that this group might perhaps be reduced, and certain cases transferred to the former one, if we carried our histories over sufficiently prolonged periods of time. The patient, who during the first year or two may have shown no symptoms, may yet become the subject of tertiary manifestations.

It will be a matter of great importance and interest to determine in future whether the subjects of this group—those who in the first instance have had no symptoms whatever, and who consequently have never been treated for syphilis—become later in life liable with any degree of frequency to tertiary symptoms. That they do so sometimes may be admitted, and I have recorded not a few examples of it; but my impression is that such events are rare, and that of those who have acquired blood-syphilis from the fœtus, a large majority remain through life free from any indications of it.

What is wanted, in order to complete our knowledge of the subject, is, that in all cases in which syphilitic children come under notice the health of the mother should be carefully noted. In the first place, the observer must ascertain whether there is any probability that the woman has herself suffered from primary syphilis, and all cases in which there is doubt on this point should be kept apart. Respecting those in which the evidence is strongly against such a supposition, we want to know—first, the details as to health during the first pregnancy; secondly, the details of subsequent health carried on for as many years as possible, with especial note as to the facts regarding subsequent pregnancies. Those of us who are engaged in family practice, and who keep the same patients under notice for many years, may probably be able to give valuable evidence respecting this class of cases.

I do not possess any facts bearing upon the question as to whether women who have borne syphilitic children can contract primary syphilis in the ordinary way. No instance of such an occurrence has ever come under my notice either in the course of practice or in reading. It would not be wise to let this negative fact count for much, but still it may have its degree of weight. No inoculation experiments upon such women have, so far as I know, ever been performed. They would be of extreme interest and value, but it may be doubted whether they would be quite justifiable.

There are certain cases of considerable clinical importance, the correct appreciation of which is somewhat difficult. I allude to those in which a woman who has borne a syphilitic infant becomes, within a few months of delivery, the subject of severe syphilis and of phenomena of the secondary class. Several such are on record; I do not know that I have myself ever had the opportunity of investigating any. If the taint in such be communicated by the fœtus, I see no reason why its outbreak should be delayed till after delivery, and should then be so exceptionally severe. On the other hand, I am precluded from suggesting that such cases are probably examples of ordinary chancre-contagion after delivery, for, if so, they would be exceptions to Colles' law. Probably in most such the disease began by a chancre in the mother shortly before delivery, the fœtus being infected from the maternal blood.

In conclusion, then, I wish to propose to this meeting, and to the profession, the following questions as to matters of fact:—

1. Can any exceptions to Colles' law be produced? Has anyone ever seen a case in which a mother suckling her own syphilitic infant contracted a chancre on her nipple from its mouth?

2. Can any cases be produced in which a woman who had borne syphilitic children subsequently became the subject of chancre, contracted in the ordinary way, or of a well-marked outbreak of secondary symptoms, such as would suggest the probability of a recent chancre?

3. Can any cases be found in which a woman having borne a syphilitic child, without having been herself the subject of chancre, has within a short period lost her husband and been married again to an untainted man? Cases in which these various conditions are conformed to are probably very infrequent, but, should they be obtainable, it will be of extreme interest to know whether such women bear syphilitic infants.

4. Are there any facts which would show that women who have never had chancre-syphilis, and have borne syphilitic children without presenting any symptoms during pregnancy or within a few years afterwards, may yet later on suffer from definite tertiary lesions? I have myself recorded a good many cases which seem to illustrate this; but in none had the patient been throughout under my own observation, and I had to rely upon her memory for the fact that early symptoms had really been absent.

It is not without its interest, in reference to this subject, to remember that the fœtus, from which the contamination is supposed to be derived, is itself, in nine cases out of ten, wholly free from symptoms during its intra-uterine existence. Although death of the fœtus in syphilitic cases is common, we must recollect that this may be from disease of the placenta in most cases, and is no proof of active syphilis in the ovum. In nine cases out of ten an infant destined subsequently to suffer severely from inherited syphilis appears perfectly healthy at

the time of its birth. Nothing is commoner than for the mothers of such to assure us that when born the infant, now puny and shrivelled, was "the picture of health." Thus it becomes highly probable that some change occurs in the state of the syphilitic virus in an infant's blood and tissues after birth, and that it has to wait for birth and direct aërial respiration before this development can take place. Usually about the same time is required after birth for the development of secondary symptoms which occurs in the development of the chancre form. A month or six weeks is the usual incubation period for chancre-syphilis; and about the same, or perhaps a little less, for the inherited taint. Now, the circumstance that the virus usually exists during intra-uterine life in some modified form, and quite latent so far as outward effects are concerned, may have an important significance as regards the suggested fact that the taint communicated under such circumstances to the mother is in a remarkably mild form.

It seems highly probable that the spermatic fluid does not contain the syphilitic virus in a form which is directly inoculable. If it did, the appearance of primary chancres in newly married women would be far more common than it is. When through its means by the impregnation of an ovum a living syphilised organism is produced in the maternal cavities, changes must take place in the virus itself of which as yet we have no knowledge. We do not know in the least at what date from conception a virus which was not potent for inoculative purposes in the semen becomes potent in the tissues of the child. We do not even know whether the blood of a syphilitic infant is at the time of birth inoculable. As to the period of the pregnancy at which it becomes possible for the fœtus to infect its mother, we cannot even conjecture. In attempting, however, to realise in imagination what is possible in these directions, I think we may without difficulty perceive that it is possible for the poison to pass over in a mode very different indeed from that of chancre-contagion, and therefore not unlikely to be followed by very different results. Our business for the present is, however, not to speculate, but to collect and scrutinise facts.

Prosecution of another Prescribing Chemist.—The East London Medical Defence Association has just been successful in recovering another penalty of £20 from a registered chemist and druggist named Frederick Nichols, residing at Green-street, Victoria-park, who, it is alleged, did an extensive visiting and prescribing business. The proceedings were taken in the Court of Exchequer under the Apothecaries Act of 1815, but the case did not come on for hearing before the judges, as the defendant resolved not to defend the action, and paid the full penalty sued for and costs into court. In this, as in several other cases which have been prosecuted by the Association, the defendant was attempted to be covered by a registered medical practitioner.

Royal Institution of Great Britain.—The following are the arrangements of the lectures at the Royal Institution before Easter, 1877:—Professor John Hall Gladstone, Ph.D., F.R.S.—Six lectures adapted to a juvenile auditory, on the Chemistry of Fire; on December 28 (Thursday), 30, 1876; January 2, 4, 6, 9, 1877. Professor Alfred H. Garrod, M.A., F.R.S.—Ten lectures on the Human Form: its Structure in relation to its Contour; on Tuesdays, January 16 to March 20. Dr. C. R. Alder-Wright, F.C.S.—Four lectures on Metals and the Chief Industrial Uses of these Bodies and their Compounds; on Thursdays, January 18 to February 8. William Pole, Esq., F.R.S., Mus. Doc.—Six lectures on the Theory of Music; on Thursdays, February 15 to March 22. Ernst Pauer, Esq.—Two lectures on the Nature of Music: the Italian, French, and German Schools; on Saturdays, January 20, 27. J. A. Symonds, Esq.—Three lectures on Florence and the Medici; on Saturdays, February 3 to 17. Professor Henry Morley—Five lectures on Effects of the French Revolution upon English Literature; on Saturdays, February 24 to March 24. Professor Tyndall will give a course of lectures after Easter. The Friday evening meetings will begin on January 19, 1877, at eight o'clock; the discourse by Professor Tyndall, at 9 p.m. The succeeding discourses will probably be given by Professor Huxley, Professor Osborne Reynolds, Mr. Francis Galton, Professor F. Guthrie, Mr. J. F. Moulton, Sir John Lubbock, Mr. Frederick J. Bramwell, and others. To these meetings members and their friends only are admitted.

ORIGINAL COMMUNICATIONS.

ON A
GLYCEROLE OF NITRATE OF BISMUTH
AS A REMEDY IN SKIN DISEASES AND IN SOME OTHER CONDITIONS.

By BALMANNO SQUIRE, M.B. Lond.,
Surgeon to the British Hospital for Diseases of the Skin.

A short time since I contributed an article to this journal, describing the preparation and detailing the advantages of a glycerole of the subacetate of lead. The result already has been that the preparation is now commonly used by practitioners throughout the country, not only for the purpose for which I originally designed it—that is to say, for use as an application for the treatment of various chronic diseases of the skin (more especially for the treatment of chronic eczema), but furthermore as a useful means of employing lead topically in the treatment of diseases of the uterus. The advantages of lead as a local application in many various conditions have been long appreciated; and this new preparation of it has evidently been found to be a serviceable one.

The advantages of bismuth as a local application in certain conditions are equally appreciated, but the difficulty of employing it in a liquid form is a well-known obstacle to the development of its valuable properties. Like lead, it acts as a topical sedative and astringent. Its chief use is as a local application to the interior of the stomach, and accordingly it is largely prescribed as a sedative in cases of painful digestion and as an astringent in cases of water-brash. It is also, but less largely, used as a remedy in skin diseases; and it has been found serviceable as an injection in lingering gonorrhœa attended with exceptionally profuse purulent discharge. I was therefore desirous of having a glycerole of it if possible. Accordingly, I applied to one of the leading chemists in this city, and requested him to make me up a solution of the nitrate of bismuth in glycerine, to take away with me. I was assured by him that it was impossible, inasmuch as the salt would not dissolve in glycerine; and, as another difficulty, the nitrate of bismuth was never kept in stock,—there was no demand for it. I pressed him to procure some and to dissolve it for me. He promised to do so, but told me he knew perfectly well what would be the result. The next day I received from him a perfectly clear solution containing a drachm of nitrate of bismuth dissolved thoroughly in an ounce of glycerine. Now, this is in many ways, I venture to affirm, a valuable preparation—more valuable, perhaps, on the whole than the glycerole of the subacetate of lead. Here we have a soluble preparation of the simple salt of bismuth; and a tolerably strong solution too. The liquor bismuthi et ammoniæ citratis of the Pharmacopœia is of course a *double* salt, and it is a question whether it has in full all of the valuable qualities as a local application of the *simple* salt of bismuth. On putting some of my glycerole on the tip of my tongue, I found it merely astringent, and slightly acidulous. On rubbing it well into my tongue I found only the same effect, but more decided in degree. I was told that I should find the preparation very irritating, inasmuch as the salt comes under the chemical heading of "acid salts"; but I do not find it so even in the least degree. I thought I would just ascertain that my friend had really dissolved the quantity of bismuth he professed to have done, by availing myself of the simple test of pouring a little of it into a wineglassful of water, and stirring the mixture up with my finger to see how much white precipitate of trisnitrate of bismuth I should get. To my astonishment, I got no precipitate. So I poured in a little more; still no precipitate whatever. However, I left the glass to stand for an hour or two, and then looked at it again, and found a milkiness of the solution, and a fine milky deposit on the surface of the glass. I therefore arrived at two conclusions—the one is that nitrate of bismuth, which is so utterly insoluble in water, is perfectly soluble in glycerine; and furthermore that the presence of glycerine in water is capable of delaying, more or less, the precipitation of the nitrate of bismuth in it. So that where glycerine is a permissible vehicle we have now a ready means of *applying*, a simple solution of bismuth; and where glycerine is not permissible as a vehicle we have equally a ready means of *administering* a simple solution of bismuth in water, provided we do not mix it too long before it is required to be used

As an application to the skin, or to the vagina or uterus, or to the throat, when bismuth in solution is required, nothing can be better than the solution of the nitrate of bismuth in glycerine. As a mixture to be taken internally, nothing more is necessary than that the mixture should be ordered as a solution of the salt in glycerine—one teaspoonful for a dose, to be mixed in half a wineglassful of water before taking it. Then, if the patient does not look too long at it before he swallows it, he will certainly swallow a perfectly clear solution, and one, moreover, which will probably do him more good than any other preparation of bismuth that has yet been devised.

The difficulties presented by nitrate of bismuth are well described in Fownes' "Manual of Chemistry" as here quoted: —"When bismuth is dissolved in moderately strong nitric acid to saturation, and the whole left to cool, large, colourless, transparent crystals of the neutral nitrate are deposited. Water decomposes these crystals; an acid solution, containing a little bismuth, is obtained, and a brilliant white crystalline powder is left, which varies to a certain extent in composition, according to the temperature and the quantity of water employed, but which frequently consists of a basic nitrate of the teroxide $BiO_3, NO_5 + 2\,HO$. A solution of nitrate of bismuth, free from any great excess of acid, poured into a large quantity of cold water, yields an insoluble basic nitrate, very similar in appearance to the above, but containing rather a larger proportion of teroxide of bismuth. This remarkable decomposition illustrates at once the basic property of water and the feeble affinity of teroxide of bismuth for acids, the nitric acid dividing itself between the two bases. The decomposition of a neutral salt by water is by no means an uncommon occurrence in the history of the metals: a solution of terchloride of antimony exhibits the same phenomenon; certain salts of mercury are affected in a similar manner; and other cases might perhaps be cited, less conspicuous, where the same change takes place to a smaller extent."

It was "the basic property of water and the feeble affinity of teroxide of bismuth for acids" that I sought to elude by employing glycerine as a solvent in place of water, if only I should haply chance to find that glycerine would prove itself to be a solvent in this case; and the result was that I succeeded quite to my content. I relied, and not unduly so, on the remarkably solvent powers of glycerine, and on its strong affinity for water. It will be so obvious as scarcely to need stating that a soluble preparation of any drug is far more active and efficient than an insoluble one, and that the simpler *that* preparation may be, the more are we likely to get the unmodified and full effect of that drug. In all cases where an astringent yet unirritating application is required, this preparation cannot fail to be of signal service. In diseases of the stomach its action cannot fail to be more prompt and more certain than any preparation of bismuth that has yet been used.

As an application for diseases of the skin a field is opened out for the employment of bismuth with an amount of efficiency and precision that has never yet been possible; and the variety of diseases of the skin in which even the comparatively inert, because insoluble, trisnitrate has been found of service are too numerous to refer to in this place. In diseases of the female genital organs, accompanied with tenderness and profuse discharge (a sufficiently common class of cases), we have here a remedy which requires only to be carefully tested to insure, most probably, very excellent results. In inflamed sore throats its value as a paint or as a gargle will most likely be very considerable; and as an injection in gonorrhœa, after the acute stage has passed over, or in cases of chronic gleet, attended with an irritable state of the urethra, it cannot but prove of signal service. It is for those who have devoted themselves particularly to the study of these various classes of disorders, and of the effects of remedies on them, to say whether I am right or not in believing that I have stumbled on a useful addition to our means of treating them.

It may be necessary to add here that a much smaller proportion of the soluble nitrate of bismuth ought to be employed than is customary in the case of the insoluble trisnitrate (or subnitrate), and *that* equally, whether the amount of a dose for internal use may be under consideration, or the strength of a solution for external application.(a)

In comparing a glycerole of nitrate of bismuth as against a glycerole of subacetate of lead, I find that, in cases of chronic eczema, the former (equal strengths of either being employed) has a much more active and stimulating effect than the latter; but then it must be remembered that the former is a simple salt, while the latter is a basic one. Unhappily we are unable as yet to obtain a solution of a *basic* salt of bismuth in a neutral menstruum. The dose for internal use of the simple nitrate of bismuth must therefore be a moderate one, or at least the dose should be largely diluted, and the strength of the glycerole, as an outward application should in most cases not exceed ten grains of the nitrate to the ounce of glycerine.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
Physician to the Hospital for Diseases of the Nervous System.

(*Continued from page* 621.)

VI. I now proceed to discuss the influence of *age* on the fatality of nervous diseases. The information given on this point by the Registrar-General applies, as a rule, only to London; and in the earlier volumes is given for twenty-six, and in the later for seventeen different periods of life. For the year 1847, however, the ages of all persons who died in the whole of England have been detailed; and I have thought it best to take the information given for that year as the base for my diagrams, as I consider it more illustrative of this matter than taking only the ages of people who died in London, although for a series of years.

Diagram A shows the influence of age on the mortality from nervous diseases altogether; and we may see at a glance that this influence is far greater than that of sex. The periods of life are stated at the *top*, and the number of deaths which occurred at the *side*. The first five years of life are given each one singly, and then there is an entry comprising all the deaths which have taken place under five years of age. This period is separated from the other periods by a thick stroke. All the other squares contain periods of five years up to ninety-five; after which there is one with a mark of interrogation, containing any in which the age has not been ascertained.

The curve which shows the number of deaths in all these different periods is, in Diagram A, seen to attain an immense maximum in the first year of life; it descends suddenly after that until four years of age; and the further rise assumed by it only sums up, as it were, the results of the first five years. This curve shows that the number of deaths from nervous diseases during the first lustrum of life is greater than that at all the succeeding ages taken together—viz., in round numbers, 25,000 out of a total of 48,000. From five the curve continues at a low ebb until thirty. At thirty-five a rise is perceptible, which becomes large at sixty, and reaches its maximum at seventy; but this second maximum amounts only to about the tenth part of the first maximum attained in the first period, the numbers being about 2500 against 25,000. I may say at once that the first maximum is chiefly owing to the mortality from convulsions, and the second maximum to that from apoplexy and paralysis.

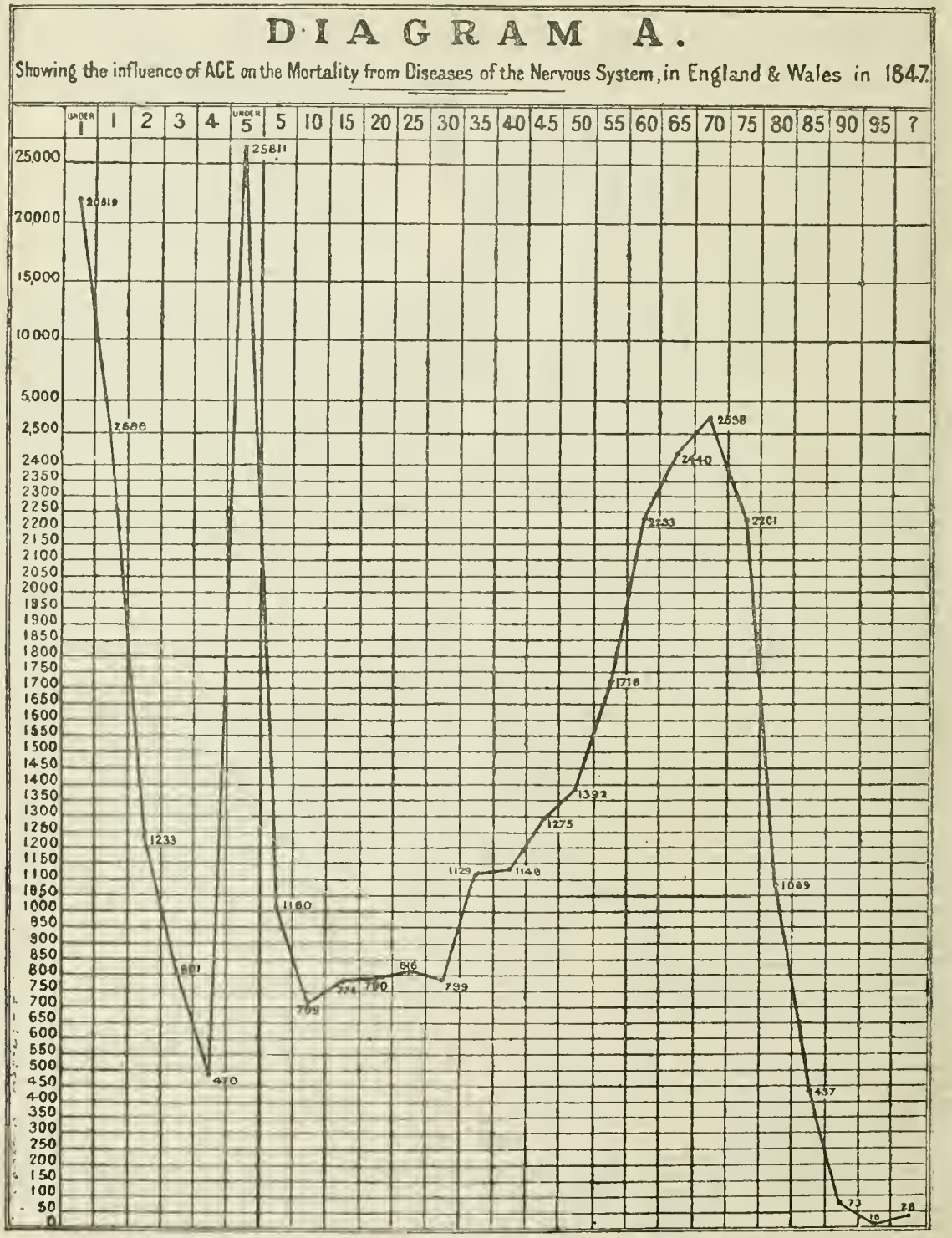
The following diagrams show the influence of age on the *several diseases* of the nervous system:—

1. The curve for *cephalitis* in Diagram B shows that disease to be much more common in infancy than later in life. The first year is more fatal than any subsequent one, and the first lustrum of life attains the maximum, from which there is a steady fall ever afterwards.

2. For *apoplexy*, which is illustrated by Diagram C, matters are very different. The curve shows it to be not uncommon in the first year of life; and this agrees with our clinical experience, which is to the effect that a number of infants die from meningeal hæmorrhage. The curve then rapidly descends, and reaches its minimum between ten and fifteen years. A slight rise is again perceptible at fifteen; at thirty-five this becomes greater; and the maximum is attained at seventy. There is a rapid fall at eighty; but, considering

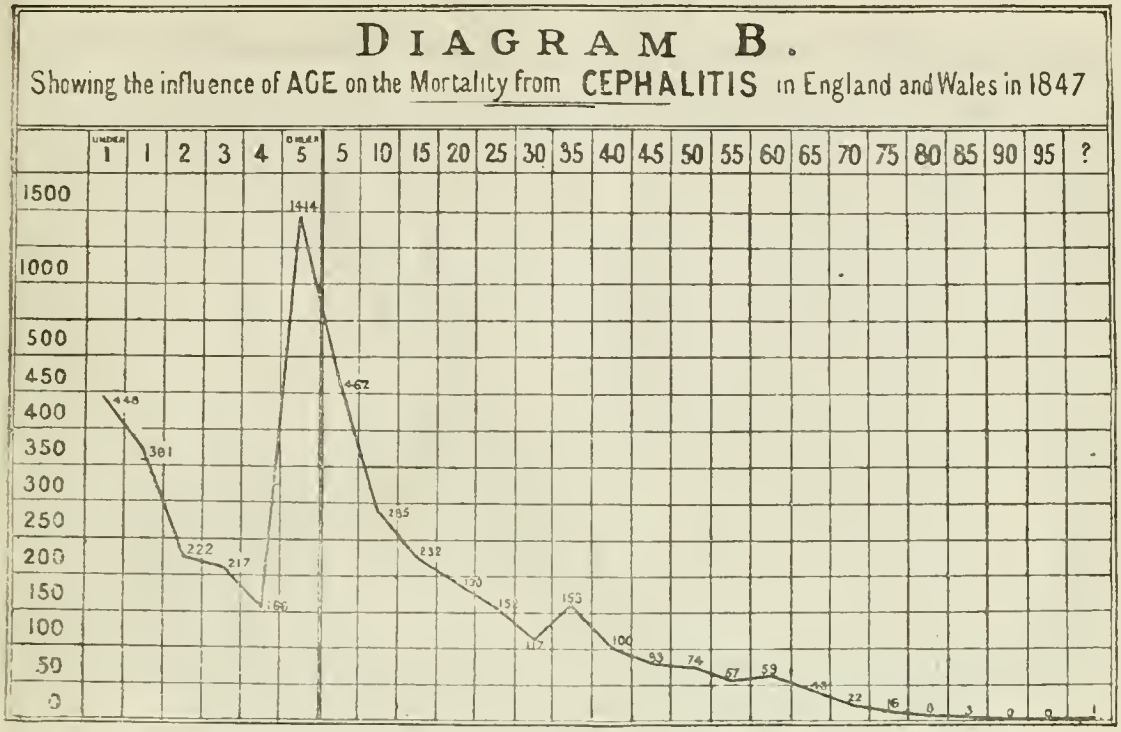
(a) The widely differing activity of the soluble bichloride, as compared with the insoluble subchloride of mercury, whether for internal or external use, and the considerable difference of the proper dose of the one as compared with that of the other, and of the quantity of corrosive sublimate as contrasted with the amount of calomel that may be employed in lotion or ointment as a topical remedy, are instances that require to be cited in introducing a much more active form of a familiar, but as yet comparatively inert drug.

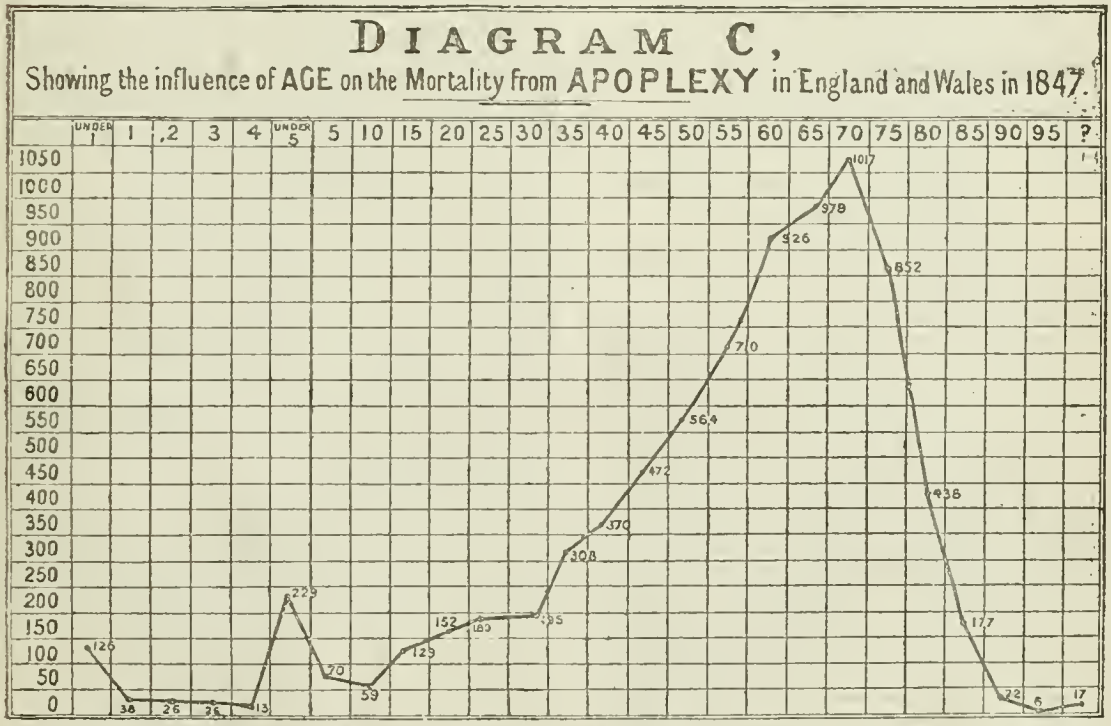
how few people live to that age, the death-rate from apoplexy is even then considerable, being about the same as at forty-five. Dr. Lidell's tables of the city of New York show that the maximum for apoplexy is there attained between sixty and seventy years of age, there being a considerable fall after seventy. That in this country the maximum should be reached *after* seventy seems to show a greater vitality in the English than in the American people in this respect.



The top line of numbers denotes the periods of age at which the deaths have taken place.
The side line of numbers indicates the numbers of deaths at the different periods of life.

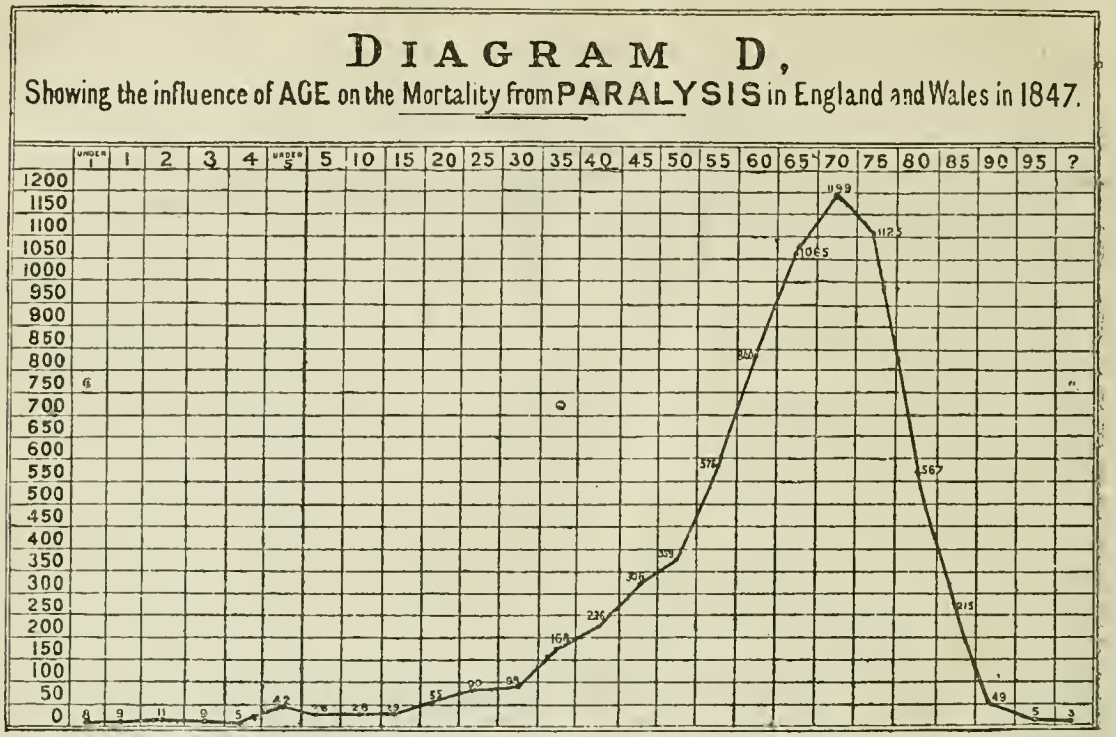
3. *Paralysis*, contrary to apoplexy, carries off but few victims in the earlier periods of existence; and this likewise coincides with our clinical experience, which shows that that form of paralysis which is peculiar to infantile life is but rarely fatal. The curve in Diagram D remains, therefore, low until the age of twenty, when it begins to rise. At fifty-five there i





The top line of numbers denotes the periods of age at which the deaths have taken place.
The side line of numbers indicates the numbers of deaths at the different periods of life.

a sudden jump upwards, and the rise is then rapid until seventy, when the maximum is reached. At eighty there is a sudden fall, owing, no doubt, to the small number of people who remain to be carried off, and the minimum is reached after ninety-five.



The top line of numbers denotes the periods of age at which the deaths have taken place.
The side line of numbers indicates the numbers of deaths at the different periods of life.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE WESTMINSTER HOSPITAL.

INTESTINAL OBSTRUCTION TREATED BY OPIUM AND BELLADONNA.

(Under the care of Dr. FINCHAM.)

[For the notes of this case we are indebted to Mr. Howard Cane, M.R.C.S., House-Physician.]

Peter P., aged forty-four, a messenger, states that on three separate occasions, at intervals of five years, he had suffered from attacks similar to the one for which he was admitted, but not such severe ones. In the intervals he was perfectly well, and his bowels acted regularly and without pain every day. On October 31 he ate an excessive quantity of apples and nuts. On the morning of November 1 his bowels acted naturally. In the evening he felt some general uneasiness in the belly, but as there was no sharp pain he went to work the following morning. On November 2 he says he passed early in the day some wind, and a little thick, "jelly-like stuff." At 1.30 p.m. his uneasiness had so much increased that he came to the surgery at Westminster Hospital, and was ordered two ounces of mist. sennæ co. He went home to bed, and the pains in the belly got worse. Towards evening he noticed that his abdomen began to swell, and he then vomited for the first time and brought up some "black stuff," but he did not notice any particular smell about it. On the following morning (November 3) he felt so much worse that a doctor was called in, who ordered him some aperient medicine and hot fomentations to the abdomen; but the swelling still continued to increase. Three injections per rectum were then administered at different periods, and some time after the last he states that a small quantity (about half a pint) of thick fluid was ejected, but this was followed by no relief.

On November 4 he had repeated vomitings; all his symptoms continued to get worse. On the 5th, the vomiting being every five minutes, he was advised to go to the hospital. On admission the patient complained of a feeling of uneasiness and great distension of abdomen, with thirst, and constant vomiting and hiccough. The vomited matter consisted of greenish-yellow watery stuff, with a small amount of flocculent deposit, but it was not stercoraceous. Tongue large, tolerably clean, moist and flabby. On examining the abdomen it was found to be enormously distended, and the swelling followed somewhat the outline of the colon. There was no particular tenderness anywhere, but patient stated that he had had a pain in the right groin on Thursday morning, which lasted for a few hours, and then disappeared. All the possible herniæ were searched for, but none could be discovered. Pulse 90, regular, rather small; respiration natural. He was ordered a grain of opium every eight hours, with hot fomentations to the abdomen, and small quantities of brandy in iced water at intervals of about two hours; no nourishment of any kind was given. At 9 p.m., five hours after admission, the vomiting first became distinctly stercoraceous, and this continued off and on at varying intervals during the night, also the hiccough, which was very troublesome. He was very restless during the night, and had a desire to go to stool, but passed nothing; complained of a feeling of great pressure on the abdomen. Urine normal, passed without difficulty. Slept at short intervals.

November 6.—Remains about the same, but complains of pain in the abdomen, moving from side to side. Coils of intestines distinctly visible through the abdominal walls, which are enormously distended and tense. At 2 p.m., when first seen by Dr. Fincham, there was some tenderness at a spot two inches to left of umbilicus. He was ordered to continue opium, with the addition of half a grain of extract of belladonna as before; no nourishment. Towards evening vomiting diminished; also hiccough. He expressed himself as feeling more comfortable; no pain except when he moved; he could lie on his right side. No fæces or flatus passed, and no desire to go to stool. Pulse 120; temperature 99°; respirations 20. Tongue very dry and red.

7th.—Passed a tolerably good night; vomited once. This morning stercoraceous vomiting again came on, and continued till 2 p.m. at intervals of about half an hour. Pills ordered

every four hours. To continue ice and fomentations, and a pint of milk to be given in the twenty-four hours.

8th.—Had very little sleep during the night, but complained of no pain. Vomited once or twice during the day. Tongue still dry. Continue treatment as before. Give enema of ol. terebinthinæ ʒj., ol. olivæ, mucilaginis, āā ʒss., aquæ ad Oj. The enema was returned about two hours afterwards, but no fæces.

9th.—Patient passed a very restless night; the vomiting continued off and on. Very restless all day, and somewhat delirious. At 6 p.m. delirium more marked, patient waving his arms about, and talking in a confused and excited manner. Pills then ordered to be discontinued, and an enema given as before. Patient still continued very restless and excited, trying to get out of bed every few minutes. Two-thirds of a grain of morphia injected subcutaneously. Two hours after, delirium still continuing, half a drachm of bromide of potassium was given, to be repeated in two hours if not quieter. Pulse 108; respirations 24; temperature 100·2°. At 11 p.m. patient passed per rectum a small quantity of semi-opaque, whitish-looking mucus, with two or three small lumps of fæces and some flatus. Ordered two pints of milk in the twenty-four hours.

10th.—Patient passed a very restless night, but was somewhat quieter than during the day. At 3 a.m. he passed a semi-solid motion of a yellowish-brown colour, but very small in quantity, and some flatus. He was wandering all day. At 2 p.m. brandy omitted, the patient being very restless and excited. Half a drachm of bromide of potassium was given every two hours. At 8 p.m. he was much quieter, and dozed slightly; bromide discontinued. Temperature in evening 97·2°; pulse 108. Tongue slightly moister.

11th.—Patient slept much better during the night, and woke at 7 a.m., and was quite rational. At 10 a.m. the bowels acted freely; over a pint of fæculent matter coming away, of much the same character as that passed yesterday. At 2 p.m. the bowels again acted freely; patient then slept for three hours, and at 5.30 the bowels were moved again very freely. He took a basinful of bread-and-milk. Temperature in morning 96·2°; pulse 108. At 11 p.m. bowels again acted. Evening temperature 100°. Tongue quite moist and clean.

12th.—Passed a quiet night, sleeping nearly eight hours. Bowels acted at 2 a.m., and again at 9 a.m. Passed a very quiet day, and seemed very comfortable, but complained of great weakness.

13th.—Feels better altogether; passed a good night, and bowels acted this morning.

From this time he made an uninterruptedly good recovery. Castor oil was given him occasionally to regulate the bowels, and he was discharged cured on November 23.

Remarks.—On account of the early onset of vomiting, the almost sudden and complete obstruction, and the spot of tenderness, Dr. Fincham was inclined to locate the mischief in the small intestine. The occurrence of three similar but less severe attacks at intervals of five years, with complete immunity from intestinal disturbance between those occasions, gave no kind of support to the supposition of there being either organic stricture or band causing traction on the intestines. The man's age was against intussusception. On the whole, the most reasonable hypothesis appeared to Dr. Fincham to be that the excessive quantity of fruit taken had set up some local enteritis, subsequently increased by aperients, and that this led to paralysis of the intestine and obstruction. The delirium was an odd feature in the case; it was entirely out of proportion to the severity of the local symptoms. It was a question whether the belladonna had anything to do with it, or the brandy. Favourable points in the prognosis throughout were—that the patient had had three similar attacks before, but had recovered; and that, although his condition was very grave, he never had the sunken eyes and anxious aspect which are of such bad omen in cases of intestinal obstruction.

INTESTINAL OBSTRUCTION DUE TO INTERNAL STRANGULATION OF SMALL GUT—ABDOMINAL SECTION.

(Under the care of Dr. FINCHAM and Mr. COWELL.)

[For notes of this case we are indebted to Mr. Howard Cane, M.R.C.S., House-Physician.]

Charles Henry F., aged fifty-three, labourer, was admitted to Westminster Hospital on Wednesday, October 18. He stated that he was quite well up to six o'clock the previous Friday afternoon (the 13th), when he was suddenly seized with a violent and sharp pain in the abdomen, which "drew him double." This was after his tea, which consisted of grilled haddock, bread, etc. The pain he referred to the right side of the abdomen, just below the liver. This pain continued till the day of admission. When first seized with the pain he tried to pass a motion, but failed, and only passed blood. He had done a good day's work before his tea, but did not remember having strained himself. About ten o'clock on the Friday evening he began to vomit, and has continued to do so up to the present time. The vomited matter has been most offensive during the last two days. Has not passed any motion or any wind since the time when he was first seized.

On admission (October 18—*i.e.*, five days after the onset of symptoms) patient was ordered a hot bath, after which he was relieved of pain, and passed flatus in small quantity. When seen at 7 p.m. he was quite comfortable; had no pain, only constant vomiting, which was stercoraceous. Tongue red, dry, and cracked; pulse weak and easily compressible. Abdomen much swollen, but not at all tender. No tumour could be felt; if tapped on the left side, gurgling could be heard. Tympanitic all over; rather more so on the left than on the right side. No hernia discernible externally. On introducing the finger into the rectum, no tumour or hernia could be felt. Lower part of rectum empty; higher up there was a quantity of blood mixed with fæcal matter—much more of the former than of the latter. A warm soap-water injection brought this away, but failed to bring any more than what was in the rectum. Ordered pulv. opii gr. j., in pil. 4tis horis. Brandy ʒiv.; ice to suck.

19th.—1.30 a.m.: The vomiting is increasing, and is more stercoraceous than before. Now he has hiccough. Pulse 96, very weak, fluttering, and easily compressed; temperature 97·4°; respirations 24. At 3.30 a.m. the patient was in so critical a condition that Mr. Cowell was sent for. There seemed a strong presumption in favour of some internal strangulation; but from the cessation of pain Mr. Cowell suspected that gangrene might have set in, and hesitated as to the expediency of operation. At 10 a.m., however, as the patient's condition was unaltered, abdominal section seemed to give the only chance of relieving him. Patient was placed under the influence of ether, and Mr. Cowell proceeded to operate by making an incision from umbilicus to within one inch of pubes. Having cut through the abdominal walls and peritoneum, he began to trace the bowel; but, as this was much distended, the wound had to be enlarged till it reached about two inches above the umbilicus. About six ounces of claret-coloured fluid escaped from the peritoneal cavity, but there was no lymph along the intestinal coils, which were quite smooth and shining. After tracing the distended bowel, first in one direction, then in the other, the strangulated portion was found to the right of and below the umbilicus, very red and congested, but not actually gangrenous, bound down by a distinct band of fibrous tissue. This was divided, and, as no other band could be found, Mr. Cowell proceeded to return the intestines. As they were so much distended they were punctured to allow of escape of gas. From blocking up of the fine aspirating needle, it was found necessary to puncture the intestines four times. Slight oozing of fæcal matter took place on the withdrawal of the needle each time, but this soon stopped when the intestine was cleansed with a sponge and a little pressure put on the punctured spot. The intestines were now more easily returned, the wound stitched up with silver wire, and the patient taken to the surgical ward. After the operation one grain of opium was given directly, and repeated in form of pill. A little brandy, champagne, and barley-water were given; and, as he complained much of thirst, ice to suck *ad libitum* was was ordered. He continued to improve—vomited once or twice, but not much—till about 4 p.m., when his pulse became weaker, and he began to get an ashy blue colour about the face. At 5 p.m. he had a severe attack of vomiting, bringing up about two pints, which gushed out through his mouth and nose. After this he sank very rapidly, and died about 5.20 p.m. The heart continued to beat after the respiration had ceased.

Post-mortem.—The wound had healed slightly above and below, and on opening the abdomen slight adhesions were found to have taken place between the bowels and the abdominal walls. The strangulated portion of the small intestine was found on the right side of the abdominal cavity, very black, but still with a shining, smooth surface. The strangulated part was about eighteen inches long, and the

same distance above the ileo-cæcal valve. In the abdominal cavity was a quantity of dark fluid, like a mixture of blood and water.

CLEVELAND-STREET ASYLUM.

GASTRO-COLIC FISTULA.

(Under the care of Dr. A. H. LEDIARD.)

C. M., AGED fifty-five, charwoman, was admitted into the Cleveland-street Sick Asylum on July 24, and died on August 5, 1876.

During life the following brief notes were recorded:—Parents died of old age. No history of tumour in family. Patient fell on her back in frosty weather just before Christmas. Was quite well up to that time, but has been bad ever since, having lost flesh considerably. Has kept her bed during the last three months from excessive weakness, and three months ago a doctor told her that she was the subject of tumour. She was not aware of it, but has felt it since her attention was directed to it. Was stout till last Christmas. Has not suffered from any sickness, neither has she vomited or passed any blood. Has taken very little food of late.

On examination of the abdomen, a large, smooth, hard, globular, movable tumour is distinctly felt just below, and a little to the left of, the umbilicus. It has well-marked communicated pulsation; dulness on percussion, with tenderness. No bruit heard over it. Tumour is not connected with the liver, nor does it arise from the pelvis, but appears to lie amongst the intestines, and does not pass towards the loins; it is evidently of a malignant nature. Patient is emaciated, very feeble, and intensely anæmic, presenting altogether an advanced cachectic appearance. Urine contains no albumen. Bladder, rectum, and vagina are healthy She could not be induced to take much beyond a little milk, brandy, and beef-tea. She did not complain of pain, but of weakness and faintness. I did not see the stools, and the nurse stated that her bowels were not loose, neither was there anything peculiar about the motions, which were scanty from the small amount of food taken. There was no vomiting, nausea, or blood passed.

Post-mortem.—Body thin; all fat gone; no general peritonitis, but adhesions of parietal and visceral layers of peritoneum from just above umbilicus down to hypogastric region. In consequence of this the knife passed into the transverse colon on opening the abdomen, and fluid resembling that usually seen in the stomach exuded freely. On this being ligatured the liver was removed, and found anæmic but otherwise healthy. The stomach was then tied at the cardiac orifice, large gut ligatured at sigmoid flexure, the small gut just below the duodenum, and the whole mass, together with a large tumour, removed by dividing the gut in the right loin. On examination of the stomach, a large ragged opening was found at the pyloric end, and towards the greater curvature. This opening consisted of cancerous ulceration of characteristic hardness. This large opening was then found to open straight into the transverse colon, to which there were numerous surrounding adhesions. On opening the colon at this part, the fistula was found to lead to an enormous area of ulcerating cancerous deposit, ragged, of reddish-brown colour, and smelling horribly. The pylorus was found healthy, leading to a healthy duodenum. The small intestines contained grumous matter, but not so much as the large. No secondary deposit of cancer found. Kidneys healthy, but pale and anæmic. Spleen small and pulpy. Brain not examined, as there had been no head symptoms. Lungs not adherent, œdematous, but otherwise healthy. Heart healthy. Uterus healthy; pelvis free from cancer; no enlarged glands. Pancreas healthy; mesenteric glands not enlarged.

Remarks.—From the disease being most extensive in the colon, it is probable that the cancer originated there rather than in the stomach; but for this distinguishing point it would be difficult to form any opinion on the matter, seeing that the stomach and colon were intimately adherent. The fistula must have existed for some time, possibly during the last three months of life, when she suffered from such great weakness induced by the passage of food directly into the large gut. Diagnosis here was difficult; there was no fæcal vomiting, or even vomiting of any kind, whilst patient was under my observation, which has been drawn attention to in these cases by Dr. Murchison, who has referred to a considerable number in an able memoir on the subject.

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Medical Times and Gazette.

SATURDAY, DECEMBER 9, 1876.

THE COLLEGE OF SURGEONS AND THE CONJOINT SCHEME.

THE Council of the Royal College of Surgeons has apparently determined, inspired, and chiefly moved thereunto, we may suppose, by the pre-eminent influence and persuasive powers of Sir James Paget, that a Conjoint Scheme for England shall be brought into active practical existence, no matter what sacrifices may be required of the College to meet the demands of other medical authorities concerned. Consequently, at the special meeting of the Council held on Friday, last week, it was decided by a large majority to accept the last amended Scheme, with the modifications suggested by the Senate of the University of London. And the chief of these modifications called for no slight amount of sacrifice and self-effacement on the part of the College. It will be remembered that the amended Scheme now before the co-operating bodies was the result of long-continued labour and thought on the part of a conference presided over by Sir James Paget, and constituted of delegates from all the co-operating bodies. In that Scheme it was recommended that the Committee of Reference, which must become a body of very considerable authority and influence, should be formed of four representatives from each of the three corporations, and two from each of the four universities,—the numerical preponderance of power in the Committee being thus given to the corporations, which bodies admit to the profession by very far the greatest number of the men who year by year become legally qualified practitioners. This Scheme was agreed to by the majority of the licensing bodies concerned, but was objected to by the University of London and the University of Cambridge. With the objections made by the latter body we will not just now deal; but the University of London dissented from the constitution of the Committee of Reference, and the Senate of the University approved of and adopted the following alteration, suggested by their Medical Committee, viz.:—"That the Committee of Reference should be constituted of representatives

to be appointed in equal numbers by each of the medical corporations and universities of England." The alteration thus proposed would effect a radical change in the constitution of the Committee of Reference, by transferring the preponderance of votes from the corporations to the universities, and giving to such a body as the College of Surgeons—the most powerful of the corporations—only the same representative power as to the University of Durham, the feeblest of the universities. As it has been shown that of the medical men in England and Wales not 4 per cent. hold a degree from an English university, it is difficult to imagine what valid reason or reasons could be brought forward in support of the proposed change; and, coming as it did from the youngest of the universities—one which is not an educating but only an examining body,—any member of the Council of the College might be forgiven if he deemed the proposal not merely altogether unreasonable, but almost an impertinence.

The Council of the College, however, remembering probably, among other considerations, that the Fellows and Members of the College, at a meeting held in 1870, had resolved that "it is highly desirable that a single Examining and Licensing Board should be established in each division of the United Kingdom as the sole portal to professional practice," determined that, if they could help it, the last elaborated scheme for an English Conjoint Board should not be shipwrecked by the University of London; and consequently, after much consideration and reconsideration, they have finally resolved to accept the unreasonable alteration proposed to them, and the lessened power it gives the College in the Committee of Reference.

This resolve was not indeed easily arrived at, but it was finally carried by fifteen votes to eight—a very decided majority. The meeting was a full one, every member of the Council having been present; and we are glad to take this opportunity of congratulating Sir William Fergusson on being again well enough to take his seat at the Council Board. The motion for the confirmation of the minutes of the Council meeting of the 9th ult. was proposed by Sir James Paget, and seconded by Mr. Hilton; while the amendment, "That they be confirmed with the exception of that portion which relates to the Conjoint Scheme," was moved by Mr. Marshall, and seconded by Mr. Hancock; and the division list on the final vote was, we believe, as follows:—For the original motion, Mr. Prescott Hewett (the President), Sir James Paget, Dr. Humphry, and Messrs. Birkett, Baker, Busk, Curling, Critchett, Erichsen, Hilton, Holden, Simon, Spencer Wells, Wilson, and Woodhouse; and against it Mr. Marshall, Sir William Fergusson, and Messrs. Le Gros Clark, Forster, Gay, Hancock, Holt, and Walton. Only one of the members, we are glad to say, was still unable to make up his mind how to vote. Since the Council meeting of November 9 the minority has gained only one vote, while the narrow majority by which the thrice-fought motion was then carried has been increased by six. We will not pretend to any knowledge of the arguments used in favour of the motion within the College walls, though we doubt not that that of expediency was not forgotten; but outside the favourite "argument" has been the hint, not to say the threat, of something worse to come in case the College should not yield now; and another, that, after all, this is only a temporary experiment, and that any of the co-operating bodies can retire from the Scheme at the end of five years should it prove unsatisfactory,—the first a very unworthy, and the latter, we venture to say, a very untenable argument. If the Scheme is once established it may possibly break up altogether, but no one of the corporations, at any rate, can retire from it and endeavour to live alone. One or more or all of the universities might, perhaps; but then the Scheme might very well and very usefully have been established without them. It is worth remarking also that, though no hostile criticism or comment was publicly made on the action of the University of London, when the modifications proposed by that body, and giving to itself increased power, impeded the general acceptance of the Scheme, yet when the Council of the College showed a hesitation in accepting them, the public were informed that the points in dispute were of a futile and trifling character; and the College was held up to obloquy as endangering the Scheme.

There is now wanting to the Scheme only the adhesion of the University of Cambridge, and probably that will not be wanting long. We are not sure that her objections have been distinctly formulated or made public yet; but, if we are not mistaken, one is that the experiment of a Conjoint Board ought not to be tried in one division only of the kingdom, but in all three simultaneously, or something to that effect. We confess to sympathising with her, and to feeling, at any rate, not a little objection to England being the *corpus vile* in which the experiment is to be made. But Cambridge is not likely to object to the University of London proposal, and Professor Humphry's influence may now be counted on to help to gain her acceptation of the Scheme.

WATER ANALYSIS AND WATER ANALYSTS.

A LITTLE work has recently come into our hands which deserves notice in more than one respect.(a) It is a work of unquestionable ability, but which is so marred by rash and rude statements as greatly to detract from its otherwise remarkable merit. It is an old story that "doctors differ," that "authors disagree," and generally that "two of a trade will never agree"; but, happily, these squabbles are usually kept in the background, and the dirty linen is washed at home. Unfortunately, however, since the Adulteration Act came into force we have had several untoward examples of analyses by one chemist being discredited by another—notably in the instances of wine, bread, butter, and even arrowroot. But in nothing has the conflict of analysts been more apparent than in what relates to the question of potable water. For years we have had a series of analyses of the water supplied by the various London water companies published at stated intervals, from the study of which the outside public must have risen, not exactly refreshed, but rather disgusted with the character of the water they were compelled to use. Nevertheless, as may be seen from the volume before us, chemists are not even now agreed as to the substances which are to be sought for in the determination of the question whether a water is fit for drinking purposes or not—to say nothing of the processes whereby the amount of these substances is determined. This is very well shown by a short inquiry into the nature of the contents of the volume before us. And first as regards the preface. Here we are told that in all former editions of the work a special chapter was devoted to the estimation of nitrates; but that in the present edition "the estimation of nitrates is described just as the estimation of silica might be—viz., as a step in the exhaustive mineral analysis of a water residue." Such a statement is begotten of the fact that Mr. Wanklyn's confidence in the ammonia process has increased, and that he is now prepared to trust to it as "a direct test for the actual presence or absence of organic matter," and "can afford to discard indirect and, in many instances, delusive signs." Next come in this preface "a few observations on the reception which the ammonia process has met with at the hands of chemists." This essentially consists of a history of the gradual acceptance of this process by chemists up to a certain point, and then the following remarks:—"Within the last year a very curious attempt has been made by Dr. Frankland and his

(a) "Water Analysis: a Practical Treatise on the Examination of Potable Water." By J. Alfred Wanklyn and Ernest Theophron Chapman. Fourth Edition, rewritten by J. Alfred Wanklyn, M.R.C.S., Vice-President of the Society of Public Analysts, etc., etc. London: Trübner. Pp. 182.

supporters to shake the confidence of chemists and of the public in the working of the ammonia process; or, to express myself more fully, the attempt made by Dr. Frankland, in the year 1868, to disparage the ammonia process and to commmend his own—which was responded to by the general adoption of the ammonia process, and the rejection of his and Armstrong's process—has been renewed by Dr. Frankland and his followers." Following this there comes an account of the doings of Dr. Frankland's late assistants, and then of Dr. Frankland himself—especially with regard to a discourse delivered before the Chemical Society in February of the present year. Mr. Wanklyn was present by invitation, and, "at the call of the President, replied to the discourse; but the Council of the Society (which....is in office, not in virtue of the choice, but of the supineness of the Society) has recently published Dr. Frankland's discourse, but has not published my reply." Mr. Wanklyn would be willing to leave Dr. Frankland's process to the disintegrating action of time; but he "owes a duty to those who have adopted the ammonia process." "Moreover, water analysis has assumed a national importance; and the errors and misrepresentations which, in his official capacity, Dr. Frankland is making, may cost the country much, both in life and treasure."

Consequently, Mr. Wanklyn has come to the resolution to publish in the appendix to this edition a "sketch of the history of the ammonia process, and of the controversy on water analysis, giving in substance the reply suppressed by the Council of the Chemical Society."

Take it all in all, a more objectionable preface to any book cannot well be conceived. A handbook of any kind is a wrong place for discussion. These matters are best settled elsewhere, either in the public journals or in the form of a tract or pamphlet. And if the preface is objectionable, the appendix is very much more so.

Briefly, we would endeavour to give our readers a sketch of what all this contention is about. In the analysis of potable waters, the determination of whether a water is *safe*, in contradistinction to being merely *advisable* or *unadvisable*, as a source of water-supply for domestic uses, depends mainly on the estimate of two sets of substances—namely, chlorides, and the metamorphic products of nitrogenous matters. Water containing chlorides in any excess, except they come from natural strata containing chlorides, are almost always suspicious; for chlorides in any quantity almost certainly indicate contamination with sewage, inasmuch as human and other animal *débris* contains chlorides in abundance.

The metamorphic products of nitrogenous matter, again, are largely, though not absolutely, derived from the animal kingdom. They commonly assume the form of nitrates, or of ammonia, or, it may be, still exist in a more or less unoxidised condition. Various plans have long been in vogue for the estimation of nitrates and nitrites—that is to say, of the ultimate products of albuminous or nitrogenous bodies. As regards ammonia, or any nitrogenous substance converted into ammonia, Nessler's process furnishes a ready method of determination. Any description of this well-known and elegant process would go beyond our limits. But the estimation of both nitrates and ammonia leaves the third possible and most dangerous contamination unaccounted for. It will not account for the unoxidised, or only partially oxidised, products of nitrogenous matters which are frequently discharged from the living body, and which may, under certain circumstances, long remain unoxidised in water supposed to be potable. The process brought forward by Wanklyn and Chapman was intended to overcome this difficulty. It was intended to afford a secure means of estimating, not only free ammonia in the usual way, but also what they termed "albuminoid" ammonia—that is, ammonia not existing actually as ammonia, but as nitrogenous matter only partially or not at all changed. The agents used by them for the destruction of the organic matter were permanganate of potash and enormous excess of caustic potash. This, the authors say, is a kind of "combustion process, with ammonia as the ultimate product." The ammonia thus produced is estimated by the Nessler process.

That this is a most useful process we are quite free to admit. That it is perfectly accurate as a measure of all albuminoid matter contained in water has not been proved. That it does not discriminate between different kinds of organic or albuminoid matter is perfectly clear. But it is exactly here that the necessity for discrimination arises. Chemical analysis cannot, beyond a certain stage, discriminate between nitrogenous matter derived from plants or the lower animals, and the nitrogenous matter derived from human beings; yet the former may be innocuous, the latter deadly. Chlorides are not poisonous, yet we know it is wise to avoid waters containing them in any quantity. They indicate sewage contamination, and this sewage may any day appear as sewage, not as chlorides, as nitrates, or as ammonia, but in the strictly organic form of living germs, to spread death and destruction far and near. We repeat that it is not the chlorides, nor is it the ultimate products of nitrogenous change, which constitute the danger: it is the source whence these are derived, and which, itself unchanged, may at any time appear in the most noxious shape.

When it is once known that a water is impregnated with such impurities as those mentioned above, the water ceases to be a potable water in the strict sense of the word. Its use should be discontinued, for no one can tell when the organic substances whence these are derived may make their appearance. That being so, surely it is folly to talk of nitrates being of no more importance than silica. Everything is of importance which leads us to a clear conception of the risk and danger incurred from waters liable to contamination, and it is useless to decry one method of analysis to bolster up another. We are very far from decrying the process, or rather processes, advocated by Mr. Wanklyn. We consider them most useful, highly convenient, and well adapted to give a general idea of the condition of a water, but we do not suppose that they are the ultimate product of human ingenuity; and, in the meantime, we consider it highly indecorous of Mr. Wanklyn to use such language as he does in this book with regard to Dr. Frankland. We should hesitate to transfer to our columns the words which Mr. Wanklyn uses with regard both to that gentleman and to Dr. Odling. Assuredly the so-called ammonia process will not be fostered by such means. We would advise Mr. Wanklyn to cut out all such controversial matter, carried on against or with nobody, from his book, and leave it as it would then really be—an admirable little handbook.

THE ARCTIC EXPEDITION.

Letters on the subject of the disastrous outbreak of scurvy which crippled the Arctic Expedition still appear in the daily papers, but we do not really get any nearer to the discovery of its real cause or causes; nor do we yet know whether or not the Expedition was fully and sufficiently furnished with lime-juice; nor if a daily ration of this well-proved anti-scorbutic was or was not, as a matter of course, served out to each and every member of the Expedition, whether sick or well, and whether staying with the ships or employed on sledging expeditions. And our contemporary the *Times* agrees with us in saying, as we did last week, that no reliable judgment can be formed on the whole question till the Admiralty is pleased to give us authoritative information on the points referred to, and that that information ought to be given without delay. Meantime it may be observed that Mr. Clements Markham, in his letter published in the *Times* of December 5, attri-

butes the outbreak of scurvy, chiefly, at any rate, to the unprecedentedly prolonged absence of sunshine endured by the late Expedition. He says: "But there was one great and important difference between the circumstances of the late Expedition and those of all expeditions which have preceded it, and which have sent out extended sledge parties. Former expeditions, which sent out sledge parties for long periods, wintered in 74° and 75° N., where the sun was only absent for ninety-three days, and where there was never total darkness. The late Expedition endured a winter involving the absence of the sun for 142 days; while there is greater darkness during three months in 82° 27′ N. than there is during the darkest days of the year in 75° N. This darkness, which in itself is deleterious to health, involves other unavoidable consequences, such as prolonged damp, intense cold, and confined air. Then, again, the travelling parties of former expeditions had enjoyed the effects of the sun for two months before they started, while those of 1876 left their ships when they had barely had the benefit of the returned sun for one month." The prolonged winter darkness may, perhaps, for aught we as yet know, have been one of the factors in causing or predisposing to the disease; and we know, from Sir George Nares' report to the Admiralty, the scurvy appeared among the men left with the ships after the departure of the sledging expeditions.

This much, however, may be taken to be only too true—viz., that the various sledging parties were either not at all or very insufficiently provided with lime-juice. Sir George Nares, in his official report, when endeavouring to account for the, to him, "most inexplicable and unlooked-for" outbreak of scurvy, comes to the conclusion "that the heavy labour of sledge-travelling must have intensified and brought it out, as has been the case in nearly all former journeys when the travellers have been unable to secure large supplies of game, *and were unprovided with lime-juice*" (the italics are our own); and Mr. Clement Markham now only says, "In the late Expedition some of the parties took sufficient [lime-juice] to furnish supplies to the sick." This statement of Mr. Markham must, we are afraid, be accepted as strictly accurate, though some of the "facts" his memory has supplied him with appear to be of very questionable accuracy, as the statement that "in former expeditions no lime-juice was taken in the sledge-travelling parties," and that the weights for each man to drag were greater in former expeditions than in this last one.

But we do not yet know all the necessary facts, and we have still to wait for them from the inexplicably reticent authorities at the Admiralty.

THE WEEK.

TOPICS OF THE DAY.

A PAPER was read last week, at the Society of Arts, by Major General F. C. Cotton, C.S.I., on "The Construction of House-Drains." The paper was written in furtherance of the efforts now being made by the Society of Arts to elicit information on the subject of house-drainage, by which it is hoped that the knowledge of this all-important matter will be made general. There had been, the lecturer said, an entire disregard of all the first principles of sanitary science shown during the last year, both by the builders and occupiers of many new houses. He would limit his remarks for that night to the pipes and drains of a house, without entering into the requirements of the main sewer. There were comparatively few, even among the well-educated classes, who realised the daily injury to health from breathing contaminated air. Sanitary laws were the only safeguard, considering the artificial life which the citizens of London and other large towns were leading. The weak point in our drainage system was the house connexion, and the only way to obtain security was by a thorough alteration in the process hitherto adopted. House-drainage should be supervised by the sanitary authorities, as the main drainage was. It was well known that many of the best houses in London, owing to the gross ignorance exhibited by builders, were most unhealthy and dangerous to live in. Houses by hundreds were being built, in which every sanitary law was neglected. The real remedy for this was sanitary education; but it must reach to the point of being possessed by the public generally before it would affect the builders. Only when houses were valued for the care taken to insure their healthiness would the builder's attention be diverted from decorations to drains. He thought it was essential that some such system as had been adopted in agricultural districts should be adopted in towns. In the former, the necessary work of land-drainage was done under Government control, to be paid by instalments extending over a series of years. House-drainage in towns should be also supervised by the Government, and stringent laws should be enacted on the point.

The Guardians of St. Saviour's Union, at their recent weekly meeting, agreed to accept the suggestions made by Dr. Stevens, Government Medical Officer, through their vaccination officer, to open the vaccination stations of the Union one night a week each, to offer facilities for free vaccination or revaccination to adults who could not attend the stations during the business hours of the day; and to issue broadsheet posters, pointing out this fact, and the advantages of vaccination for the prevention of small-pox.

Mr. Armand Leslie, of the National Society for Aid to the Sick and Wounded in War, desires to contradict the very universal belief that the wearing of the red cross of the Geneva Society in Turkey is fraught with danger to the wearer. The statement that the sight of a cross produces an effect upon a Mussulman analogous to that made on a bull by a red cloth is, he says, totally erroneous. In common with all the surgeons of the National Society's ambulance, he has always worn the red cross on his cap and arm since his arrival in Turkey. It has been worn openly in the Turkish camp for weeks, and he has travelled with it over a great part of Bulgaria by night and day without a guard. Neither he nor any other Englishman has ever met with the shadow of an insult. The Turkish soldiers seldom notice the appearance of the cross, and its presence is always the means of the wearer being treated with the greatest respect.

Last week, Major-General Lysons, C.B., Quartermaster-General of the Army, and Sir William Muir, K.C.B., Director-General of the Army Medical Department, visited Aldershot for the purpose of inspecting a detachment of the Army Hospital Corps, consisting of one officer and a hundred non-commissioned officers and men. The proceedings commenced with a number of men in marching order being sent out to represent the wounded, each man bearing a ticket describing his wound. The Army Hospital Corps men then went out provided with stretchers, bandages, lint, splints, and other appliances, and after temporarily dressing each wounded man, conveyed them to the ambulances, and by these to the field hospitals, where they were supposed to receive further attention. Another company was exercised in improvising methods for carrying the injured. The inspection was pronounced very satisfactory, and this new arrangement for training the men of the Army Hospital Corps to the duties which would be required of them on active service is a very wise and necessary precaution.

A Board of Trade inquiry was held at Falmouth on the 28th ult., under the superintendence of Dr. Arthur B. Paris, medical inspector, to ascertain the cause of an outbreak of scurvy on board the ship *Queen of India*, belonging to the Merchants' Trading Company, Liverpool. The chief cause of

the outbreak is considered to be the defective quality of the water taken on board at Calcutta.

At a meeting of the Bristol Board of Guardians, held on Saturday last, a letter was read from the Lecturer on Anatomy at the Bristol Medical School, stating that there were forty-six pupils at the School requiring subjects for dissection, and asking if the Guardians would supply their wants by furnishing them with unclaimed bodies. The chairman informed the Board that there was a standing order on the books that the medical school should have any unclaimed bodies upon payment of half a guinea each as interment expenses.

A meeting of the Council of the Metropolitan Hospital Sunday Fund was held at the Mansion House on the 1st inst. The Lord Mayor, in his capacity of President of the institution, presided; and the members of the Council mustered in considerable numbers, most of those who have prominently identified themselves with the movement being present. Mr. Henry N. Custance, the Secretary, read the report of the Committee of Distribution, which included their award to the several hospitals and dispensaries seeking to participate in the Hospital Sunday Fund collected on June 18 last. Although the full amount of the sum collected had not yet been received, the Committee suggested that a distribution might be made at once of the funds in hand, and that such balance as might hereafter accrue be apportioned on the same bases at a later period of the year. The Committee recommended that the sum of £23,827 12s. 4d. be now given to sixty-nine general and special hospitals and four institutions, and £2275 16s. to forty-five dispensaries, as shown in an appendix. In compliance with a resolution of May 7, 1875, the Committee invited the representatives of every hospital or dispensary to confer with them, in every case in which their Committee had proposed to fix the award below the arithmetical basis. In reply to that invitation, some of those institutions intimated their wish to leave the decision entirely with the Committee, while others availed themselves of the opportunity of a conference thus afforded to them. In conclusion, the Committee desired to acknowledge the assistance rendered to them by all the institutions claiming to participate in the distribution. The report of the Council having been put to the meeting by the Lord Mayor for adoption, was approved without a dissentient voice, as were also the laws of the constitution of the fund as revised by the General Purposes Committee. Considering that nearly six months have elapsed since the hospital collection for the present year was made, and that the distribution is only now authorised (some of the amounts not having yet been received), it would seem quite within the province of the Council to consider whether some suggestion might not with advantage be made for an earlier transfer of the sums collected, from the various ministers to the treasurer's hands, so simple a duty scarcely warranting such a long delay. Whilst on this subject we may just notice that up to the present time no information has reached us of the way in which the sum collected for the Hospital Saturday Fund of the present year has been distributed.

At the present time, when outbreaks of epidemics are more or less prevalent all over the country, we cannot help being struck with some remarks which recently fell from Mr. Humphreys, the coroner. At an inquiry respecting the death of a seaman from alleged ill-treatment, held before him, Mr. Humphreys, adverting to facts disclosed in evidence, remarked upon the way in which vessels were supposed to be challenged by the quarantine officer at Gravesend. A boat simply ran alongside while the vessel was tacking off, and asked whether all was well, and on receiving the captain's reply in the affirmative, gave her a clean bill of health. It was true, he continued, the vessel was overhauled in London, but by that time the most deadly diseases might have been introduced; there ought in each case to be a personal investigation by an intelligent officer. Mr. Humphreys' remarks are certainly worthy the attention of the Port Sanitary Authority, as cases of infectious disease should undoubtedly be ascertained and dealt with *before* the arrival in the actual port of London of the vessel in which they may have occurred.

Once, at least, in every year our attention is called by the Registrar-General to the lamentable waste of human life which takes place in the streets of the metropolis from accidents, and the question is asked, Can nothing be done to prevent it? The following, which we quote from the *Builder*, certainly does not show the way:—"A further strip of land belonging to Lincoln's-inn is still needed to complete the improvement of Chancery-lane; but some delay has arisen in regard to its acquisition, owing to the fact that the Government hold a lease of the plot, with a right of pre-emption, and, as yet, no terms have been arrived at for the purchase of this right. Meantime, carriage traffic has received the full benefit of the improvement, and the roadway is now sufficiently wide to admit of two vehicles passing abreast. Pedestrians, however, must cross from the west to the east side of the lane on approaching Holborn, or run the risk of being squeezed or mud-bespattered by the wheels of passing vehicles—a state of things barely safe, and certainly highly inconvenient. The Government's interest in the strip of land must be so small as scarcely to be worthy consideration, and it is earnestly to be hoped, in the interests of the public, that the department charged with settling the terms upon which the land can be added to the highway will speedily dispose of this preliminary."

The much-vexed question of the Thames Valley Drainage seems fraught with difficulties. Colonel Cox has now issued his report, but he suggests that the Local Government Board should direct a formal inquiry to be made, so as to enable a decision to be come to, whether or not a provisional order should be made, forming a united district; and it is reported that such inquiry will shortly be held. Colonel Cox explains that the essential idea of the united proposal is, that the sewage of the several places is to be conveyed by gravitation to one or more points situated centrally—say near Teddington,—thence to be pumped to the table-land near Hounslow Powder Mills, and utilised on the land, the effluent passing by the river Crane into the Thames. The scheme, taken as a whole, might be considered, from an engineering point of view, practicable. Richmond, Kingston, Surbiton, Teddington, Twickenham, New Malden, and Hampton Wick might combine with advantage to carry out the Hampton Wick project in part. With regard to Richmond (rural), the difficulty of conveying the sewage to the central point made it seem doubtful to him whether it would be desirable that these places should be included in a united district. The same remark applied to Brentford. Heston and Isleworth could probably deal with their sewage more economically separately than jointly with the proposed district. As to East Molesey and Kingston (rural), the length of sewer required to connect these places with the centre of the combined district would be considerable, with reference to the small population served; and so far the argument was against their being included. On the other hand, these places were situate above the intake of the London water companies, and this circumstance rendered it extremely desirable that their sewage should be taken, if possible, to some point below what might be called their natural outlet, even at a considerable cost.

THE REPORT ON THE LONDON SMALL-POX HOSPITALS.

A MEETING of the Metropolitan Asylums Board Managers was held on Saturday, the 2nd inst., Dr. Brewer presiding. Letters from the Local Government Board were read, one sanctioning increased accommodation being made at Homerton

and Stockwell Asylums for 140 small-pox patients each, in lieu of 102, and for 300 in the Hampstead Asylum. The Local Government Board withdrew its orders which limited the actions of the managers in this respect, and authorised them to follow the course they had adopted before these orders were pressed upon them. With regard to providing more hospitals for infectious diseases, the Fulham and Deptford Committee, through Sir William Wyatt, recommended, as small-pox was increasing, that on the Fulham site two blocks of two storeys each should be immediately erected, and also forthwith four temporary wards of one storey. They also recommended that the erection of permanent blocks at Deptford should be deferred for the present, and that six temporary wards be erected with all speed. In order to lose no time, the Committee had taken tenders for the work of the temporary wards. The total cost of the works to be done at Deptford was £14,000, and at Fulham £17,500. The report was adopted. A letter was read from a firm of soliciters, to the effect that they had been instructed by Sir Rowland Hill, K.C.B., and others, to commence proceedings against the Board, to obtain compensation for the injury they have sustained in consequence of the establishment of the small-pox hospital at Hampstead, and to restrain the further use of this hospital for the reception of patients. The letter was referred to the General Purposes Committee. The report of the Homerton Asylums said that the pressure on the small-pox hospital had not relaxed during the previous fortnight, and the whole of the increased accommodation at the disposal of the Board would shortly be exhausted if the epidemic continued to increase at the same rate as at present. The report was adopted. Surgeon-Major Bostock, C.B., in presenting the report of the Stockwell Committee, stated that the pressure there had been lessened by the removal of ten convalescents to Hampstead. It was reported, also, that Mr. Shaw-Stewart had resigned the chairmanship of the Committee: and the Board, after passing a resolution expressing their sense of the great services he had rendered to the sick poor, elected Surgeon-Major Bostock, C.B., to fill the vacant post. The Hampstead Hospital Committee's report stated that Dr. Brewer, the chairman, had expressed his desire to be relieved of this duty, and Colonel Ratcliffe had been selected to succeed him.

SUDDEN DEATH AFTER THORACENTESIS.

THE French physicians are equally puzzled with the English ones to explain in all cases the cause of sudden death after thoracentesis. At the meeting of the Society of Biology, on November 18 (reported in the *Gazette des Hôpitaux*, November 21), M. Leven gave the details of one of these cases, and showed, both from the symptoms and post-mortem appearances, that his patient had not succumbed either to pulmonary congestion, cerebral anæmia, or syncope. By elimination, M. Leven was led to attribute the fatal issue to a "bulbar irritation which had its origin in the irritation of the nerves of the lung, especially the vagus." This "reflex" explanation, it will be remembered, was one of the theories discussed in Dr. Cayley's case recently read before the Clinical Society; but in Dr. Cayley's case iodine injections had been used. M. Charcot, at the meeting above mentioned, referred to a patient the subject of gout, and who often, when seized with a cough, fell down as though struck by lightning. Another patient, also, who was subject to a cough which had no special character, suddenly fell down when the cough came on. In neither of these cases were there any signs of syncope or epilepsy. M. Charcot was inclined to regard such cases as a kind of laryngeal vertigo, analogous to Menière's vertigo, which has its starting-point in the ear. In this malady, according to Menière, there is first a sensation of a "strident noise," and then the patient falls with his face to the ground. M. Laborde stated that in dogs in which pleuritic effusions have been artificially induced, true epileptiform attacks may be brought on by injections into the pleura.

CONVICTION FOR EXPOSING A SMALL-POX PATIENT IN PUBLIC.

AT one of the Dublin police-courts, on Saturday last, a labourer and his wife were charged for "that they, being persons in charge of an infant child, James Shea, aged four years, then suffering from small-pox, did, in contravention of the thirty-eighth section of the Sanitary (Ireland) Act [Vic. 29 and 30, cap. 90], wilfully expose in the public street the said child, so suffering from a dangerous and infectious disorder." It appeared that the child was admitted to Cork-street (Fever) Hospital the previous Thursday on a medical certificate. He was suffering from modified small-pox, and had been found in an overcrowded room in a dirty tenement-house. On Saturday morning the mother came to the Hospital and demanded her child. The Hospital authorities had no legal right to detain him under the circumstances; but the Resident Medical Officer most properly communicated with the police, who arrested the mother the moment she left the precincts of the Hospital; and the child was brought back at once to the Hospital, on its being ascertained that the father and mother had no settled home, and *were about to look for lodgings!* The facts having been brought before the magistrate, he said it was his duty to act promptly in the matter, in the interests of the public, and accordingly he imposed a fine of £5 on each of the prisoners, or, in default of payment, imprisonment for two months; and no money being forthcoming, the man and his wife were sent *on foot* to Grangegorman Prison—a special messenger having been despatched previously to warn the prison authorities that preparations might be made to have the prisoners' clothes disinfected.

THE ROYAL MEDICAL COLLEGE, EPSOM.

THE Council of the Royal Medical Benevolent College had again the pleasure of receiving, at their last meeting, from a gentleman who was formerly a foundationer at the College and a Carr Scholar, and is now a member of the profession, a letter expressing his deep gratitude for the benefits received from the College, and enclosing a donation of ten guineas towards its funds. The writer says:—"The last four years of my school days were spent at Epsom as a foundationer, and while there I received an education enabling me to pass well the Matriculation Examination of the University of London, by means of which I was fortunate enough then to obtain one of the 'Carr Scholarships,' and that has enabled me to obtain a qualification (M.R.C.S.). I strongly and very favourably contrast my position and chances in life now with what they might have been had it not been for Dr. Carr and the College; and by this you may judge of my appreciation of the benefits received." We are glad to notice this, because it is a proof of the excellent education given at the Royal Medical Benevolent College, and at the same time gives us an opportunity of again reminding our readers that the "Carr Scholarship Fund" still needs help for its completion, and that donations to it may be sent to Dr. Carr, of Blackheath, who originated the scheme of the scholarships, himself founded the first one, and is hon. treasurer to the Fund.

THE HEALTH OF PADDINGTON.

THE annual report of Dr. James Stevenson, Medical Officer of Health for Paddington, for the year 1875, has just been published. It is a somewhat lengthy, but with a very interesting report, and the mass of figures and facts which he has here collected and commented on is sufficient to show that he is an enthusiast in sanitary work. The parish of Paddington contains a population of about 105,000, and during the year there was a total of 1855 deaths, or only 17·6 per 1000, which is about 2 per 1000 below the annual death-rate of the preceding ten years,

and more than 5 per 1000 below the death-rate for England and Wales last year. Although, by comparison, the number of deaths in Paddington last year was small when the statistics relating to the causes of the deaths are examined, it is evident that they were much more numerous than they should have been. From the seven principal zymotic diseases no fewer than 283 persons died, of whom 2 died from small-pox, 11 from measles, 108 from scarlet fever, and 63 from whooping-cough. These, says Dr. Stevenson, might, and should, have been prevented. Accompanying the report is a very interesting table showing the number of deaths, registered at several groups of ages, from different causes. It shows that by far the largest proportion of deaths occur during the first year of life, chiefly from preventable diseases, whilst no less than 38 per cent. of the entire mortality is among children under five years of age. Dr. Stevenson hopes for better things in the future. The death-rate, he says, is decreasing, and it must continue to do so if sanitary science is to accomplish anything. "If," he continues, "sanitary science fail to remove, as far as practicable, those causes which strike down nearly one-half of the race before it can be said to have well begun to live, it will belie its name and be comparatively worthless."

SMALL-POX IN LONDON.

The deaths from small-pox in London, which had been 48, 52, and 43 in the three preceding weeks, rose last week to 67, of which 26 were certified as unvaccinated, and 25 as vaccinated; in the remaining 16 cases the medical certificates did not furnish any information as to vaccination. Of the 67 fatal cases, 34 were registered in the three Metropolitan Asylum Small-pox Hospitals at Homerton, Stockwell, and Hampstead, 1 in the Highgate Small-pox Hospital, 3 in the North-street Infirmary (Poplar), and 2 in St. Thomas's Hospital; the remaining 27, or 40 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 18 of the deceased small-pox patients had resided in Hackney, 8 in Lambeth, and 4 in St. Pancras; in all (excluding one case in the Stockwell Hospital, of which the residence was not stated), 4 belonged to the West, 25 to the North, 4 to the Central, 12 to the East, and 21 to the South groups of districts. The three Metropolitan Asylum Small-pox Hospitals contained 529 patients on Saturday last, against numbers increasing steadily from 185 to 433 in the five preceding weeks. The Small-pox Hospital at Highgate, which has 108 beds, contained 61 patients on the 1st inst.

PATHOLOGICAL SOCIETY OF DUBLIN.

On Saturday, December 2, the chair was taken by the new President, Dr. Thomas Hayden, Fellow and Vice-President of the King and Queen's College of Physicians. Dr. W. G. Smith showed a remarkable lympho-sarcoma, involving the mediastinum of a man aged forty five, with a good family history, and of robust constitution until five months before his death in last September. Hæmorrhagic effusions had taken place into the left pleura and pericardium. The left lung had undergone extreme compression. The President laid on the table a specimen of aneurism of the transverse portion of the arch of the aorta, which presented features of unusual interest. The aneurismal sac communicated with a canal, lined with fibrin, and travelling downwards parallel to the œsophagus until it reached the diaphragm. Here a rupture had occurred, and the peritoneal cavity contained several pounds of partly coagulated blood. Death had taken place within a space of three minutes. Mr. F. T. Porter exhibited the skull of a male subject with extensive syphilitic caries of the bone. At a subsequent meeting of the members of the Society, it was agreed that the system of giving certificates of attendance to students should be discontinued after the present session.

CASE OF DOUBLE AORTIC ARCH IN THE HUMAN SUBJECT.

Professor Morrison Watson, at the meeting of the Manchester Medical Society held on the 1st inst., exhibited and described a preparation showing a very unusual condition of the great vessels, taken from the body of an elderly woman. Instead of the aorta passing upwards from left to right, and then arching over to the *left* side of the body of the fourth dorsal vertebra, it followed the middle line from the base of the heart upwards, winding round to the *right* side of the trachea and œsophagus. From the aorta a branch was given off, following the direction of the normal aortic arch, which, after supplying the left common carotid and left subclavian, became impervious, and was continued as a fibrous band, in which condition it ran on to join the dorsal aorta. Thus there was in fact a double aortic arch, as in the turtle, and through the loop formed by the two arches passed the trachea and œsophagus. The case was one of great interest, especially from the embryologist's point of view; and by a series of excellent diagrams drawn on the slate in coloured chalks Professor Watson showed what had here been the deviation from the ordinary series of changes in early embryonic life. The non-obliteration of the right aortic root, and consequent persistent condition of both roots; the full subsequent development of the right root; and the partial development only of the left (a portion of it degenerating into a fibrous band), were the main peculiarities to which attention was called. Professor Watson found that the thoracic duct passed up to open into the *right* subclavian vein, and that the general arrangement of the large veins was somewhat unusual. He concluded a very able communication by comparing his case with others previously reported.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

The President and Fellows of this Corporation have made arrangements for the delivery in the College Hall of annual courses of lectures on subjects connected with medical science. The lectures, six in number, are to be delivered in the months of January and February of each year. The following are the lecturers who have been selected by the College to deliver the series for 1877:—James Emerson Reynolds, M.D. Dub., Professor of Chemistry in the University of Dublin; Alexander Macalister, M.B. Dub., Professor of Zoology in the University of Dublin; and Arthur Wynne Foot, M.D. Dub., Fellow K.Q.C.P., Senior Physician to the Meath Hospital and County Dublin Infirmary. Dr. Reynolds will give two discourses on the "Influence of Chemical Constitution on Physiological and Therapeutical Action." Dr. Macalister will lecture on (1) "Researches on the Development of the Muscular System in Vertebrates," and (2) "Researches on the Intestinal Canal in Man and in the Higher Animals." Dr. Foot has selected "Tuberculosis" as the subject of the discourses to be delivered by him. The lectures will be open to all licentiates of the College free of charge, while all registered medical practitioners will be admitted on payment of a moderate sum.

THE WATER-SUPPLY OF THE METROPOLIS FOR OCTOBER LAST.

From the report of the Water Examiner presented to the Local Government Board for the month of October last it appears that the water in the river Thames at Hampton, Molesey, and Sunbury (where the intakes of the West Middlesex, Grand Junction, Southwark and Vauxhall, Lambeth, Chelsea, and East London Companies are situated), was good on seventeen days, and turbid during the other days of the month under notice. The highest flood state of the river was one foot above the (six feet) summer level, and the lowest was at summer level. The highest temperature of the water taken at Seething Wells was 59°, and the lowest 48°; while the highest temperature of the air at the same place was 68°, and the lowest 38°. The condition of the water in the river was good on nine days, indifferent on twenty days, and bad on two

days. These observations were made daily at 9 a.m. The rainfall for the month was 1·80 inches. From Dr. Frankland's report of the chemical examination of the waters supplied to the metropolis during the month of October we learn that the Thames water delivered by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies has suffered great deterioration since September, and when the samples were drawn it was much contaminated with organic matter in solution. The West Middlesex Company's water was, however, less impure than the others. The water supplied by the Southwark Company was slightly turbid from inefficient filtration, and contained moving organisms; that delivered by the other Thames Companies was clear and transparent. The Lea water supplied by the New River and East London Companies was of much better quality; indeed, in chemical purity the water of the first-named Company surpassed even that of the Kent Company. The Kent Company's water from deep wells maintained its excellent quality.

THE PROTECTIVE POWER OF VACCINATION.

THE REGISTRAR-GENERAL in his last week's report makes the following pertinent remarks respecting statements of "vaccinated" or "non-vaccinated" in certificates of death from small-pox:—"In the last weekly return it was stated that, in the present year, among 31,360 unvaccinated children of the ages of one to five, thirty-five were certified to have died of small-pox; while one only out of about 317,081 vaccinated children of the same age died of this disease. In answer to an inquiry respecting the latter child, the surgeon says, 'The child which died at 4, Elgin-street North (Hackney) was vaccinated by me on November 3; the arm took well; and the small-pox appeared on November 11,'—that is, eight days after the vaccination. Now, Mr. Marson, one of the first authorities, states that 'small-pox appears on the skin on the fourteenth day after the infection has been received into the constitution.' So this child had been infected by the small-pox leaven some five days before he was vaccinated—at a time, therefore, when he was unprotected. Other cases of the same kind occur, and have to be guarded against in the certificates. A child cannot, in the proper sense of the word, be said to be 'vaccinated' before the twentieth day after the operation, when the scab falls off." We must add to this that it is highly unsatisfactory, and not creditable to medical men, to see that the Registrar-General has still, week after week, to record that in a large proportion of medical certificates of death from small-pox it is not stated whether or not the deceased had been vaccinated. Last week no information on this point was given in sixteen out of sixty-seven certificates.

FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

WE are informed that the Faculty of Physicians and Surgeons of Glasgow have lately established a lectureship on subjects connected with medical science. These subjects may lie within any part of the domain of the medical sciences, whether scientific or practical. The appointment of the lecturer is vested in the Council, to whom is allowed the fullest latitude in the way of selection. It is, we believe, the desire of the Council that the lecturer should, as far as possible, be selected from among gentlemen who have been working at some special field of investigation. The sum of fifty guineas is allowed as a honorarium to the lecturer.

THE "KAKKE" DISEASE OF JAPAN.

THE natives of Japan are liable to suffer from a very remarkable and fatal disease, which resembles to some extent the *beriberi* of the East Indies, and goes under the name of *kakke*. According to Dr. Wernich, of Yeddo, in his interesting letters on the progress of modern medicine in Japan, in the *Berliner Klin. Wochenschrift*, thousands of apparently healthy individuals are annually carried off by this curious complaint, to which his attention has been specially directed by the death from it of a number of the students at the medical school to which he is attached at Yeddo. The symptoms consist in rapidly advancing debility, whose onset is unattended with pain or fever, or even with any disturbance of digestion, and which is succeeded by anæsthesia and œdema of the legs, by palpitation of the heart, and lastly by general dropsy, with diminution of the flow of urine. Only in the very severest cases does the appetite fail a few days before death occurs, and the palpitations and sense of oppression and weakness assume a serious character. It is a peculiar feature of the disease that a patient may be lying in bed feeling tolerably well in the morning, and that the same evening the appearance of œdema over circumscribed parts of the skin, especially near the nape of the neck, will indicate that he is in a state of extreme danger; and the next morning he will die suddenly, without pain or perceptible collapse. Ten per cent. of all the cases attacked with the kakke die in a few weeks. The season of the year at which it is most prevalent is the summer, from May to September, and its victims are mostly healthy males. It is to be hoped that Dr. Wernich, during his stay in Japan, may be able to throw some light on the causes and the pathology of the kakke. His present opinion appears to be that this disease, and the enormous mortality of the Japanese during the summer months, are largely dependent on the poverty of their food, which consists chiefly of rice and fish, and of concoctions of vegetables and preserves of "horribly unpleasant flavour." The natives appear to have a great objection to meat, as well as to beer and European wines. The insidious character of the kakce seems to depend in part on a constitutional peculiarity of the Japanese themselves, which makes them react to morbid influences to an infinitely less degree than Europeans do; thus the temperature of a severe case of peritonitis may never rise above 38·5° or 38·8° Cent. Extensive suppuration may terminate favourably without a trace of general reaction, and other serious diseases may run their course with scarcely any outward evidence of their presence; and when the patients die the agony consists merely in increasing anæmia, in a pulse that, without being very frequent, quite gradually gets smaller and smaller, and in gradually increasing indistinctness of the heart's sounds. With all this there is no fever and no thirst; the patient makes no complaint, although his consciousness is apparently intact; in fact, he seems gradually, so to speak, to glimmer away. With regard to the treatment of the kakke disease it should be stated that early removal of the patients to hospitals at a considerable elevation above the sea, with a careful regulation of diet and medical treatment, has been successful in arresting its progress in certain cases.

ROYAL MEDICAL SOCIETY, EDINBURGH.—The following have been elected office-bearers for the ensuing year:—*Presidents:* J. Graham Brown, M.B., C.M.; Joshua J. Cox, M.B., L.R.C.P.&S. Ed.; R. Kirk, M.B., C.M., L.R.C.P.& S. Ed.; James Baker, M.B., C.M., L.R.C.S. Ed. *Honorary Secretaries:* J. Milne Chapman; Robert Roxburgh, M.B., C.M., L.R.C.S. Ed. *Library Curator:* Lionel Druitt, M.R.C.S. Eng. *Museum Curator:* Chas. W. Cathcart, M.A.

WESTERN INFIRMARY, GLASGOW.—The second annual meeting of the contributors to the Western Infirmary was held on the 30th ult., under the presidency of the Lord Provost. The report submitted by the secretary showed that from November 1, 1875, till October 31 last, 9575 outdoor and indoor patients had been treated; that the average daily number of patients in the hospital during the year had been 178; and that, while the ordinary income for the year had amounted to £9993, the ordinary expenditure had exceeded this sum by £1484 10s. 1½d. A resolution was adopted expressing satisfaction with the progress made by the Western Infirmary during the year, and asking for it more extended liberality on the part of the public.

THE CLERICAL AND MEDICAL PROFESSIONS.

Under the head of "The Inter-Relationships of Clerical and Medical Functions," Dr. Richardson, F.R.S., delivered on Tuesday, at the request of the Church Homiletical Society, a lecture before the members of the Society in the Trophy Room in St. Paul's Cathedral. The lecturer, after referring to the death of Linacre, who combined in himself the functions of a minister of religion and a healer of the sick, said that since his time these functions had never been formally combined in one individual. On the contrary, there had rather been an estrangement, which the lecturer hoped would pass away—a hope strongly supported by the significant sign that he, a physician and layman, had been invited to address a body of clergymen in that place on subjects in which their mutual studies were intimately allied. Dr. Richardson then divided his lecture into two parts, one part bearing upon the inter-relations of clerical and medical work in matters of physical health, and the other on the inter-relations of the same work in matters relating to mental conditions in health and disease. Under the first head the lecturer dwelt on the communication of unhealthy conditions by hereditary transmission, by intemperance, etc. Under the second head he dwelt on mental aberrations, induced by the passions, by excessive mental work, by educational competition among the young, by passion for the supernatural, by moral contagion, and by physical products resulting from diseased conditions of the body. The study of these subjects affected the two professions equally, and while they were disunited upon them, or at variance upon them, or uninformed respecting them, the progress of enlightenment was seriously impeded. The lecture concluded with the suggestion that a professorial course of study might be adopted in which the young of both professions should be educated equally on those topics in which their labours were correlative. In such a professorship, Linacre the minister of religion and Linacre the healer of the sick would live again, and his last bequests, instituted for "the glory of God, the true art of medicine, and the help of the fallen, would have a new and grand significance." The Right Rev. Bishop Perry presided. The Homiletical Society is a strong one, consisting of a very large number, we believe, of clergymen. They have lectures every year on various subjects, but this was the first occasion on which the lecturer has been a layman; and in applying to Dr. Richardson the Society wished to mark especially their sense of the close alliance for good between the two professions.

Mr. F. Sutton, Public Vaccinator, Willingham District, Gainsborough Union, has been awarded by the Local Government Board the sum of £2 8s. 8d. for efficient vaccination in his district.

New Medical Honours.—On Tuesday, the 5th inst., his Grace the Duke of Abercorn, K.G., before leaving Ireland on resigning the Lord Lieutenancy, conferred the honour of knighthood on the Right Hon. the Lord Mayor of Dublin, and on the Mayors of Cork and Derry. Two of these gentlemen are members of the medical profession—the Lord Mayor of Dublin and the Mayor of Derry. The Right Hon. Sir George B. Owens, Lord Mayor of Dublin, is M.D. of Glasgow University, and a Licentiate of the Apothecaries' Hall of Ireland. He is universally esteemed as a Poor-law Guardian and Deputy Chairman of the South Dublin Union, a Governor of the Meath Hospital and of other charitable institutions; and the honour bestowed upon him meets with the approval of all classes of his fellow-citizens and of his professional brethren. Sir William Miller, Mayor of Londonderry, is son of Alderman J. Ewing Miller, M.D., J.P., of that city. He was educated at Foyle College, from which he entered the University of Dublin. He graduated in Arts and Medicine in 1853, having studied medicine at the Meath Hospital. In the same year he became a Licentiate of the Royal College of Surgeons in Ireland. He is Surgeon to the Derry County Infirmary and Gaol, and Physician to the Derry Fever Hospital. Like his father, Sir William is in the enjoyment of a large practice in Derry and the neighbouring counties. A few days ago he was chosen Mayor for the third year in succession.

REVIEWS.

The Normal Standard of Woman for Propagation. By Nathan Allen, M.D., LL.D., Lowell, Mass. (Reprinted from the *American Journal of Obstetrics and Diseases of Women and Children.*) New York: William Wood and Co., 27, Great Jones-street. 1876.

It will be remembered that Dr. Allen has devoted much time and attention to the question of the infecundity of American women; and in the pamphlet under notice he has further discussed the causes which have led to this result—a result which he justly asserts to be most important, not only from a national, but also from a scientific point of view. Dr. Allen explains that his attention was first seriously called to the subject through his being called upon to attend a large number of obstetric cases in a mixed population of English, Irish, Scotch, German, French, and American women, during which time he was particularly struck with the great differences in the fertility of these women, as well as in the difficulties accompanying parturition. He found that uterine diseases and complaints had greatly multiplied, for which there must be special causes. Among these the compression of the chest and abdomen, from the style of dress and fashions of the day—commenced early and long continued,—had had a very injurious effect upon the internal organs, especially upon those in the pelvis, thereby causing displacements, weaknesses, and disease. Dr. Allen sums up by observing that, as far as physiology is concerned, the true law of population must be based upon the same general principles as that of propagation, and that a correct knowledge of the former cannot be obtained without reference to the latter.

Our Trip to Burmah, with Notes on that Country. By Surgeon-General Charles Alexander Gordon, M.D., C.B., etc. London: Baillière, Tindall, and Cox. Pp. 265.

Surgeon-General C. A. Gordon, the Chief of the Medical Department of the British Army in the Madras Presidency, started in December, 1874, with Sir Frederick Haines, the Commander-in-Chief, and a numerous suite, on a tour of inspection in British Burmah. They first steamed up the coast to Vizianagram; then across the Bay of Bengal to Rangoon; thence up the Irawaddy to Prome and Thyet Myo, where, leaving the river, they went on elephants, chiefly through jungle and dense forest, across the Yoma mountain range to Tonghoo, on the river Sitang, which river they descended in boats to Rangoon, and so across the bay homewards to Madras after a pleasant excursion of two months.

Surgeon-General Gordon's book consists of his diary of the events of the journey, and of a copious appendix of notes on the chief points in the natural and political history, ethnology, commerce, and statistics of Burmah. It is profusely illustrated with photographs, coloured plates after native artists, and rough pen-and-ink sketches rendered on wood. But before we proceed further in saying what it does contain, we may as well say what it does not. It has no "shop" talk, medical or military; it does not smell of the hospital any more than of the barrack; but it breathes the healthy air of the sea, the mountain, and jungle, and is in substance, as well as in appearance, a book fit to adorn any drawing-room table, and fit to be read by every intelligent person who wants to get a vivid impression in the shortest possible time of what Burmah is, and its products, animal and vegetable.

We have full accounts of the various tribes by whom Burmah is inhabited—the Turanian Burmese or Myamma; the Peguans, or Talains; the Karens, supposed to be Indo-Chinese; the Shans, people of Chinese affinity; and other minor tribes. The Karens had been suffering great distress, their country having been invaded by armies of rats, which devoured everything eatable, and forced the inhabitants in large numbers to enter British Burmah in search of food. They came to Tonghoo, and were offered work at ninepence a day. With a spirit worthy of the London "froze out" gardener they refused: they wanted *food*, and didn't care for work.

The modern Burmese on the whole are described as a strong, active, prolific people; easily able to obtain work, and with abundance of food. Rice seems the staple, with *gnappee* or salt, vegetables, chilies, onions, and the like as condiments. Fish, fowls, eggs, and it is said even snakes and reptiles, are occasional adjuncts. They seem to have plenty of clothes. Their huts are raised on piles like those of the lake dwellings.

The men are tattooed; the women not so, except among the Shans. The marriage tie is very loose, and divorce very easy. Woman has all her "rights"; can hold her own property. They combine burial and cremation—burning the body, and burying the ashes. If they accumulate wealth they spend it on building sacred edifices, in the hope of thereby attaining *nirvana*. They have many musical instruments, including a kind of clarionet, the bell of which is detached from the main tube, an arrangement which we wish Dr. W. H. Stone would explain. Every Burman carries his *dâh*—something between a knife and an axe,—and with this at hand murders are frequent. They are fond of amusements and public games, but their chief amusement seems to be the obsequies of a priest; for when a holy man dies his body is embalmed and kept for a year, then covered with gold-leaf, and placed on the top of a stupendous car which is loaded with fireworks; this is bombarded with squibs and rockets till it takes fire and is burned, or blown into a thousand pieces.

As we have said before in the *Medical Times and Gazette*, man abhors an insipid diet, and seasons insipid articles, such as rice, with materials not merely pungent—such as the chili—but offensive: the favourite condiment of the Burmese is the *gnappee* mentioned above. This disgusting stuff is prepared by pickling the fish in salt, and then burying it till decomposition is more or less advanced, for a period varying from one to four years; for the Burmese gourmand is very particular as to the flavour developed by a longer or shorter process of putrefaction. This stuff is said to do no harm—a statement which Dr. Gordon doubts; and we may remark, in passing, on the fact that ill-cured fish has always been a staple article of diet amongst the favourite haunts of leprosy. Talking of smells, it must be remembered that the dorian, the favourite fruit of Siam, is strangely offensive to the nose. This has been attempted to be acclimatised in Burmah, but hitherto without avail. There is an experimental garden at Tonghoo, where Major Heath rears almost every kind of English vegetable that is worth rearing. He sent, to meet our travellers on their journey, a basket containing lettuce, cabbage, carrots and nollkolls, beet, mint, cress, parsley, cucumber, potatoes, *karen* potatoes, tomatoes, onions, and chili peppers. A curious thing it is, that the lower orders of English at home and abroad seem to care little for a variety of diet. The soldiers at Tonghoo would not eat lettuces, and cared only for the potatoes.

The greater part of the journey between Thyet Myo and Tonghoo was very rough work, including steep and slippery tracks, the beds of dry winter torrents variegated with fallen timber and boulders, and an exceedingly dense vegetation. The greater part of it was performed by our author on an elephant named Menoo, we suppose in honour of the great lawgiver of the Hindoos. "Menoo," says Dr. Gordon, "starts at rapid pace up and down steep sides of streams, along their bed by sharp turning tracks in the now dense forest, up ascents, down declivities, at rapid pace he carries us, some of our party declaring that he is training for the Derby; so on and on he goes, over rough road and smooth, landing us at last in safety at our new halting-place. We had started at 6.15: it is now 10.20 a.m. The distance we have come is eighteen long miles, the usual time occupied in the journey eight hours. We think ourselves most fortunate in our animal until we learn that Menoo was never to be much depended on—he killed his former driver, and is given to bolting in the jungles."

Throughout his journey, Dr. Gordon views everything with the eye of an ardent naturalist; he tells us of the lofty forest trees, and of the forest Thugs that strangle them, in the shape of creepers and epiphytes, some of the most destructive of which (*Echites*), however, seem worth cultivation for the sake of the indiarubber which they yield. Every bird that flies seems to attract his attention; but we are glad to say that, naturalist as Dr. Gordon is, he is not that vulgar creature yclept a sportsman, and he reprobates the wandering idlers who scatter destruction amongst the most beautiful objects of creation for no other purpose than to gratify the savage pleasure of killing.

We hope we have said enough to show the character of Dr. Gordon's book. As we have said, it is rather a popular than a medical work, and we may here quote almost the only distinctly medical bit that it contains:—

"A man named Reid had been convicted of the murder of a woman with whom he cohabited. He had been a 'volunteer.' When the *murder* was discovered, the body of the woman was found in his bed, the back of the skull shattered, as if by gunshot; the musket by the body; the man himself with a severe wound through the shoulder. Reid was sentenced to penal servitude for life. During the early part of his imprisonment he came under the professional care of Dr. Lethbridge, who, from the unhealed wound in his shoulder, extracted a fragment of an occipital bone, the specimen being left by him in the gaol at Lahore. The version given by the man himself was that, having been indulging deeply in drink, he went to bed, the woman with her head upon his shoulder; that, some time afterwards, roused by the sound of a shot, he found her dead, himself severely wounded. At any rate, the case has in it several very peculiar and rather difficult points. When last heard of, Reid was in prison at Hazarabagh."—Page 157. We cannot help thinking that Reid was hardly used, considering that the shot which entered his shoulder must have gone through the woman's head.

But the author does not forget to point out palpable defects. For instance, speaking of the vessels at Rangoon, he says:—"In the rigging of some, white men are at work, their heads protected by no other covering than an ordinary small cap. At the landing-places boats are arriving, leaving, or waiting for the captain. In several instances of the latter a young lad sits listlessly in the stern-sheets; no awning protects him from the powerful sun; nor can I avoid thinking that, as he sits and waits, he furnishes an example of how it is that so many of his class sicken and die in foreign parts—victims to absolute neglect on the part of captains under whom they serve."

A Directory for the Dissection of the Human Body. By JOHN CLELAND, M.D., F.R.S., Professor of Anatomy and Physiology in Queen's College, Galway. Smith, Elder, and Co. Pp. 175.

WHEN a work is handed to us with the high authority of Dr. Cleland, it becomes a serious question to express an opinion as to its utility. Let us consider, in the first place, what the book is, and afterwards what are its aims, with a view of seeing how far they are desirable—and, if desirable, how far they are attained. It is a small octavo of 175 pages, containing a tolerably full description of the method of dissecting the human body which Dr. Cleland considers most advantageous; in other words, it is such a work as might be produced by tacking together all the paragraphs headed "Dissection" in Mr. Ellis's "Demonstrations of Anatomy." The descriptions resemble rather closely those given by Dr. Cleland in the second volume of the seventh edition of "Quain's Anatomy"; and indeed they confessedly differ from them only in the point of completeness. We shall transcribe, for the sake of comparison with the descriptions of other authors, a paragraph taken quite at random; and we may add that the directions are equally clear throughout:—"A block should now be placed under the axillary border of the scapula; the integuments should be dissected from the great muscle of the shoulder, the *deltoid* muscle, care being taken of the cutaneous branches of the *circumflex* nerve curving round its hinder border; and the manner in which the aponeurosis covering the infraspinatus muscle splits at the posterior part of the deltoid, so as to pass partly on its surface and partly beneath it, should be noted. When the deltoid muscle has been properly studied, so far as it can be seen on its outer aspect, it should be divided near its origin; the large bursa beneath it, extending between the acromion and the shoulder-joint, should be inspected, and the *posterior circumflex* artery and the *circumflex* nerve should be displayed on the deep surface of the deltoid, and the extent of the insertion of this muscle made distinct. At this stage, also, the attachment of the *long head* of the *triceps* muscle of the arm into the axillary border of the scapula should be fully displayed, and the manner should be noticed in which it subdivides the interval between the scapula and teres major, leaving a quadrangular space above, through which the circumflex nerve and posterior circumflex artery pass backwards, and a triangular space below, through which the *dorsal* branch of the subscapular artery takes its course."

Such, then, being the nature of the work, let us inquire with what object it has been written. In the preface we find that "it is expected of the student that before coming into the dissecting-room he should glance over, each evening, a portion of work in this book, and consult his descriptive manual sufficiently to have an intelligent idea of what he is to exhibit on the subject next day." For this purpose we must allow that

Dr. Cleland's work is admirably adapted; but as to the advisability of the method it would encourage, we must confess to holding the gravest doubts. Anyone who has watched, either as a teacher or a companion, the hopeless floundering of the student who comes down into the dissecting-room with his descriptive manual, or who considers the difficulty which the inexperienced dissector must necessarily find in piecing together a continuous list of directions with more or less isolated descriptions, must agree that the only way of teaching anatomy satisfactorily from the subject is to have full directions for each step, followed by a full description of the parts which each step discloses. And those to whom in their studentship Mr. Ellis's book has been a sort of gospel, and who have watched his strange peculiarities of diction and often unnecessary crabbedness of style shedding a light which is all their own upon one of the toughest of subjects, may well doubt whether any improvement on his *method* is likely to be forthcoming; and will probably be ready to maintain that that suggested by Dr. Cleland is by no means an improvement. While, therefore, we can honestly recommend Dr. Cleland's "Directory" to those who have seriously determined to adopt his plan of study, we must caution the student against resigning in its favour that which seems to us the best method of improving his time and opportunities in the dissecting-room.

GENERAL CORRESPONDENCE.

THE MEDICAL DEFENCE ASSOCIATION.

Letter from Mr. W. Spencer Watson.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you allow me to bring before the profession the question of unqualified practitioners, and the action taken by the Medical Defence Association in reference to it? This useful and energetic Association has now successfully prosecuted more than a dozen unqualified practitioners, and is preparing for still more vigorous proceedings in the coming year. With increasing numbers of its members, the working power of the Association will be proportionately increased, and it behoves every medical man to consider how far he can assist the efforts of this Society against a common enemy. It may be objected by some that this question is one rather for the consideration of the medical corporations and of the general public; that the interests of the general public are, in fact, much more affected by the impunity with which illegal medical practice is carried on than are those of the medical profession. The general public, however, from their ignorance of the status and politics of the profession, are unable to see the matter in this light. The sick man has no means of discriminating between the quack and the regular practitioner. He sees the eminent bone-setter, or herbalist, or prescribing chemist carrying on a thriving business without let or hindrance; he concludes therefore that the law allows him to do so, and that the legally qualified men, if they have any rights given them by law which the quack does not share with them, are unable to assert those rights. The rogue succeeds because the honest man is afraid to use the weapons which the law has placed in his hands. But how about the medical corporations? The difficulty of moving them to action seems unaccountable at first sight. No doubt there are good and sufficient reasons why these bodies should not in all cases use their undoubted right to prosecute offenders against their charters, or the Acts of Parliament under which they are incorporated. What these reasons are it is hard to say, but it cannot be indifference to the interests of the main body of the profession, or of those of the general public, though to an uninstructed eye it certainly looks not unlike that. Meanwhile, the regular practitioners must take the bull by the horns, and unless they wish to give colour to the impression commonly held by the non-medical public, that there is no legal distinction between a quack, a prescribing chemist, and "a doctor," they must speak out boldly, and act decisively in prosecuting offenders against the Medical Acts, and against the charters of the licensing bodies.

The success which has hitherto attended the efforts of the Defence Association has not been achieved without considerable labour and expense. The cost of getting up evidence in the early cases, and in providing against every loophole of escape for the offenders, has been very considerable. If the Association is to undertake more of these cases, the general body of the profession must come to its aid and enrol themselves as members or subscribers. The names of intending members, or voluntary contributions, should be sent to the Hon. Secretary, Mr. George Brown, of 12, Colebrooke-row, Islington, or to myself. The rules require that all members of the Association should be "registered medical practitioners," and the "every candidate for election must be proposed and seconded by two members of the Association, and elected by a majority of the Council." Branch Associations have been formed in various parts of the kingdom, and any gentlemen wishing to form themselves into a branch will have every information supplied to them by the Hon. Secretary.

I am, &c., W. Spencer Watson.

7, Henrietta-street, Cavendish-square.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 21.

Mr. George Pollock, F.R.C.S., President, in the Chair.

The International Medical Congress at Philadelphia. The Surgical Secretary read the Report of the Delegates of the Society—Dr. Hare and Mr. Brudenell Carter—to the late International Medical Congress at Philadelphia. It gave a short account of their extremely courteous and hospitable reception, of the public addresses, and of the work in the several sections. Pathology was in a highly flourishing state in America.

Molluscum Fibrosum.

The President brought forward a man whose nates and legs presented a huge diffused development of skin and connective tissue, constituting molluscum fibrosum. No operation was intended.

Dermoid Ovarian Tumours.

Dr. Griffiths, of Swansea, exhibited two dermoid ovarian tumours removed successfully from patients of twelve and twenty-one years respectively. In the first case an abdominal tumour had been known to exist since the age of four. Just before the operation, in October last, it was found as large as a cricket-ball, situated in the middle line, midway between the umbilicus and pubes, freely movable in all directions, manifestly possessing a long pedicle, and elastic and fluctuating to the finger. Ovariotomy was successfully performed, and the tumour found to be connected with the left ovary. The patient was convalescent on the nineteenth day. The tumour contained hair and a peculiar fleshy mass remotely resembling a fœtus. The second patient was a married woman. The tumour had been discovered four years before; and it extended at the time of operation from the pubes to the epigastrium; it was freely movable. Ovariotomy was performed; and the patient was convalescent on the twelfth day. The pedicle in this case also was very long; the tumour contained six pints of a creamy-looking fluid, which separated on standing into a kind of curd and whey, and therewith hair, as in the former case. Both operations were performed antiseptically.

Mr. Spencer Wells spoke on the question of the removal of the ovary along with the tumour in this operation. Dermoid cysts of the ovary were not of common occurrence; he had himself performed ovariotomy 300 times before he saw two, and these came together. Of the twenty cases that he had seen in all, ten occurred in the last hundred of his total number of 800, and only two of them proved fatal.

Mr. Knowsley Thornton exhibited microscopic specimens of the contents of ovarian tumours.

Diffuse Suppurative Inflammation of the Mediastinum.

Dr. Goodhart exhibited the parts and drawings from two cases of this nature. In the first a man of fifty-seven was struck on the chest by a log of wood six days before his death, and had continued to suffer local pain and great distress in breathing since. He was but a short time in hospital. The pain was situated outside the left nipple; dyspnœa was severe; and there was some crepitation at the bases of the lungs and slight præcordial murmur, but no sign of fracture of the ribs; the temperature was 3° above the normal. Post-mortem the mediastinal tissues were found infiltrated with pus; there was double pleurisy, more extensive on the left; both lungs

were perfectly healthy; and the pericardium was rather hyperæmic. The second case was in a man of forty-four, whose symptoms dated back seven or eight months, to a time when a piece of meat seemed to stick at the ensiform cartilage, where it remained, causing dysphagia until it was rejected. After a month of good health, pain returned in the spot; and emaciation and dysphagia followed. In hospital the symptoms were regurgitation of food after arrest, and urgent dyspnœa. The physical signs were not peculiar. Post-mortem, double pleurisy was found, and infiltration of the mediastinum with pus. The lymphatics in the interlobular septa of the lungs were yellow from the presence of pus. Dr. Goodhart remarked that this disease—an infiltration of the mediastinum with pus—was very rare, only fourteen cases of inflammation of the mediastinum, acute or chronic, having occurred in the last 1600 necropsies at Guy's Hospital; seven of these presented acute suppuration, but only one was primary. The condition was not abscess, but diffused phlegmonous cellulitis, and in the two present instances was evidently primary. The symptoms were chiefly urgent dyspnœa, non-paroxysmal; moderate pyrexia; and a typhoid appearance.

Dr. Moxon asked whether Dr. Goodhart was certain that the mediastinal inflammation in the second case was really primary to the lung-condition.

Dr. Goodhart said that he could not be positive.

Clot in the Left Auricle—Mitral Obstruction.

Dr. Moxon described this case, which was that of a female dying with cardiac dropsy. A presystolic murmur had been heard at the left apex, but continuous instead of possessing the usual characters, resembling somewhat the *bruit de diable*. He had previously observed mitral obstructive murmurs become hæmic-like and continuous. The left auricle in this case contained the largest clot Dr. Moxon had ever seen. The cavity could not have been able to contract. It had been debated whether the presystolic murmur was or was not due to the auricular systole. In the present case there could not have been much pressure, but rather a continuous flow of blood as in the veins of the neck.

Dr. Gowers spoke upon the length of the presystolic murmur of mitral stenosis. He had recognised (1) a murmur occupying the period of ventricular diastole, and (2) the presystolic murmur proper; and in one case lately both of these were present—the one continuous, and the other short and of a different character, with a distinct interval. He accounted for the first by pressure from behind, whereas the second was due to active contraction.

Dr. Greenfield believed that the long, soft, continuous murmur audible in some cases of mitral obstruction might be due not only to the contraction, but to the roughened surface of the left auricle; it was then independent of the action of the heart. This was different from the ordinary short presystolic murmur.

Dr. Moxon replied that what his case showed was that, under certain circumstances, such a prolonged murmur might exist.

Primary Contracting Scirrhus of the Liver.

Dr. Hilton Fagge showed this specimen of liver, from the body of a man of fifty-two who died in Guy's Hospital. He laboured under ascites and anasarca, and was very sallow and much emaciated. He was "never intemperate." Post-mortem the liver, which weighed only thirty-six ounces and a half, presented many of the characters of cirrhosis, both superficially and on section. Some of the insulated masses were, however, cheesy-like, and could be squeezed from their capsule, and they proved on microscopical examination to be heaps, not of hepatic, but of cancer cells. Thrombi were found in the portal vein. Dr. Fagge said that this case showed how readily cancer and cirrhosis of the liver might be confounded. He had seen a similar case last year, in which the two conditions appeared combined; there was portal thrombosis there also. And in a third case the distinction was at first equally difficult. In not one of the three cases was there malignant disease elsewhere. Various speculations might be entertained as to the relation of the condition, which found its parallel in certain examples of mammary carcinoma. Another question was whether cancer could be the result of alcoholism; and, analysing the cases recorded by Frerichs, Murchison, and himself, Dr. Fagge was inclined to reply in the affirmative.

Dr. Hare said that one was naturally inclined to question the possibility of a liver being at once small and cancerous; but he had himself seen a specimen of the disease where the liver weighed only twenty-seven ounces.

Epithelioma of the Bladder secondary to Stricture.

Dr. Hilton Fagge also showed this specimen, in which epithelioma appeared to be the result of prolonged irritation. The patient, on whom Mr. Cock had performed the operation of perineal section thirty years before, had been in the habit of passing a catheter through the permanent fistula: at last he died with suppurating kidneys. Post-mortem an epitheliomatous ulcer as big as a crown-piece was found on the posterior surface of the bladder, behind the trigone. The urethra was obliterated for a distance of a quarter of an inch. The cancerous growth was probably due to the introduction of catheters. In another case, from a man of forty-eight, Dr. Fagge found epithelioma of the fundus of the bladder along with stricture of the urethra: here the malignant disease was probably not due to catheterism.

Mr. Nunn said that these cases were of the greatest importance if they were brought forward as examples of cancer due to external surgical irritation.

Dr. Fagge replied that these were simply the facts, and the evidence was very strong.

Mr. Thomas Smith said that the one case was opposed to the other.

The President said that experience did not associate cancer of the bladder and stricture of the urethra.

Dr. Fagge replied that it would not be a remarkable association. There was a parallel in the œsophagus, where epithelioma may be found above a chronic stricture in the situation of the arrest of the food.

Dr. Moxon remarked that after all the case of the lip and the tobacco-pipe was analogous.

Mr. Holmes said that if there were any risk of cancer in stricture of the urethra it showed the great desirability of operation for relief.

The President added, with regard to stricture and cancer of the œsophagus, that Dr. Marshall Hall died of epithelioma of the pharynx after having dysphagia for years.

Mr. Howse reminded the meeting that the perineal section had been performed for a temporary purpose, not to serve as a permanent route into the bladder. The cure had evidently been interrupted, and the result ought not to be laid to the charge of the surgeon.

Concretion of the Vermiform Appendix.

Dr. Thorowgood showed this specimen for Dr. Wilton. A girl of ten suffered from symptoms of acute abscess in the right loin, with sickness, local tenderness, flexure of the thigh, and pain extending down the limb. About the seventeenth day fetid pus and gas were evacuated by incision. Three days after, a hard substance as large as a nutmeg, covered with fæces, was discharged; and convalescence proceeded favourably. The mass was believed to be a gall-stone, but there was no corroborative history. The patient was remarkably young for such a complaint.

Dr. C. Theodore Williams asked what the composition of the concretion was.

Dr. Thorowgood replied that it had not been ascertained.

Dr. Payne pointed out that a superficial examination of such a concretion was of comparatively small value unless a section were made of it; the coating was probably derived from the fæces.

Mr. Waostaffe asked whether it really came from the appendix.

Dr. Murchison said that he had seen two cases of concretion in the appendix; in the first the nucleus was a portion of a plum-stone; in the second, in which the body was as large as a cherry, the nucleus was a swan-shot. He had never found a cherry-stone. In the present case the evidence was obscure.

Dr. Griffiths had seen a case of impaction of a pea in that situation, and death in twenty-four hours.

Dr. Cumberbatch said there could be but little doubt the mass came from the appendix; there was no biliary history.

Dr. Knowsley Thornton had seen a damson-stone in the appendix.

Mr. Nunn reminded the meeting of Cruveilhier's plate of the appendix filled with cherry-stones!

The specimen was referred to the Morbid Growths Committee.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 24.

Sir W. JENNER, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

CASE OF LYMPHATIC LEUCOCYTHÆMIA, TREATED WITH PHOSPHORUS.

DR. GOWERS read notes of this case. The patient was a lad, aged sixteen, who had been under the care of Dr. Wilson Fox in University College Hospital. He presented extensive glandular enlargements in the neck, axillæ, and groins, and evidence of a large mass in the mediastinum. The spleen was slightly enlarged, and the temperature was uniformly raised several degrees. The blood presented a large excess of white corpuscles. Their proportion to the red was as one to four. One hundred and four were counted in one field. The glandular enlargements had been noticed only three months. During a fortnight of expectant treatment, little change was observed. Phosphorus was then commenced, one-thirtieth of a grain being administered three times a day. A week's slight improvement was followed by an increase in all the symptoms, due apparently to some unwise exposure; but, during the second fortnight of the phosphorus treatment, there was a marked diminution in the number of white corpuscles. At the end of the fifth week, they were reduced to a third of the original number, and the external glands were smaller and harder. A trace of albumen appeared in the urine; and, on account of obstinate diarrhœa, the phosphorus was omitted. The improvement in the special symptoms continued; and, a week later, only twenty-four white corpuscles could be counted in the field of the microscope, and the dulness produced by the mediastinal mass had sensibly diminished. The albumen in the urine, however, increased, fatty casts were found in it, and general œdema came on. The temperature fell, the patient became weaker, and finally died from asthenia—the number of white corpuscles showing to the last a progressive diminution. At the post-mortem examination, besides the external glands which could be felt, masses of agglomerated glands occupied both the anterior and the posterior mediastinum. In front, the mass occupied about the position of the thymus, and was adherent to the rib cartilages and to the left lung. A still larger mass in the posterior mediastinum lay around the trachea and aorta, and had perforated the periœardium. The abdominal glands were also enlarged. Most of the glands were hard and fibrous, or else easeating. Under the microscope, all showed lymphatic overgrowth and abundant leucocytes. In some the overgrowth was undergoing fibroid, in others fatty, degeneration. The spleen weighed thirteen ounces and a half; the Malpighian bodies had undergone lardaceous degeneration; it contained some caseous infarctions. Its tissue was infiltrated with leucocytes. The liver was slightly enlarged, and contained abundant minute growths, most of which were undergoing fatty degeneration. The kidneys were large and pale, and their tissue presented general granular and fatty degeneration, with a few leukæmic growths. The marrow of a tibia was abundant, and consisted of leucocyte-like cells massed together. Dr. Gowers drew special attention to the degeneration in the glands and in the liver, which seemed to be indicated during life by the diminution in their size, and this coincided with the improvement in the state of the blood. The spleen presented no degeneration which could be associated with the diminution in the white corpuscles, since the Malpighian follicles are believed not to be specially concerned in the leucocythæmic process. Hence, it was probable that the leucocythæmia which existed was due to the glandular overgrowth, and not to the spleen. Renal disease was a rare complication of leucocythæmia, and it was further remarkable in this case from the acuteness of the process and the early evidence of fatty degeneration. What effect could be ascribed to the phosphorus? The known influence of phosphorus was to cause fatty degeneration, the condition found abundantly in this case. But such degenerations had occurred in cases in which no phosphorus had been given, and with so acute a course and elevation of temperature degenerations were likely to occur. The process might have been hastened by the phosphorus; but, if so, the drug must be suspected of an influence on the kidney degeneration. In conclusion, Dr. Gowers said he had brought forward the case rather as suggesting points for future observation than as itself settling the questions it raised.

A CASE OF HODGKIN'S DISEASE, WITH INCREASE IN THE WHITE CORPUSCLES OF THE BLOOD, TREATED WITH PHOSPHORUS.

Dr. W. S. GREENFIELD detailed this case. The patient, a woman, twenty-six years of age, had never been strong, though suffering from no special ailment, until about two years before, when she had attended as an out-patient at St. Bartholomew's Hospital, under Dr. Duckworth, for amenorrhœa. She stated that she had, at the same time, some glandular enlargement in the neck; but this appeared to have been doubtful. Some enlargement of the glands in the neck was noticed about January, 1876; and from that time there was complete amenorrhœa and gradually increasing debility, which at last led her to seek advice. She was first seen by Dr. Greenfield at the beginning of May; and from that time till her death was under the care of Dr. Rogers, of Old-street, Dr. Greenfield seeing her in consultation with him. When first seen, she was greatly emaciated. There was a mass of enlarged glands in the right side of the neck, at the upper part, with some enlargement behind the sterno-mastoid; on the left side was corresponding, though less, enlargement, and there were also enlarged glands in the right axilla and in both groins. The patient suffered from hectic fever, with frequent profuse perspirations. There were also various attacks of dyspnœa, lasting a few minutes, which came on suddenly, often preceded by pulsation of the right carotid artery; then she became suddenly pale, half unconscious, the respiration becoming very laboured, and almost entirely abdominal. The right pupil was sometimes dilated during or after the attacks, and profuse perspiration frequently followed them. The spleen appeared to be slightly but not notably enlarged. The blood was not examined until later. Having in view the important results gained by Dr. Broadbent and Dr. Wilson Fox in leucocythæmia by the employment of phosphorus, Dr. Greenfield thought it would be desirable to try its effects in a disease which presented some analogies with it; and one-thirtieth of a grain of phosphorus was, therefore, given three times daily in pill, and was continued for six weeks. Ten days later, the blood, examined with a high power, showed a decided increase in the number of white corpuscles, which appeared to be in the proportion of one white to fifteen red. There were also other white corpuscles, smaller than usual, and a number of microcytes. The glandular swellings increased somewhat rapidly, and in the middle of June there was a large mass in the right axilla; the swellings in the neck had greatly increased, and there were masses of enlarged glands in the groins. The febrile attacks and perspirations continued unabated, and the patient became extremely emaciated and prostrate. The temperature, taken pretty regularly three or four times in the twenty-four hours, presented remarkable variations, the daily range extending over from 4° to 6° Fahr., and the elevation occurring very rapidly. On one occasion, a rise from 98° to 103° was observed in four hours, and on another from 97° to 103° in five hours. The highest temperature observed was 105·5°; but temperatures of 104° and 105° were frequent, the highest usually occurring towards evening or at night, but with no great regularity. The patient lived for about four months, dying early in August. During the greater part of that time the glandular enlargements increased, emaciation was progressive, and, after a temporary improvement, the dyspnœa became a more or less permanent symptom. Towards the end of life the glandular swellings decreased in size and some of them entirely disappeared. The temperature continued high; but during the last week of life it became lower, rarely rising above 101°. On post-mortem examination there was found a mass of enlarged and indurated glands in the upper part of the right side of the neck; enlargement and induration of the bronchial and mediastinal glands; and the mesenteric and lumbar glands were greatly hypertrophied. There were two smallish nodules of new growth, resembling indurated lymphatic glands in structure, in the liver. The spleen was but slightly enlarged, and apparently free from patches of new growth, but was too much decomposed to permit of certainty on the point. There were scarcely any other marked visceral changes. Dr. Greenfield observed that the case was clinically a typical example of Trousseau's "adénie," "anæmic lymphatica," or "Hodgkin's disease." He thought that the increase in the proportion of white blood-corpuscles was not sufficiently large to allow it to be designated as a case of leucocythæmia, nor were there any of the usual symptoms of that disease, such as epistaxis or other hæmorrhage. At the same time, the condition of the spleen was different from that

which was observed in many cases, and regarded by Dr. Wilks as one of the essential anatomical lesions of Hodgkin's disease. The clinical features, however, were most typical—glandular enlargement, great and progressive, a peculiar anæmia, progressive emaciation, with irregular and high temperature. The condition of the spleen in five other cases which had fallen under his observation presented considerable variation; in only two did it present the typical characters of containing masses of new growth, aptly likened by Dr. Wilks to lumps of salt. At the same time, the condition of spleen observed was equally inconsistent with typical leucocythæmia. Probably the case must be considered an intermediate one, and "anæmia lymphatica" would be the most appropriate name, rather than Virchow's "leukæmia lymphatica." In commenting more particularly on the symptoms observed, the author remarked that the earlier attacks of dyspnœa were probably due to pressure on nerves; the later to direct pressure on the trachea and bronchi of enlarged glands—a condition discovered post-mortem. The phosphorus was observed to have had but little influence on the progress of the disease; the glandular enlargement continuing and increasing during its use, and the subsequent apparent atrophy of the glands being accounted for, in all probability, by the induration—a similar occurrence having been observed in other cases. Nor did quinine, which was given throughout a great part of the course of the case, appear in any way to prevent the febrile attacks. The other treatment adopted consisted merely in palliative measures.

A Case of Leukæmia.

Dr. Goodhart read notes of the following case. A married woman, aged forty-five, at present under the care of Dr. Pavy in Guy's Hospital, came under notice first early in June of this year. She had never been pregnant, and menstruation ceased two years ago. Her family history showed no weak strain, neither cancer, rheumatism, gout, nor bleeding being known. When about seventeen years old she had three attacks of rheumatic fever, and since then had been troubled with rheumatic pains and weakness at her heart. Of late she had been weakly, and six years ago had inflammation of the kidneys without dropsy. Her habits appeared to have been strictly temperate. Twenty months before admission she had a boil on her thigh, which bled freely on being opened, and she had lost much blood; and ever since then she had been weakly and pale. After that she had fistula in ano; was operated upon and recovered. Then the glands in the neck and axillæ enlarged, and then she had a long attack of "dropsy," which had never quite subsided. The glands had since then gone down again. When admitted she had general anasarca, great pallor, and a distended abdomen—the latter due in great part to a large liver, possibly to some enlargement of the spleen, which, however, did not come below the ribs; and some indefinite lumps in the abdomen, probably due to glandular enlargement in other parts. At first there was no definite glandular enlargement elsewhere. The urine was normal. Temperature normal, and pulse 128. A loud mitral bruit was heard at the apex of the heart. The blood was watery-looking, and contained a large excess of colourless corpuscles—sixty colourless to one hundred red. The latter quite normal, but the colourless very small; most of them one-half to one-third smaller than the red globules, and granular. She was ordered one-thirtieth of a grain of phosphorus, in the form of a pill, three times a day within a day or two of admission, and she continued this for about three months. During this time the condition of the blood varied much—sometimes the colourless corpuscles were not out of proportion to the red; at others they were 10, 20, 30 per cent. and more of all the corpuscles in the microscopic field. The colourless globules were sometimes of normal large size; at others, and much more frequently, very small. The blood always remained watery and poor. Notwithstanding the want of improvement in the blood, the patient's general health improved, and this, too, even as the glands in the neck and axillæ enlarged. But the glandular enlargement, though evident on palpation, had never been a marked feature in the case, and was not so now. Latterly the patient has had pericarditis, pneumonia, and epistaxis, but got round from all these attacks, and still remained in better general health than she was. The abdominal enlargement remained much as it was; the liver being very large, the spleen by no means so evidently. Dr. Goodhart remarked that, inasmuch as the case was fortunately still incomplete, the patient being alive, the exact state of affairs must yet be doubtful—whether Hodgkin's disease alone existed, or splenic leukæmia alone, or both together. The amount of visible glandular enlargement was not great, and the spleen might ultimately prove to be larger than could be diagnosed from the present conditions. But, on the whole, the case seemed more probably one of lymphatic leukæmia, and particularly so from the state of the blood, which showed an excess of very small colourless corpuscles such as had been described by Virchow as occurring in the lymphatic variety of leukæmia. It differed from the typical Hodgkin's disease in the large number of these corpuscles. He had said that the patient had been treated by phosphorus for four months, and without any apparent influence on the course of the disease; but he did not bring it forward so much to pit it against other cases treated in like manner as to lay stress upon the variations in the blood found in leukæmia, and to raise the question what clinical significance had white-celled blood. The cases before the Society showed how variable was the condition of the blood, and, if one took a still wider range, it would be found that, in some cases, large white cells were in excess; in some, small white cells; in others, the red corpuscles were also of variable shape, and free nuclei were to be found; in others, again, the serum was crowded with granules, and leucocytes were not to be found in excess at all. The importance of this variation in the constituents of the blood was likely to be lost sight of, because the blood was a fluid tissue; but, if the whole blood were imagined as crowded into the space of a single organ, such as the liver, then we might recognise that there was enough difference in the changes classed under a common term (leukæmia) to constitute several separate diseases; and it seemed that, till we were quite sure that leukæmia was only *one* disease, the discussion of the treatment of leukæmic cases by any given remedy might be an attempt to compare likenesses when we should be contrasting differences. It was in special reference to leukæmia in general, not to this or that variety, that these remarks were made, and they bore upon a class of cases which those who saw much of the diseases of children were, doubtless, familiar with—viz., leukæmia in association with splenic enlargement in children, which, under any treatment, got well. He had seen in the last two years six such cases—the average extent of leukæmia being from forty to sixty leucocytes in a field where there should be but four or five; all in children under two years old; and they had all improved under treatment, some with phosphorus, some with iodide of iron, etc. Then, as if to show the close relationship there is between a curable and an incurable leukæmia, another child, ten months old, was seen in an apparently similar state to the others, as to its spleen, but without any leukæmia—nothing, in fact, to indicate that it would not do as well as the others had done. The leukæmia subsequently became developed, and the child died with purpura and the usual characteristic changes in the liver, spleen, kidneys, etc. From cases such as these it was concluded that leukæmia is either a disease of several stages, of which, perhaps, anæmia of some kind, rather than leukæmia, is the first, and then curable; and such cases as had been narrated in the course of the evening were the more advanced, and, in many cases, incurable, or else, as had been suggested, several distinct conditions had become mixed under a common symptom.

Splenic Leucocythæmia.

Sir William Jenner read short notes of three cases of this disease treated with phosphorus. The first case was that of a lady, a patient of Mr. Fielden, of Shildon, who was first seen by Sir W. Jenner early in June last; she had well-marked splenic leucocythæmia. Her temperature in the morning was natural; the evening temperature was about 100° Fahr. There was frequent epistaxis, and once there was bleeding from the gums. For two years previously there had been chronic follicular ulceration of the pharynx, which had almost disappeared, and then recurred. On July 15, phosphorus in capsules, containing one-thirtieth of a grain of the drug, began to be administered regularly twice or three times a day, the patient having taken pil. phosphori for about six weeks previously. On November 8, Mr. Fielden reported that the phosphorus capsules had been taken repeatedly for four months, but that the benefit to the patient was inappreciable. The spleen continued to enlarge; the epistaxis still occurred, though at rarer intervals; the night-perspirations, though for a time apparently checked, had returned, and the patient complained of extreme giddiness on movement. The temperature did not vary much, and had never been above 101°. During Sir William's absence from town in the autumn, the

patient had consulted Dr. Broadbent, who could not speak hopefully of the issue of the case, but had advised steady perseverance in the treatment by phosphorus. Dr. Broadbent had estimated the proportion of the white to the red corpuscles as one to five; but Mr. Fielden had frequently examined the blood, and thought the white as numerous as the red corpuscles. The patient had suffered from bilious disorder from time to time, and symptoms of this kind Dr. Broadbent had remarked had "ushered in improvement in his case." For this reason the phosphorus had sometimes to be temporarily discontinued. More than two doses daily could not usually be tolerated, the patient complaining much of the disagreeable eructation produced by the remedy. The second patient was a barrister, aged seventy-one; he also had splenic leucocythæmia. On July 1, 1875, the spleen reached two fingers' breadth below the umbilicus; the notch was at the level of the umbilicus, and the extreme anterior border of the spleen was one finger's breadth to the right of the umbilicus. The white corpuscles in his blood were extremely numerous. His temperature was 100°. On November 2, 1875, the spleen was four fingers' breadth below the umbilicus, and two inside the level of the umbilicus. The white corpuscles were as numerous as the red; his breathlessness was extreme; his temperature 100°. He had been taking pil. phosphori gr. iij. three times a day, except for the last week, during which he had taken it only twice daily. He was decidedly worse as to his spleen, number of his white corpuscles, and breathlessness; was losing flesh, looked pale, and was worse. The third case was that of a single lady aged thirty-eight, whom Sir William Jenner had seen with Mr. John Croft on May 8, 1876. This was a well-marked case of splenic leucocythæmia; the enlargement of the spleen having been first observed in the beginning of this year. The symptoms were those usually present in the disease—epistaxis, loss of flesh, sense of breathlessness, languor, weakness, and night-perspirations. Her temperature was 99°. The blood showed a great excess of white corpuscles. Pil. phosphori gr. iij. ter die sumend. was ordered. The patient however, continued to grow weaker. Her temperature ranged from 97·5° to 101°. Having taken the phosphorus pills steadily for more than two months, she died on July 26, 1876.

Dr. Alexander Davidson, M.A., M.D. Edin., was elected, on December 5, to the Physicianship to the Liverpool Royal Infirmary, vacant by the resignation of Dr. Turnbull.

Distribution of Prizes at the Charing-cross Medical School, Session 1875-76.—The prizes of the above Medical School were distributed in the Board-room of the Charing-cross Hospital, on Friday, the 1st inst. The chair was taken by Sir Joseph Fayrer, K.C.S.I., M.D., an old student of Charing-cross Medical School. After some introductory remarks from the chairman, Mr. Hird (the Dean) read his report, which was on the whole of a most satisfactory character, forty new students having been added to the school this winter session. The prizes were then distributed, together with several certificates of merit. The following is a list of awards:—Llewellyn Scholarship—D. Colquhoun; Golding Scholarship—H. Hoole. Medals: Governors' Gold Clinical, H. Wickers. Silver Medals: Surgery, H. R. Whitehead; Medicine, H. R. Whitehead; Anatomy, A. D. Leahy; Chemistry, S. Nockolds; Physiology, John Brown; Pathology, H. R. Whitehead; Midwifery, H. R Whitehead; Forensic Medicine, H. R. Whitehead; Botany, W. W. Webb; Practical Chemistry, A. D. Leahy; Materia Medica, H. Hoole; Comparative Anatomy, W. Cottle. Bronze Medals: Surgery, James Harran; Medicine, John Brown; Anatomy, H. G. Jacob; Physiology, C. Curde. Certificates of Merit: Pathology, D. Colquhoun; Midwifery, D. Colquhoun; Forensic Medicine, W. B. Hodgson and D. Colquhoun; Botany, H. E. R. James and John Brown; Practical Chemistry, John Brown; Materia Medica, John Brown; Senior Surgery, D. Colquhoun and Robert Culling; Junior Surgery, W. W. Webb and John Brown; Senior Medicine, D. Colquhoun and A. Greenwood; Junior Medicine, W. W. Webb; Senior Anatomy, W. W. Webb and John Brown; Junior Anatomy, W. H. Day and H. E. Garrett; Chemistry, W. H. Day; Senior Physiology, A. D. Leahy and H. Hoole. The chairman afterwards in the course of his address congratulated the successful candidates, and expressed his satisfaction with the great progress of the medical school, which was responded to with hearty cheering. There was a large assemblage of ladies and gentlemen on the occasion.

MEDICAL NEWS.

University of London.—The following candidates recently passed the B.S. Examination:—

First Division.—Burton, Samuel Herbert, University College; Duncan, Andrew, M.D., King's College; Hunt, Joseph William, University College; Ottley, Walter, University College; Pepper, Augustus Joseph, University College.

Second Division.—Kidd, Walter Aubrey, Guy's Hospital; Parry, Thomas Sharp, University College.

The following gentlemen passed the M.D. Examination:—

Batterbury, George Henry, King's College; Beuham, Henry James, University College; Dukes, Clement, B.S., St. Thomas's Hospital; Duncan, Peter Thomas, B.S.,(a) University College; Garlick, George, University College; Harris, Vincent Dormer, St. Bartholomew's Hospital; Houghton, Walter Benoni, B.S., University College and Charing-cross Hospital; Hullard, Jean Arthur, B.S., B.Sc., University College; Leech, Daniel John, Owens College; Lowe, Walter George, St. Bartholomew's Hospital; Virco, Joseph Cooke (Gold Medal), St. Bartholomew's Hospital.

Logic and Moral Philosophy only.—Batterbury, Richard Legg, King's College; Brown, Robert Charles, King's College; Petch, Richard, King's College.

The following gentlemen passed the M.S. Examination:—

Gould, Alfred Pearce, University College.

Logic and Moral Philosophy only.—Jameson, Leander Starr, University College.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 30:—

Trewman, George Turner, Stafford-place, S.W.
White, Robert Godfrey, St. Albans.

The following gentlemen also on the same day passed their primary professional examinations:—

Appleton, Thos. Alfred, St. George's Hospital.
Brydon, Richard Joseph, Guy's Hospital.
Davy, David Henry, London Hospital.
Gardiner, Bruce Herbert John, London Hospital.
Jefferson, Arthur John, St. Thomas's Hospital.
Lawson, Robt. Lockhart, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Biden, William Price—Assistant Surgical Officer to Charing-cross Hospital, *vice* Conolly.

Conolly, Paul Bennett, M.R.C.S. Eng.—Resident Surgical Officer to Charing-cross Hospital, *vice* Strange.

Potts, Lawrence, L.S.A.—Resident Medical Officer to Charing-cross Hospital, *vice* Phillips, deceased.

Whitehead, Haywood—Resident Obstetrical Officer to Charing-cross Hospital, *vice* Potts.

Wickers, Henry Adolphus, M.R.C.S. Eng.—Assistant Medical Officer to Charing-cross Hospital, *vice* Biden.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—Inspector-General of Hospitals and Fleets William Richard Edwin Smart, C.B., M.D., to be Honorary Physician to her Majesty, *vice* Sir E. Hilditch, deceased.

BIRTHS.

Dorin.—On December 2, at 344, Clapham-road, the wife of Arthur F. L. Dorin, M.R.C.S., prematurely, of a son.

Eady.—On December 2, at West-hill Lodge, Wandsworth, the wife of G. J. Eady, L.R.C.P. Edin., of a daughter.

Grellet.—On December 1, at Bancroft, Hitchin, Herts, the wife of Charles John Grellet, M.R.C.S. Eng., of a son.

Harrison.—On November 24, at Fairfield View, Ambleside, the wife of Robert Harrison, M.R.C.S. Eng., of a daughter.

Platt.—On December 1, at 1, Priory-villas, Kilburn, the wife of W. H. Pratt, L.R.C.P. Edin., of a daughter.

Weir.—At St. Mungho's, Great Malvern, the wife of Archibald Weir, M.D., of a son.

Wilkins.—On November 24, at Chittoor, Madras, the wife of T. J. Hackett Wilkins, L.R.C.P. and M.R.C.S. Edin., Surgeon Madras Army, of a daughter.

MARRIAGES.

Corscadden—Armstrong.—On November 29, at the parish church, Darenth, Thomas Corscadden, of Holly Mount, Manorhamilton, Ireland, to Eliza, third daughter of John Armstrong, M.D., J.P., Greenstreet-green, Dartford, Kent.

De la Cour—Tooze.—On November 30, at St. Matthew's, Oakley-square, George Francis de la Cour, M.D., of 282, Camden-road, N.W., to Julia Terry Southmeade, fourth daughter of the late Rev. Henry John Tooze, of Pehembury, Devon.

(a) Obtained the number of marks qualifying for the Medal.

KRASBE—SMITH.—On October 18, at St. John's Church, Buenos Ayres, Charles Henry, son of the late C. B. Krahbe, to Ada Mary, third daughter of the Rev. Francis Smith, M.A., M.D.

SLAUGHTER—JARVIS.—On August 25, at St. Giles's, Camberwell, John Edward Slaughter, M.R.C.S., youngest son of T. G. Slaughter, M.D., of Farningham, Kent, to Edith, younger daughter of R. H. Jarvis, Esq., of Sutton-at-Hone, Kent.

WOOLNER—GIBSON.—On November 29, at All Saints' Church, Hull, Richard Woolner, of Croydon, Surrey, to Alice Gibson, youngest daughter of J. H. Gibson, M.D. St. And., of Hull.

DEATHS.

CHEYNE, JOANITA MARIA STIELL, eldest daughter of George Cheyne, M.D., of Mexico, at Naples, of typhoid fever, on November 12.

HARVEY, WILLIAM, F.R.C.S., late of 2, Soho-square, at 3, George-street, Hanover-square, on December 5.

ROSS, Surgeon-Major JOHN HALYBURTON, M.B. Aber., L.R.C.S. Edin., late 39th Regiment, at Bombay, on November 19.

STEDMAN, WILLIAM, M.R.C.S. Eng., of Havant, on December 4, aged 57.

MANNINGS, GEORGE, M.R.C.S. Eng., late Surgeon in the service of the Peninsular and Oriental Company's Service, at the Parsonage, Downton, Wilts, on November 28, aged 33.

MAYO, CHARLES, F.R.C.S., Consulting Surgeon to the Hampshire County Asylum at Winchester, at St. Peter's-street, Winchester, on November 27, in his 88th year.

PARKER, SAMUEL, F.R.C.S., at Broomgrove Cottage, Sheffield, on November 30, aged 57.

YARROW, ANNE, wife of George Eugene Yarrow, M.D., of 87, Old-street, on December 1, aged 32.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOURNEMOUTH GENERAL DISPENSARY AND COTTAGE HOSPITAL.—Resident Surgeon. Candidates must be registered, unmarried, and possess a qualification in medicine and surgery. Testimonials, diplomas, etc., to the President of the Bournemouth Dispensary, care of A. A. Johnston, Esq., Hon. Sec., on or before December 31.

FLINTSHIRE DISPENSARY.—House-Surgeon or Dispenser. Applications and testimonials to the Hon. Secretary, on or before December 19. Candidates must be conversant with the Welsh language.

PARISH OF LISMORE AND APPIN.—Medical Officer. Testimonials and private references to be lodged with Dr. Laurie, Chairman of Parochial Board, Drumniel, Appin, Argyleshire, on or before December 20.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY AND FEVER HOSPITAL.—Resident House-Surgeon and Dispenser. Candidates must be duly qualified and registered. Applications to the Hon. Sec., at the Infirmary, Whitehaven, on or before December 19.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Chailey Union.—The Third District is vacant; area 15,023; population 4105; salary £76 per annum.

Kidderminster Union.—Mr. George G. Brown has resigned the Lower Mitton District; area 1801; population 3081; salary £60 per annum.

Thorne Union.—The Hatfield District is vacant; area 16,778; population 1825; salary £20 per annum.

West Ward Union.—Mr. George Dale has resigned the Patterdale District; area 16,374; population 976; salary £10 per annum.

APPOINTMENTS.

Belper Union.—Richard G. Allen, M.R.C.S. Eng., L.R.C.P. Edin., to the Belper District and the Workhouse.

ALCOHOLIC STIMULANTS IN ST. GEORGE'S, HANOVER-SQUARE, UNION.—From a return just presented to the St. George's, Hanover-square, Union Board of Guardians, it appears that during the six months ending Michaelmas, 1875, there was expended in alcoholic stimulants for the use of the inmates of the several workhouses, averaging 1379 a week, £839 16s. 9d. In the six months ending Michaelmas of this year, with an average of 1346 inmates, during five of which measures were adopted to reduce the amount so expended, the cost of these stimulants was only £407 19s. 1½d., thus effecting a reduction of £431 17s. 7½d.

OUR CANAL-BOATS POPULATION.—The necessity for some effective measure for regulating the employment of children in the canal-boats that ply to and fro throughout the kingdom was painfully apparent at an inquest held a few days since, before Dr. Diplock, the Coroner for West Middlesex. The deceased, a girl nine years old, was drowned in the Grand Junction Canal. It appeared that when an infant of five years only she had been set to work to drive the horse, which drew the canal-boat, along the towing-path. Thus employed, in the dark one night she fell, with the horse, into the canal. The horse got out and walked on, and the girl was not missed for some time, but her body was found where the accident occurred. The jury appended to their verdict a recommendation that the provisions of the Factory Act should be extended to children engaged in this employment. That these poor children are subject to great neglect and cruel treatment there can be no doubt. The conditions under which they and their parents live urgently demand authoritative supervision.

PROFESSIONAL OPINION ON PROPRIETARY DISPENSARIES.—On Monday last a meeting was held at the rooms of the Medical Society of London to discuss the question of proprietary dispensaries. Dr. R. Quain was voted to the chair, and among those present were Drs. Barnes, Stewart, Farquharson, Routh, Fothergill, Thorowgood, A. Leared, and Forbes Winslow; Messrs. Nunn, Royes Bell, Adams (President of the Medical Society of London), Mac Cormac, etc. In opening the proceedings, Dr. Quain referred to the difference between proprietary dispensaries (in which it was the object of the owner to make as large a profit as possible out of the patients) and provident dispensaries (which were under the direction of governors, and which might be truly classed among charitable institutions). A proprietary dispensary under the mask of a provident institution was but a prostitution of the name of charity. The following resolution, proposed by Mr. Adams, seconded by Mr. Mac Cormac, and supported by Mr. George Brown (Hon. Sec. of the Medical Defence Association), was carried unanimously, viz.:—"That the principle of establishing proprietary dispensaries under the guise of provident institutions is in the highest degree objectionable, and ought to be discouraged as fraught with danger to the public, and as tending to degrade the status of the profession."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. George Henry.—Received, with thanks.

E. Moody, Winchester, is thanked. He will see that the matter has already been dealt with.

Onward.—The first examination for the new degree in State Medicine at Cambridge took place in October, 1875.

L., Gower-street.—The number of medical students for the present term at the Strasburg University is 199.

Philanthropist.—The Prussian Patriotic Association of Women has existed for upwards of ten years. It is mainly destined to promote benevolent and patriotic purposes. During the war of 1870 some fifty private hospitals were founded, in which about 4000 wounded were received. In 237 other hospitals the Society undertook the tending of 67,000 sick and wounded. Its ramifications are extensive, and other institutions have been benefited by this Association.

A Female Medical Student.—Yes, the number has greatly increased; no less than 132 young women had been entered, up to October 10, as students of the Faculty of Medicine at St. Petersburg.

Nemo.—The subject of the essay for the Howard Medal for 1877 is—"On the Condition and Management, Past and Present, of the Workhouses and similar Pauper Institutions in England Wales, and their Effect on the Health, Intelligence, and Morals of the Inmates."

Imprimatus.—So long as 800 years ago, in the time of Richard II., an ordinance was enacted forbidding the pollution of rivers, drains, &c.; another in the reign of Edward II., against selling "muzzled swine-flesh," etc.; and in the reign of Henry VI., Henry VII., and of Elizabeth, for the inspection and cleansing of sewers, against the slaughtering of cattle in towns, and against the overcrowding of dwellings.

M.D., Metropolitan Railway.—On daily travellers like the delicate young lady in question it would no doubt have a prejudicial effect. In the amusing "Diary of the Shah of Persia," his Majesty, writing of the railway tunnels, which he always calls "holes," says of them:—"After passing through these holes, one feels a *very suffocating kind of sensation about the heart.*"

Mr. Williams.—There are three cases in the Museum of the Royal College of Surgeons, including the celebrated one of the late Mr. Highmore. In the *London Medical and Surgical Journal*, vol. vii., p. 255, you will find a case of fœtus vomited by a child three years old. Mons. Geoffroy St. Hilaire also published the particulars.

H. S.—In 1606 a statute was framed, prohibiting Roman Catholics "from practising physic or exercising the trade of apothecaries in England."

A. S. S. D., Fowey, Cornwall.—The Students' Number of this journal will give you the desired information.

Mr. Campbell.—Sir James Paget, the late President of the College of Surgeons, will deliver the Hunterian Oration in February next.

Dr. McM.—When Parliament was dissolved in May, 1731, his Majesty gave the Royal Assent to several Acts of the past session, including one "to enable lunaticks and ideots to make conveyances, etc."

An Old Subscriber.—You will find the account in Hunt's "Fourth Estate." He states that Dr. Shebbeare was condemned to stand in the pillory at Charing-cross for publishing "An Eighth Letter to the People of England." Mr. Hunt, who was the founder and sometime editor of the *Medical Times*, died several years ago when editor of the *Daily News*. He was a member of the College. His friend, the gentleman mentioned, is still on our staff, and has been connected with the journal from its commencement.

COMMUNICATIONS have been received from—

Dr. William Squire, London; Mr. Richard Davy, London; Mr. J. Balmanno Squire, London; Dr. Julius Althaus, London; Mr. Jonathan Hutchinson, London; Mr. B. R. Wheatley, London; Dr. Thomas Barlow, London; The Registrar of the Apothecaries' Hall, London; Mr. D. P. Stuart, Menteth Sinla; Mr. E. Stanford, London; Mr. Edwin Moody, Winchester; Mr. Godlee, London, Dr. Handfield Jones, London; The Registrar of the University of London; Mr. Robert Johnson, Woodbridge; Mr. F. Sutton, Gainsborough; Dr. Sparks, Mentone; Dr. Arding, Walliagford; Mr. Richard Weaver, London; Mr. Francis Wright, London; Mr. G. H. Marins, Greenwich; Dr. J. W. Moore, Dublin; The Secretary of the Faculty of Physicians and Surgeons, Glasgow; The Secretary of the Royal Medical Society, Edinburgh; Mr. F. G. Larkin, London; Mr. T. M. Stone, London.

BOOKS AND PAMPHLETS RECEIVED—

Tilbury Fox, M.D., F.R.C.P., Atlas of Skin Diseases, part 15—Rajpootana Dispensary, Vaccination, Gaol, and Sanitary Report for 1875—Craeroft's Trustees' Guide—Alexander Silver, M.A., M.D., Outlines of Elementary Botany—John Henry Steel, M.R.C.V.S., Outlines of Equine Anatomy—D. P. Stuart Menteth, The Silver Question and How to Raise Exchange—Cassell's History of India, part 12—Cassell's Picturesque Europe, parts 2 to 10.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—The Australasian—Gazeta Medica da Bahia—Monthly Microscopical Journal—National Anti-Compulsory Vaccination Reporter—Morningside Mirror—New York Druggists' Advertiser—Monthly Homœopathic Review—Obstetrical Journal of Great Britain and Ireland—Veterinarian—Archivio Clinico Italiane dei Medici Condotti—Indian Medical Gazette—Students' Journal—The Colonies—Edinburgh Medical Journal, December—The American Practitioner.

APPOINTMENTS FOR THE WEEK.

December 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

11. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Ernest Sansom, "On Mitral Stenosis and Insufficiency." Mr. Spencer Watson, "Polypus of the Nose"; "Pendulous Tumour of the Tongue." Mr. Lennox Browne, "Warty Growth from the Uvula"; "Aural Polypus."

12. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. Holke—"Case of very general Teleangiectasis on the Left Half of the Body, with Abnormalities in Large Bloodvessels of Lower Limb, &c." Dr. Wickham Legg, "Hæmophilia, complicated with Multiple Nævi" (two cases).

13. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8½ p.m. Dr. W. R. E. Smart, "On the Recent Appearances of Dengue."

14. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

15. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Medical Microscopical Society, 8 p.m. Mr. C. H. Golding-Bird, "On Rodent Ulcer."

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 2, 1876.

BIRTHS.

Births of Boys, 1246; Girls, 1175; Total, 2421.
Average of 10 corresponding years 1866-75, 2181·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	792	786	1558
Average of the ten years 1866-75	804·4	822·5	1626·9
Average corrected to increased population ...	...	...	1741
Deaths of people aged 80 and upwards ...	...	...	66

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	2	8	1	3	...	4	...	1
North	751729	38	5	3	3	7	...	5	1	2
Central ...	334369	1	3	2	2	4	...	2	...	1
East	639111	6	7	13	1	6	...	3	3	5
South	967692	20	14	15	2	5	2	7	3	7
Total	3254260	67	31	41	9	25	2	21	7	16

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·312 in.
Mean temperature	46·0°
Highest point of thermometer	66·0°
Lowest point of thermometer	34·1°
Mean dew-point temperature	42·6°
General direction of wind	Variable.
Whole amount of rain in the week...	1·69 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 2, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Dec. 2.	Deaths Registered during the week ending Dec. 2.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2421	1558	56·0	34·1	46·0	7·78	1·69	4·29
Brighton	100632	42·7	66	48	56·4	36·0	46·7	8·17	1·80	4·57
Portsmouth ...	124887	27·8	73	46	55·6	38·0	47·6	8·67	1·47	3·73
Norwich	83430	11·2	44	29	53·0	36·0	45·0	7·22	0·69	1·75
Plymouth	72230	51·8	32	27	56·0	37·0	48·2	9·00	1·29	3·28
Bristol	199539	44·8	172	74	56·7	33·5	45·7	7·61	1·74	4·42
Wolverhampton ...	72549	21·4	45	28	52·7	34·5	43·8	6·56	1·37	3·48
Birmingham ...	371839	44·3	295	144	...	...	...	...	...	...
Leicester	113581	35·5	87	52	54·2	35·2	44·1	6·73	0·97	2·46
Nottingham ...	93627	46·9	84	33	54·6	30·8	43·0	5·56	1·02	2·59
Liverpool	621544	100·1	352	293	51·9	32·8	43·2	6·22	2·79	7·09
Manchester ...	357917	83·4	250	204	52·0	31·0	42·6	5·90	1·74	4·34
Salford	138425	26·8	119	100	52·5	31·4	42·3	5·73	1·76	4·47
Oldham	88609	19·0	61	54	...	...	...	...	...	...
Bradford	173723	24·1	133	78	48·6	33·4	41·3	5·17	1·13	2·87
Leeds	291580	13·5	225	157	51·0	32·0	41·5	5·28	1·12	2·84
Sheffield	274914	14·0	216	113	51·0	30·5	42·4	5·78	1·64	3·91
Hull	136933	37·7	99	66	52·0	32·0	41·6	5·34	1·25	3·17
Sunderland ...	108343	32·8	92	64	...	...	...	...	..	...
Newcastle-on-Tyne	139929	26·1	101	55	...	...	...	...	...	...
Edinburgh	215146	51·3	125	73	...	...	...	...	1·83	4·65
Glasgow	545144	90·4	413	284	44·9	26·4	36·0	2·22	0·43	1·09
Dublin	314666	31·3	179	175	55·3	28·8	42·5	5·84	1·87	4·75
Total of 23 Towns in United Kingdm	8028595	37·7	5687	3755	56·7	26·4	43·5	6·39	1·54	3·91

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·31 in. The lowest reading was 29·05 in. on Monday evening, and the highest 29·64 in. on Thursday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON OPHTHALMOLOGY.

DELIVERED AT GUY'S HOSPITAL.

By CHARLES HIGGENS, F.R.C.S.E.,
Assistant Ophthalmic Surgeon to the Hospital, and Lecturer on Ophthalmology in the Medical School.

LECTURES III. AND IV.

ASTIGMATISM.

Definition.—By the term "astigmatism" we understand a condition of asymmetry of the cornea. The asymmetry is of two kinds: in the first there is a difference of curvature between different corneal meridians; in the second there is a difference of curvature in different segments of the same meridian, constituting irregularity. The first form is known as *regular*, the second as *irregular* astigmatism. The latter defect is frequently complicated by irregular curvature of the crystalline lens, and in the present state of our knowledge little can be done in the way of treatment. I shall therefore dismiss the subject without further notice.

REGULAR ASTIGMATISM.

A certain amount of regular astigmatism is present in the cornea of the emmetropic eye. Its maximum of curvature (that which has the shortest radius, and consequently the shortest focal length) is found in the vertical meridian; its minimum of curvature (that which has the longest radius, and consequently the longest focal length) is found in the horizontal meridian. If the degree of asymmetry be so slight as to give rise to no impairment of vision, it is known as *normal astigmatism*, or *astigmatism of the normal eye*. But if, on the contrary, defective vision is produced by the asymmetry, it is known as *abnormal astigmatism*.

The existence of normal astigmatism can be very easily demonstrated. If we draw two fine lines on paper, crossing each other at right angles, and look at them in such a position that they shall correspond to the vertical and horizontal corneal meridians, a distance will be found for every emmetropic eye at which the vertical line can be seen more distinctly than the horizontal, and *vice versâ*.

The question at once arises, Why should this difference exist? To answer it, we must understand what are the conditions necessary in order to see a vertical or horizontal line distinctly.

To see a vertical line distinctly, it is requisite that rays of light proceeding from it in a *horizontal direction*, and therefore passing through the horizontal meridian of the cornea, should be brought to a focus in the retina.

To see a horizontal line distinctly, it is necessary that rays of light proceeding from it in a *vertical direction*, and therefore passing through the vertical meridian of the cornea, be brought to a focus in the retina. As a consequence of this, vertical lines may be considered as belonging to the *horizontal* corneal meridian, and horizontal lines to the *vertical* meridian.

As I have already stated, the curvature of the cornea has the shortest radius and shortest focal length in its vertical meridian, the longest in its horizontal; consequently it will be found that a fine horizontal line can be *distinctly* seen at a shorter distance than a fine vertical line, a fine vertical line at a somewhat greater distance than a horizontal.

By practising the simple experiment just mentioned, any individual whose eyes are emmetropic can prove to himself the existence of normal astigmatism. What I have said with regard to vertical and horizontal lines applies with equal force to those drawn in any direction. In order to see any line distinctly, rays of light passing through that meridian of the cornea which is at right angles to it must be brought to a focus in the retina. This rule should be borne in mind when working out astigmatism with test lines.

ABNORMAL ASTIGMATISM.

In abnormal astigmatism we find, excepting very rarely, that the greatest curvature (that which has the shortest radius) of the cornea is in, or approaching to, the vertical meridian; and the least curvature in, or approaching to, the horizontal meridian. The two principal meridians—those of the greatest and least curvature—always stand at right angles to each other.

There are five forms of abnormal astigmatism—in two, one principal meridian of the cornea is normal, that at right angles to it deviating in the direction of too great or too slight a curvature; in the first case constituting *simple myopic astigmatism*, in the second *simple hypermetropic astigmatism*. In the third case the whole eye has a myopic refraction, but the curvature of the cornea in one principal meridian is in excess, and consequently the myopia in that meridian increased. This condition is known as *compound myopic astigmatism*. In a fourth the whole eye has a hypermetropic refraction, but the curvature of the cornea in one principal meridian is diminished, and consequently the hypermetropia in that meridian increased. This condition is known as *compound hypermetropic astigmatism*. In a fifth form the curvature of one principal meridian is too great, causing myopia in that meridian; the curvature of the meridian at right angles to it being too slight, and giving rise to hypermetropia. This condition is known as *mixed astigmatism*.

Diagnosis and Treatment.

Having thus briefly discussed the conditions which give rise to astigmatism, we will now pass on to the consideration of the methods by which it may be diagnosed and treated.

Whenever in the examination of ametropia by trial with lenses it is found that the acuteness of vision cannot be raised to the normal standard, and that the patient has difficulty in telling which glass suits him best, or states that he sees equally well with two or three of different focal lengths, the existence of astigmatism should be suspected.

How is its presence to be ascertained? A glance with the ophthalmoscope will show that there is no disease of the retina or choroid, opacities of the cornea, lens, or vitreous, etc The presence of astigmatism, as well as its degree, can, like that of ametropia, be ascertained by trial with lenses, or by ophthalmoscopic examination.

For the purposes of ascertaining the existence, and also for measuring the degree of astigmatism by trial with lenses, a series of lines radiating from a common centre should be used. A half-circle of such will be found in Dr. Snellen's book of test-types. These we place at a convenient distance (fifteen to twenty feet), and direct the patient, whose refraction should have been previously tested in the ordinary way, to look towards them. We test each eye separately, and ascertain whether that under examination can distinguish any of the lines without the aid of lenses; if any line can be distinctly seen, its direction should be carefully noted. This at once gives a clue to the form of astigmatism present; and the previous trial of refraction will, in all probability, have furnished evidence of myopia, or hypermetropia, although no satisfactory result has been obtained.

Let us suppose that a line running in a vertical or nearly vertical direction is plainly seen; from what I have said respecting the conditions necessary for seeing a vertical line distinctly, we know that the meridian of the cornea situated at right angles to the line which is plainly seen has either a normal or too slight (hypermetropic) curvature. We then direct the patient to keep his eye fixed on this line, and hold a weak convex and concave lens alternately before it; if the line is rendered less distinct by the former of these, and not much altered by the latter, we at once diagnose emmetropia in a meridian approaching the horizontal. Our next care is to ascertain what lens will enable the eye to distinguish a line running at *right angles* to that which is seen without such aid.

The trial should be commenced with that lens, convex or concave, which in the previous trial of refraction was found to give the greatest acuteness of vision: this lens, in the case supposed, will in all probability be a concave one. Such being the case, we continue the trial until the weakest concave lens has been found which renders distinct the line standing at right angles to that first seen, whilst the remainder of the half-circle becomes indistinct.

In the case supposed, simple myopic astigmatism is present and its degree may be expressed by the focal length of the weakest concave lens which renders distinct the line running at right angles to that which is most clearly seen without a lens; supposing the lens to be one of twenty inches negative focus, the degree of astigmatism $= \frac{1}{20}$. (A m $= \frac{1}{20}$, *i.e*, myopic astigmatism $\frac{1}{20}$.)

In order to check the result obtained, a cylindrical lens(a) of

(a) Cylindrical lenses are ground upon a cylinder. Only those rays of light passing through such lenses in a direction at right angles to the axis of the cylinder are refracted; those passing in the direction of the axis undergo no change: consequently the cylindrical glass must always be placed with its axis at right angles to that meridian of the cornea on which it is intended to act.

twenty inches positive focus should be held before the eye, its axis being at right angles to the line first seen without a glass. If a proper correction has been obtained, the test-lines will all appear the same, and the acuteness of vision will be found considerably increased. The other forms of astigmatism are also to be diagnosed by means of the test-lines and trial with lenses. Time will not allow of a detailed account, but each will receive a short notice.

In simple hypermetropic astigmatism it will generally be found that the horizontal or nearly horizontal lines are most distinctly seen, and that they are rendered less distinct by the addition of convex lenses, whilst those running at right angles to them are distinguished as easily or more easily than before. The trial with lenses should be continued until the *strongest convex lens* has been ascertained, with which the latter can still be distinguished. The degree of astigmatism may be expressed by the focal length of this lens. Suppose the correcting lens to be one of twenty inches positive focus, then the astigmatism $= \frac{1}{20}$. (Ah $= \frac{1}{20}$, *i.e.*, hypermetropic astigmatism of $\frac{1}{20}$.)

The result obtained must be checked by trial with a convex cylindrical lens, the axis of which must be placed in a more or less vertical direction.

In cases of compound myopic astigmatism, distant vision is generally so imperfect that none of the test-lines can be made out at twenty feet. Trial with concave lenses, commencing with that which has been previously found, during the trial of refraction, to raise the acuteness of vision most, quickly enables the eye to recognise some of the lines, those situated in a vertical direction being usually first made out. As soon as any line can be recognised, careful trial should be made until the weakest concave lens with which it can still be clearly seen has been ascertained. Having done this, we should next find the weakest concave lens with which a line running in a direction at right angles to that at first seen is clearly made out. The strength of this lens will usually be found to be greater than that of the first. The difference between the two expresses the degree of astigmatism.

Supposing it is found that no lines are made out at first, but that with a lens of twenty inches negative focus those having a vertical, or nearly vertical, direction are brought clearly into view, and that a lens of ten inches negative focus is required to enable the eye under examination to see lines running at right angles to those first distinguished; what do we learn from this result? (1.) That in the horizontal or nearly horizontal meridian of the cornea there is myopia of $\frac{1}{20}$. (2.) That in a meridian at right angles to this there is myopia of $\frac{1}{10}$. To neutralise this we employ a spherical *concave* lens of twenty inches negative focus: this, of course, corrects $\frac{1}{20}$ of myopia in all meridians, but we have found by our trial that in one meridian myopia of $\frac{1}{10}$ exists; consequently, the spherical lens only neutralises $\frac{1}{2}$ of the defect in this meridian, another $\frac{1}{20}$ still remaining $\left(\frac{1}{10} - \frac{1}{20} = \frac{1}{20}\right)$. In order to correct the remaining myopia, a cylindrical lens of twenty inches negative focus must be combined with the spherical, the axis of the cylinder being placed in a more or less horizontal direction.

In the case supposed, there is myopia $\frac{1}{20}$ $\left(M = \frac{1}{20}\right)$, and, besides this, myopic astigmatism $\frac{1}{20}$ $\left(Am = \frac{1}{20}\right)$: $\frac{1}{20}$ being the difference between the two meridians.

The result obtained must be checked by testing the acuteness of vision both for lines and letters with a spherical lens of twenty inches negative focus, combined with a cylindrical one also of twenty inches negative focus.

Compound hypermetropic astigmatism can be diagnosed by the use of lines and trial with lenses in the same manner as the compound myopic, but with this difference, however—that the lenses employed are convex instead of concave. It will generally be found that the eye affected by compound hypermetropic astigmatism has the greatest acuteness of vision for lines running in a more or less horizontal direction, those running in a direction at right angles to these being less distinctly seen.

Having ascertained which of the lines is most distinctly seen, we commence the trial with convex lenses, using first that which was found to give the greatest acuteness of vision during the trial of refraction. Stronger and stronger lenses should then be tried, until the strongest with which the particular line or lines can still be made out has been ascertained.

Our next care must be to find the strongest convex lens with which lines running at right angles to those at first seen can still be made out.

The strongest lenses, which give the greatest acuteness of vision for lines more or less horizontal and for those having a more or less vertical direction having been ascertained, the degree of astigmatism is expressed by the difference in focal length between them. Thus, if lines running in a horizontal direction can still be made out with a convex lens of twenty inches focus, the presence of $\frac{1}{20}$ of hypermetropia in the vertical meridian of the cornea is demonstrated. If lines running in a vertical direction can be made out through a convex lens of ten inches focus, there is hypermetropia of $\frac{1}{10}$ in the horizontal meridian, and the degree of astigmatism is $\frac{1}{20}$ $\left(\frac{1}{10} - \frac{1}{20} = \frac{1}{20}\right)$. There is hypermetropia of $\frac{1}{20}$ in all meridians, with an additional $\frac{1}{20}$ in the horizontal $\left(H = \frac{1}{20}\right.$ $\left.Ah = \frac{1}{20}\right)$, *i.e.*, hypermetropia $\frac{1}{20}$, with hypermetropic astigmatism $\frac{1}{20}$). The required correction will be a convex spherical lens of twenty inches focus, combined with a convex cylindrical lens also of twenty inches focus, the axis of the cylinder being placed in a more or less vertical direction.

The correction must be checked by trial of the acuteness of vision for lines and letters when looked at through the above combination of lenses.

The presence of mixed astigmatism can also be diagnosed by ascertaining the acuteness of vision for lines running in different directions, both by trial with lenses and without such aid.

In a case of this form of asymmetry, the eye under examination will probably be found to have a greater power of distinguishing lines which run in a more or less vertical direction than those which have a horizontal inclination, when the half-circle is placed at a distance of fifteen to twenty feet.

Let us suppose that on testing an eye, the trial of refraction of which has given no satisfactory result, it is found that lines having a vertical direction are seen with tolerable distinctness. We at once suspect that the meridian at right angles to the lines thus distinguished has a normal or too slight (hypermetropic) curvature. We commence the trial with weak convex lenses: if it is found that vision for the same lines is as acute with these as without, or that the sharpness of sight increases, hypermetropia is certainly present in the horizontal meridian of the cornea. The existence of hypermetropia in the horizontal meridian having been proved, our next care is to ascertain its degree; this is done by finding the strongest convex lens with which vertical lines can still be distinctly seen; the focal length of this lens then expresses the degree of hypermetropia. Suppose the lens to be one of twenty inches positive focus, the degree of hypermetropia in the horizontal meridian is $\frac{1}{20}$ (Ah $\frac{1}{20}$, *i.e.*, hypermetropic astigmatism $\frac{1}{20}$).

We next proceed to ascertain the refraction in the vertical meridian; it will be found that the convex lenses which did not affect, or even improved, the vision for vertical lines, render horizontal ones still less distinct than before. We then try concave lenses; and if it is found that the vision for horizontal lines is improved, we continue the trial until the weakest concave lens with which the greatest attainable acuteness of vision for horizontal lines is maintained has been ascertained. The negative focal length of this lens then expresses the degree of myopia in the vertical meridian. Supposing the lens to be one of twenty inches negative focus, then the degree of myopia is $\frac{1}{20}$; and the eye under examination has, besides hypermetropic astigmatism, Am $= \frac{1}{20}$, *i.e.*, myopic astigmatism $\frac{1}{20}$. The combination required to neutralise this defect will consist of a convex and a concave cylindrical lens, each of twenty inches focal length, placed with their axes at right angles to each other—that of the convex lens being vertical; that of the concave having a horizontal direction.

The diagnosis of astigmatism by the ophthalmoscope is very simple. If, on examining an eye by the direct method, it is found that, at a given distance, vessels running over the fundus in one direction are seen (either in an erect or inverted image) more clearly than those having a course more or less at right angles; or that vessels situated in the vertical meridian are seen in an erect position, those situated in the horizontal meridian being seen inverted, astigmatism is present.

The form of asymmetry present, together with its degree, can be accurately measured, according to the rules laid down in the diagnosis and measurement of anomalies of refraction by the ophthalmoscope; the degree of astigmatism being expressed by the difference between the focal lengths of the lenses, which, placed behind the sight-hole of the ophthalmo-

scope, bring vertical and horizontal vessels in turn plainly into view.

The diagnosis and measurement of astigmatism by the ophthalmoscope I cannot enter into more fully. If you wish for further information on the subject you should read a very able paper, entitled "The Ophthalmoscope as an Optometer," by Mr. J. Couper, in the "Transactions of the Ophthalmological Congress, 1872."

Treatment.—The treatment of astigmatism consists in prescribing glasses which neutralise the defect. The optician should be furnished with the focal length of the required simple cylindrical lens in the case of simple astigmatism; and with the focal lengths of the required spherical and cylindrical lenses in the case of compound astigmatism: these are combined in one lens, of which one surface is ground to the required spherical curvature, and the opposite surface of the required cylindrical curvature; such a combination is known as a spherico-cylindrical lens. We should always see the lenses and test them, and ascertain that their axes are in the proper direction, before they are placed in the permanent frame. Opticians keep frames in which the glasses can be moved, and in which they are sent for approval. In the case of mixed astigmatism, a bicylindrical lens—that is, a lens having one surface ground with a concave cylindrical curvature, the other being made of the requisite convex cylindrical curvature: the axes of the two being placed at right angles to each other—may be ordered. Or what I think is preferable, a lens having on one surface a convex spherical curvature may have its opposite surface ground with a concave cylindrical curvature, the strength of this, of course, being increased in proportion as the convex spherical surface increases the myopia in the meridian on which it (the cylindrical line) is alone intended to act. For instance, in a case where myopia of $\frac{1}{20}$ exists in the vertical meridian, and hypermetropia $\frac{1}{20}$ in the horizontal, a lens one surface of which has a spherical convex curvature of twenty inches focal length may be used; but this, of course, increases the myopia in the vertical meridian by $\frac{1}{20}$; consequently the other surface of the glass must be ground with a concave cylindrical surface of $\frac{2}{20}$ or $\frac{1}{10}$, so as to neutralise the myopia already existing, and that produced by the spherical convex curvature.

In some cases of mixed astigmatism it may be requisite to give glasses which shall enable the patient to see at a certain definite distance. For instance, in the case supposed above, with myopia $\frac{1}{20}$, and hypermetropia $\frac{1}{20}$, it might be requisite to bring the farthest point of distinct vision to twenty inches. This can be accomplished by altering the $\frac{1}{20}$ of hypermetropia to $\frac{1}{20}$ of myopia.

Now, a convex cylindrical lens of $\frac{1}{20}$ neutralises the hypermetropia, and renders the eye emmetropic in the meridian on which it acts. To induce a myopia of $\frac{1}{20}$ in this meridian, the curvature of the cylindrical lens must be increased by $\frac{1}{20}$; consequently we shall have a convex cylindrical lens of $\frac{2}{20}$, that is, $\frac{1}{10}$: therefore, to make the hypermetropic meridian of $\frac{1}{20}$ = myopic $\frac{1}{20}$, a convex cylindrical lens of ten inches focal length is required.

In working out cases of astigmatism, it will frequently be found that the accommodation continually alters its tension, and with it the focus of the eye under examination. If any very considerable difficulty be experienced from this cause, we shall find it necessary to paralyse the ciliary muscle by the use of a strong solution of atropine (four grains to one ounce), used twice or thrice a day for some few days before the trial with lenses is made.

(To be continued.)

DUBLIN HOSPITAL SUNDAY FUND, 1876.—Hospital Sunday in Dublin this year took place on November 12. Unfortunately, the day proved very inclement; however, the weather did not militate against the success of what is now an established institution. The amount of subscriptions received in aid of this year's collection up to last Saturday was £3503. Upwards of thirty churches have not yet sent in their contributions, so that the collection may reasonably be expected to exceed that of last year by a considerable sum. The largest collections this year were £276 at St. Matthias' Church, and £160 at Christ Church, Leeson-park.

ORIGINAL COMMUNICATIONS.

SUBCUTANEOUS INJECTION OF MORPHIA
IN THE TREATMENT OF
SCIATICA, LUMBAGO, & BRACHIALGIA.

By HENRY LAWSON, M.D.,
Assistant-Physician to St. Mary's Hospital, W.

I HAVE no doubt that some of my medical brethren will be a little surprised to see me again advocating this remedy in the treatment of sciatica and its congeners. When my book on the subject of sciatica, lumbago, brachialgia, and their cure by means of the syringe, appeared, a certain amount of doubt was expressed as to the results which I then brought forward—not, of course, to the positive cases which I furnished. Of these there could be not the smallest doubt. But some there were who fancied that those cases which had not been successful had not been published; which I most distinctly aver was not the case. Now, I have had more than seven years' experience of the results of the subcutaneous injection of morphia, and I have seen more than eighty cases of these forms of nerve-affection—some of them excessively bad cases—and in not more than three did this treatment prove a failure. That is to say, that subcutaneous injection of morphia invariably gave relief—in most instances complete relief,—and that by means of this relief the patient was enabled to eat or drink with comfort, and by help of perchloride of iron, and in some cases by cod-liver oil, he was thus enabled to put on flesh rapidly, and to repair the waste of tissue under which he had been labouring. And here I would mention that a remedy which is most valuable as a restorative in these cases is the hypophosphite of soda. Indeed, I think it as good a mode of administering phosphorus as any other. But in hospital cases it is questionable whether it can be beneficially employed, for we all know that the present system of administering drugs in many of our hospitals is most objectionable and faulty. It must be confessed that we owe our knowledge of this drug and its valuable effects in great measure to the recommendation of Dr. C. B. Radcliffe, to whom indeed, I think, we may give all the credit of introducing the phosphorus into the medical treatment adopted by this country.

It is as a means of relieving the pain that I administer the morphia—not, as some have erroneously imagined, as a means alone of curing the disease; and while the patient is painless there must be, as I have already laid down, every attention paid to his feeding, his walking, his warmth, and his *ease of mind:* to this last above all, for, be assured, a patient whose mind is kept constantly in a condition of worry cannot be improved in bodily condition by any mode of treatment whatever.

Of course the salt I employ is that of the muriate of morphia dissolved in pure distilled water alone. Take five grains of this salt, and add to them a single drachm of water, then heat the mixture over a spirit-lamp, and a perfect solution will form. This will, on cooling, in winter assume a rigidly solid condition, and in summer, save in very hot weather, will be unfitted for injection if cold. And here it is necessary to say that most muriate of morphia, as got from local chemists, is worthless. I have tried at many houses, where I have obtained other drugs in a comparatively pure state, to obtain pure muriate of morphia, but in vain. It, when so obtained, was found to dissolve with excessive difficulty, to form a muddy instead of a perfectly clear liquid, and to leave a certain amount undissolved. Hence I have for years obtained the morphia I use from Messrs. Hopkins and Williams, of Cross-street, Hatton-garden, of whom, it is perhaps needless to say, that I never obtained any but the very purest salt, which was readily and completely soluble in warm water.

With regard to injection, I may say that a further experience has borne out my remarks of four years ago—viz., that it is of importance to make the injection as close to the seat of pain as possible. It would, of course, be utterly out of my power to attempt any explanation of this. Indeed, as far as physiology is concerned, the facts would appear to be against this view. But I simply say that my experience—and it is derived from many trials on my patients—points to this, that to allay pain most successfully by subcutaneous injection of morphia, we must, as a rule, inject as close to the seat of pain

as possible. As a fact that likewise is opposed by some physiological reasoners, we may mention that the best treatment of acute bronchitis is the production of an irritation of the surface of the chest. This is well known by the medical man, but it cannot be explained by certain physiologists, who therefore suggest that counter-irritation in any other direction would be equally efficacious. But we know that it is not.

And as to needles. I have had considerable experience, having made many thousand punctures with their aid; and I have come to the conclusion that, as the instrument is made nowadays, in most cases it is utterly and entirely wrong. I will not say that the instrument makers are to blame for this, but assuredly whoever first ordered the gigantic instruments considerably over two inches in length that are generally appended to a subcutaneous syringe case, made a grievous mistake, and, furthermore, committed an error which, in its results, falls on both the patient and the practitioner. On the former it tells by the production of occasional abscesses, which we know are produced sometimes if a needle is introduced to a depth of two inches into the skin; and also by the fact that the drug is not so rapidly absorbed, for anyone with the smallest knowledge of microscopic anatomy is aware that the portion of the integument immediately beneath the "zone of indifferent tissue" is loaded with minute bloodvessels, while further in you have merely loose connective tissue, with, of course, larger vessels, but not anything like the numerous vascular parts you have got above. Then, secondly, it tells against the physician, for, if he has many injections to perform, we may put down as a moderate allowance for breakage at least one needle in three weeks. And these two or three errors may be easily avoided by using a needle of not more than half an inch in length. My own needle barely measures three-eighths of an inch long, yet the last needle that I obtained from Mr. Maw(a) I have used in at least seven hundred instances, and it yet shows no symptom of yielding; it is as firm as when it left the maker's hands. And here I must offer a piece of advice to the beginner. In the first place, you should always use silver wire for plugging your needles with when they are put in the case, and invariably employ plain steel needles—firstly, because they are less easily broken than gold; secondly, because they are finer in make; thirdly, because they retain their points exceedingly well, which gold does not; and fourthly, and most important, because they are driven in with one-fourth of the pressure that is required for a gold needle. And here I may mention that the judicious practitioner will invariably cleanse his syringe before laying it aside. This is essential in the case of morphia injections, for if it be not done the instrument will be unfit for use on the next occasion. It is easily done: just draw up enough pure water to fill the instrument, then force half of it through the nozzle, and next, partly unscrewing the needle, and closing the point with the finger and thumb of the right hand, inject the remainder of the pure water through the screw part that unites needle and cylinder. Then place the wire in the needle, and your instrument is ready for its case, and will be immediately fit for use when required again. These directions may seem trivial, but those who follow them will not be of that opinion.

With regard to the quantity of morphia solution that may be injected, I have had since the publication of my treatise on Sciatica some peculiar experience. I mean that I have met with some cases in which such a small dose produced such excessive vomiting that at first I thought I should have had to give up this method. And, indeed, I should have desisted giving the injection had not the patients invariably declared that, notwithstanding the illness it occasioned, they would still persist in having the injection, because, as they alleged, it so greatly diminished the pain even forty-eight hours after it was done,(b) while for some hours it absolutely prevented it. In three of these cases the largest dose that could be given subcutaneously without the infliction of vomiting was the one-twenty-fourth of a grain, so that in each of them I was compelled to make a specially diluted solution, as it would have been difficult to estimate that proportion in case my own solution were employed.

And now I have to consider some few points in connexion with the subject of injection which have not been dealt with before. And firstly, of the question, Does bleeding from the wound inflicted by the syringe tend to render the absorption of the morphia more rapid than it would otherwise be? On this point Dr. J. Harley expresses a distinctly negative opinion; but I am sorry that I must decidedly differ from him, though in a qualified sense. I am distinctly of opinion that, when a small vein—a very minute one, of course—has been opened in the course of injection, a much more rapid absorption of the morphia takes place than usual. It is not felt at the pit of the stomach sooner than usual, for that peculiar sensation is experienced in all cases almost before the withdrawal of the syringe. But when a vein has been opened you have symptoms—though they do not always take place then, but they occur in no other instance—which, in the case of a tyro at subcutaneous injection, are apt to occasion considerable alarm. In the course of half a minute in such cases the blood swarms to the head and face; the eyes are bloodshot, and the face assumes a hue that is almost crimson. The heart and great vessels may be felt beating by the patient—who is somewhat confused—with great distinctness. The action of the blood-current is not accelerated, but the beats of the heart are given with a greater degree of force. This condition is, however, of but transitory occurrence; it does not last for more than from three to five minutes, and it is rapidly got under by the application of cold water in spongefuls to the head and face.

As I have said, this occurrence does not take place often even when a good deal of blood is spent, but I have never seen a case where it has occurred unless a vein has been punctured. The circumstance of the patient having eaten no half an hour beforehand does not, either, appear to influence it; though I may here mention that it is always advisable that the patient should have eaten a good meal at least half an hour before the injection, as thereby much of the soporific effect of the drug is prevented.

Another point of interest—though we are not so well able to account for it, unless hypothetically—is the fact that frequently there is no enlargement of the lymphatic glands, but occasionally that these glands are very much swollen. Now, this enlargement has no connexion whatever with the bleeding, for very often, when the hæmorrhage is not stopped for five minutes after the puncture, no lymphatics whatever are swollen; while in other cases, in which we may say there has been no bleeding at all, the lymphatics become swollen to an extraordinary extent. I have noticed these swellings both in the arm and leg; and in some cases, where the quantity injected did not exceed two minims, there was an enormous swelling of the lymphatic glands which, I confess, when first I saw it, occasioned me some alarm. This generally occurs at about five or seven minutes after the injection has taken place, and it extends in all directions, sometimes at a distance of even five inches from the puncture. It exhibits a series of irregular-shaped swellings of a whitish appearance, at different distances from each other, sometimes large, sometimes small, circular, oblong, and variously shaped, not being in a line in different directions around the puncture. As a rule there is no apparent connexion between the puncture and the nearest swellings. They are somewhat like the mark produced by a flea-bite on a person whose skin is thick, but are often as numerous as though an entire colony of fleas had been at the assault. However, they seldom give rise to irritation, and then it is extremely slight; while they disappear in from half an hour to an hour.

Morphia, when it has been injected, often produces a first effect, a peculiar sensation in the stomach and intestines which it is difficult to explain. A sound may be heard by the injector before he withdraws the syringe, as of *borborygmi*, or motion of the intestines accompanied by the passage of gas from one part to another, which gives the well-known "rumbling of the guts." But besides this there is a well-defined feeling of contraction of the stomach, together with a sense of emptiness, and an intense desire for food. This, however, only occurs when the stomach is empty or nearly so at the period of injection. The sense of hunger that is then experienced is acute, and is at once relieved by taking food. It is needless to remark that, in such instances where the morphia has been taken fasting, the action of the drug is intensified, but in an especial manner: it operates more particularly on the head, first producing excitement, soon sleepiness

(a) Here I may mention that the practitioner who requires a syringe, and does not want to pay an absurdly high price for it, had best go to Maw and Sons, the wholesale instrument makers of Aldersgate-street, E.C. There he will see ample varieties, and any changes he requires in the needles can be effected in a comparatively short space of time.

(b) In regard to this peculiar inequality in the results of doses, some very interesting observations will be found recorded in Dr. J. Harley's classic treatise "The Old Vegetable Neurotics"—a work published some few years since by Macmillan and Co. Dr. Harley has found the examples [illegible] experience is precisely identical.

action is more shortly at an end, and the relief it affords is thus less satisfactory than when the morphia is administered about an hour after the ingestion of a good meal.

And now I must mention an effect of subcutaneous injection of morphia which has occurred in but two of the cases I have seen, and which, till I read Dr. J. Hurley's very interesting work, I had thought I was the first to observe, but I find von Graefe was before me. It is the effect upon the eye; and in one case it was the right eye, in the other the left one that was affected. The vision has been perfect before the injection; there has been no difference in the vision of the two eyes; but about five minutes after injection one of the eyes may be observed to have its pupil more contracted than the other one; and after about an hour, the two eyes, which had equal pupils before injection, have two perfectly unequal irides; the one being contracted to this degree, that the two bear the proportion to each other of 1½ to 1. This contraction may last for twelve hours, or may disappear in two. It seems a perfectly normal contraction, being quite uniform. But there are other changes in the eye besides this one. The vision *appears* to be all right with the two eyes open; at most there is a slight indistinctness of distant objects. But on causing him (both patients are males) to close the uncontracted eye, it at once becomes apparent that vision is most seriously affected. He cannot see either near or distant objects distinctly; in most cases he cannot even read a book. And here comes the difference between von Graefe's case and mine. He states(c) that he has had a small number of cases which were affected by morphia injection in a manner similar to these cases I have stated. But here is the difference. These cases of von Graefe's were simply affected after the injection of morphia with shortsightedness, which was immediately relieved by the use of doubly concave glasses. And here I may diverge a little to explain von Graefe's experience. He states that he made experiments on these as on other cases, and that he found an exact antagonism between morphia and belladonna, or rather atropine. The change of vision produced by the two was totally opposite—which, of course, we might imagine, from one dilating and the other contracting the pupil. But what I wish particularly to indicate is, that he noticed no other effect produced. It was simply that long sight or short sight was caused,(d) and these could be completely remedied by the use of either convex or concave glasses.

But in my cases the effects are totally different. Here the morphia is introduced at a distance—through either arm, the effect is the same,—and yet it operates unequally on the two eyes; and on the one that has its iris more closed, not only is vision affected as regards its being lengthened or shortened, but it is completely for the time impaired, so that glasses are not of the slightest value. Neither convex nor concave glasses have any improving effect on the vision. In fact, it would seem that in these cases, which are to my mind most extraordinary ones, vision is sometimes doubled in the one eye, singular as that may appear. Suppose the patient be desired to look at any object,—suppose it to be the name of a shop, for instance. He will tell you that, on looking with both eyes, he sees the name pretty distinctly, but that on gazing at it with the affected one alone he can see the name perfectly blurred, the letters being arranged in a kind of double fashion, one set pale and the other dark, the former lying behind the latter.

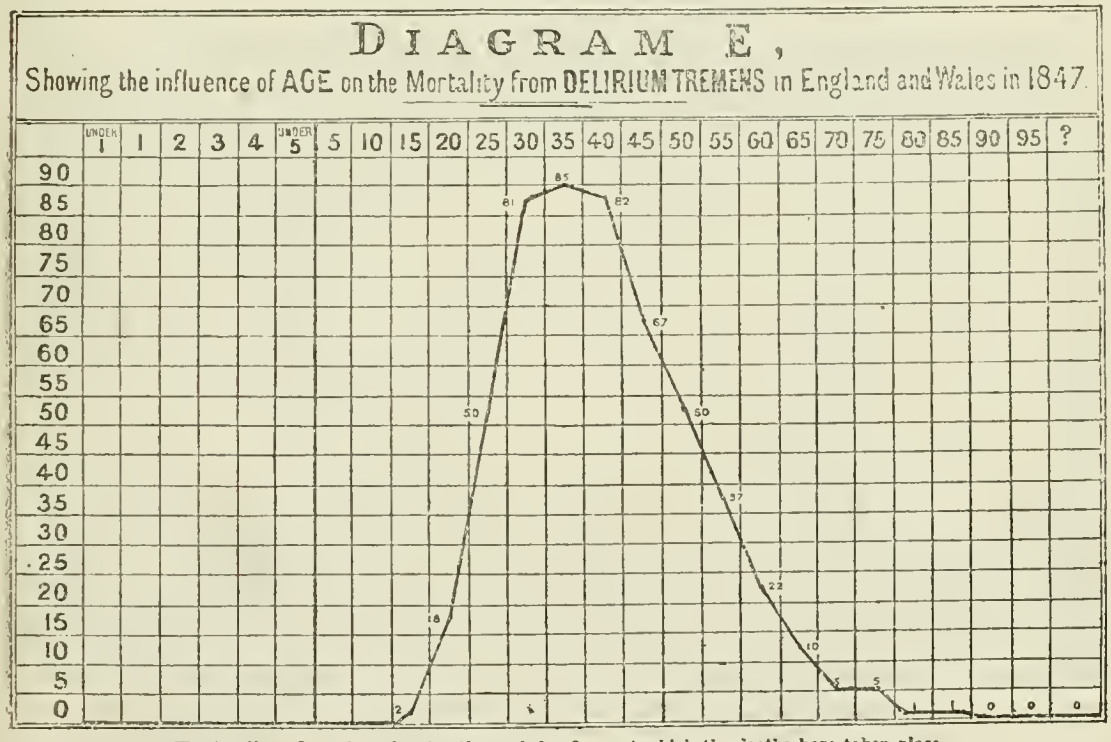
This effect comes on in different degrees at different times, although he has been using precisely the same amount of morphia. Sometimes it does not appear at all, sometimes it will last for eight hours or more.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
Physician to the Hospital for Diseases of the Nervous System.

(*Continued from page* 650.)

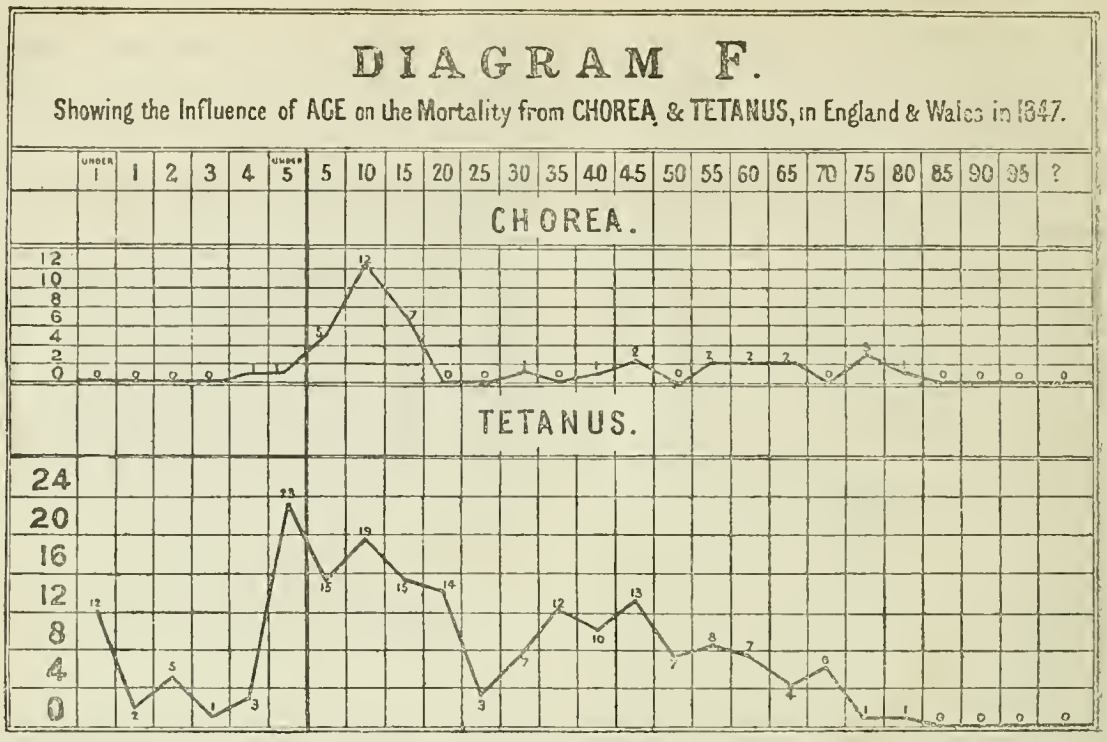
4. For *delirium tremens*, the curve in Diagram E shows a blank until after fifteen years of age. At twenty there is a rise, which becomes greater at twenty-five, and the maximum is reached at thirty-five. The greatest number die between thirty and forty. A fall then takes place, which becomes rapid after fifty-five, when it may be assumed that most of the

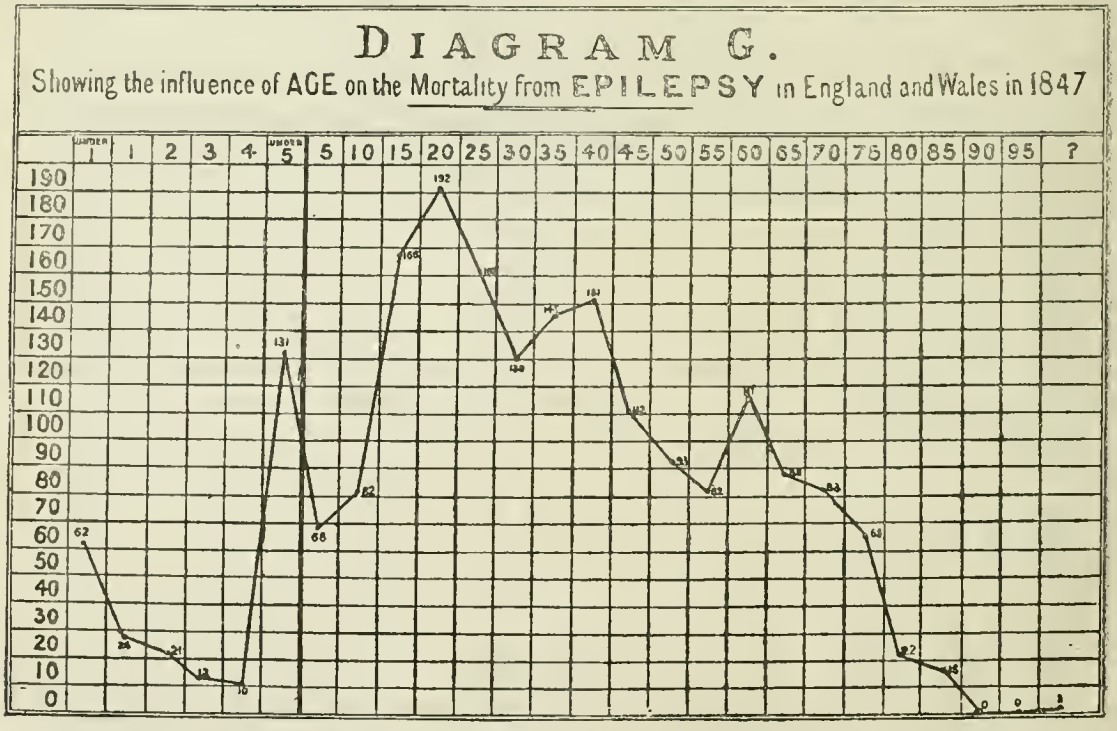


The top line of numbers denotes the periods of age at which the deaths have taken place.
The side line of numbers indicates the numbers of deaths at the different periods of life.

(c) There is a brief record of his experience given in the *Medical Times and Gazette*, May, 1st, 1861.

(d) The effect he supposes to be caused by antagonistic actions of the two drugs on the tensor choroideæ and the fibres of the iris.

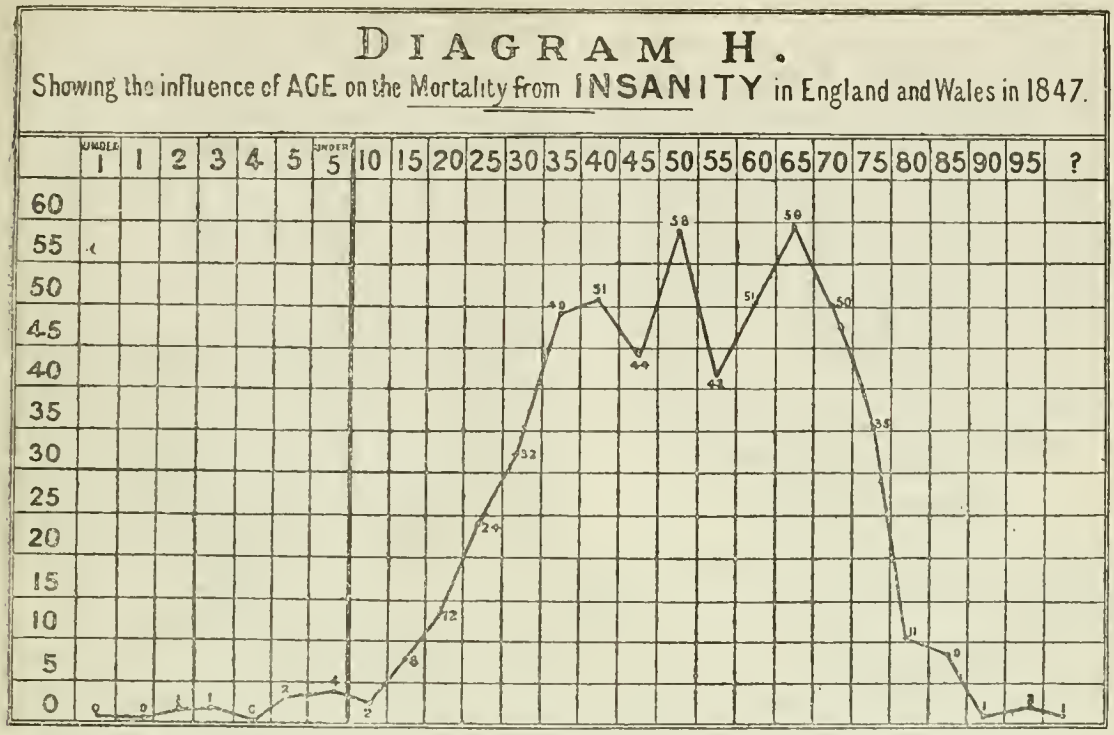


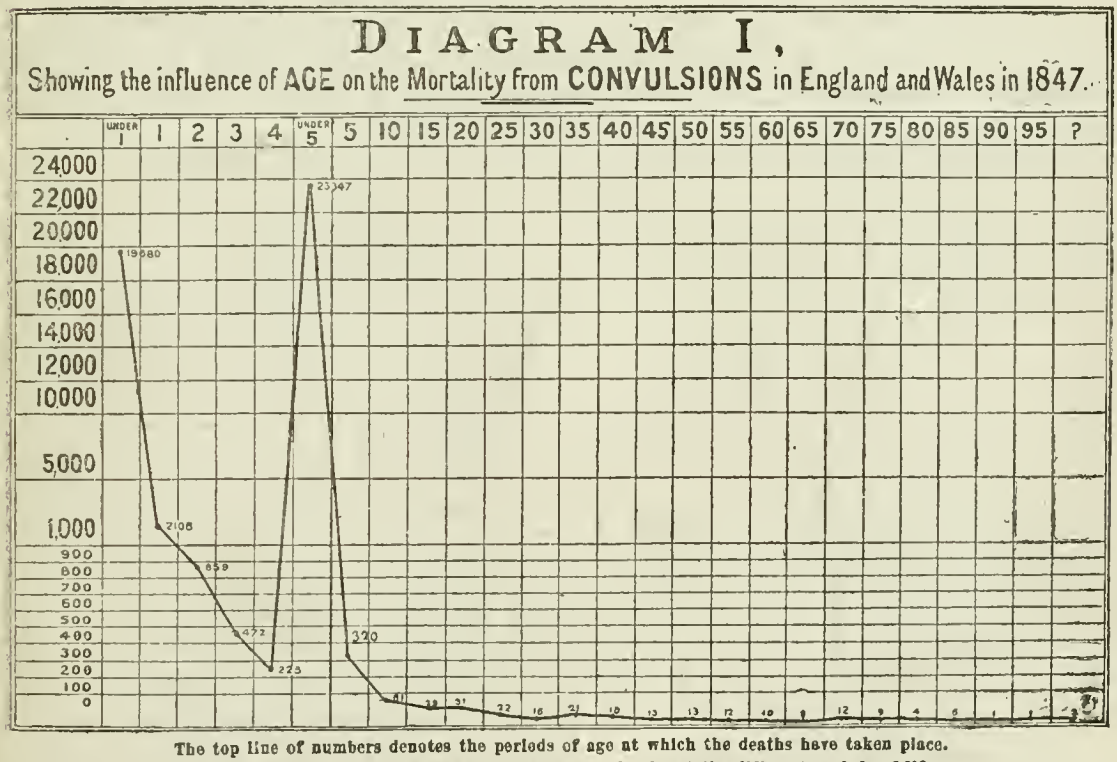


unfortunate votaries of drink have either learnt wisdom from experience or died off. The minimum is reached at eighty-five.

5. *Chorea* appears from Diagram F to be most fatal between five and fifteen years of age. The first four years of life are entirely exempt from deaths by it, and there is only one such under five years. Between twenty and thirty the mortality subsides altogether, but recommences in a small way after thirty. At seventy-five we have still three, and at eighty years of age one death from St. Vitus' dance registered.

6. The curve for *tetanus* appears on the same diagram, and shows that affection to be comparatively frequent in the first year, or, we might say, during the first few days of life. Tetanus neonatorum carried off twelve victims during the





The top line of numbers denotes the periods of age at which the deaths have taken place.
The side line of numbers indicates the numbers of deaths at the different periods of life.

year. In the second year a fall, and in the third a slight rise is perceptible, and the mortality of the period under five years of age is altogether the greatest. There is a fall at five, a rise at ten, and another fall at fifteen and twenty. The curve after that remains low, proceeding in a somewhat irregular manner until eighty, when it falls to zero.

7. *Epilepsy* appears from Diagram G to be very fatal in the first year, and altogether so in the first lustrum of life. At five the curve descends, rises slightly at ten, jumps up high at fifteen, and reaches the summit at twenty. At twenty-five it descends, and more considerably so at thirty. Another rise is perceptible at thirty-five and forty, and then a more decided

fall occurs until fifty-five. At sixty it suddenly rises again, but after that the fall is steady, and at ninety the curve has descended to zero.

8. *Insanity* is in Diagram H shown to carry off isolated victims as early as two years of age. The curve rises gradually in the subsequent periods, and more especially so at thirty-five, fifty, and sixty-five. At the latter age the curve attains its summit, and from thence falls rapidly to the end.

9. In *convulsions* the influence of age is perhaps more strikingly apparent than in any other disease. The curve in Diagram I at once commences almost at the top, in the first year of life; falls with great rapidity in the second, third, fourth, and fifth years, and reaches the summit in the first lustrum of life. After that it descends with unparalleled precipitation, never to rise again; and convulsions are during the subsequent periods of life of only very slight account in the mortality from nervous diseases.

(*To be continued.*)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

TRANSITORY HEMIOPIA AND HEMIDYSÆSTHESIA.

[For notes of the following case we are indebted to Mr. Roland Smith, Resident Medical Officer of the London Hospital.]

Miss W., the mistress of a large school, of previous good health, on October 5 did not feel so well as usual, and, being constipated, took two compound rhubarb pills. The following day she had most profuse diarrhœa, and felt extremely weak; but by October 8 she felt pretty well again, and recommenced her duties. The first thing she noticed wrong was that, in writing a letter, when she came to the word "such" she hesitated and wondered if there were such a word in the English language; she was not able to recognise the word at all. When she went downstairs into the schoolroom she could not remember the name of one of her teachers, although she knew perfectly well to whom she was talking. Then, whilst speaking to another of her teachers about the lockers, she failed to remember the word "lockers." She had occasion then to see her housekeeper, and used the word "predecessor," when it is certain the word "successor" was meant. She felt queer then, and said her eyesight was peculiar. When asked in what way, she replied that she could only see towards the right, that she saw only half the housekeeper's face, and that the limit was a straight vertical line. During this time the gardener had occasion to come into the kitchen to ask some question, though not addressed to Miss W. Seeing him, she said, "Who is that? I know him perfectly well, and I heard what he said, but could not quite understand it all."

Mr. Smith was sent for to see Miss W., and found her sitting in a chair, looking slightly pale and a little confused. Pulse was 108, regular, and of good volume. She complained of a trembling of the upper lip, and being asked which side it began in, she said it was only in the left half. She also had a peculiar sensation down the left arm and leg—a disagreeable numbness. The left half of the face also "felt queer." The peculiar sensation was abruptly limited by the median line. There was no loss of power. Questions were answered by Miss W. quite correctly and in her usual manner. The forgetfulness of names was the most marked feature—especially the name of the object of the sentence, or the name of the person to whom she was speaking. She required to ask Mr. Smith his name, although she knew him perfectly well.

She was ordered to lie down and take a little brandy, and in an hour the whole of the attack had passed off. In the course of two or three days she recovered her usual health.

HULL GENERAL INFIRMARY.

THE SURGERY OF 1875.

(Reported by Mr. HENRY THOMPSON, House-Surgeon.)

(*Continued from page* 544.)

Excision of Hip.

Although during the year there have been four excisions of the head of the femur, without one death, still, from the experience derived here, they may be classed amongst the most unsatisfactory of surgical proceedings. In all the cases the disorganisation was far advanced, and the length of time that elapsed between the operation and the discharge of the patient was very great. In only one of them was a really useful limb the result, and in that case the patient was confined to bed for no less than fourteen weeks after the operation. However, at the time of his leaving the hospital he could bear the full weight of the body on the limb, and there was only a mere trace of discharge from one small sinus. The patient was a boy aged ten, and was under the care of Mr. Craven. In two of the operations a curved incision was made over the head of the femur, which was then sawn across just below the great trochanter; but in the other two Sayre's method of operating was pursued—viz., after dissecting down to the bone, the periosteum was detached from the head and great trochanter by means of Sayre's elevator, and then the head and great trochanter were sawn off, thus leaving the periosteum *in situ*, in order that new bone might be thrown out from it. In all four cases the acetabulum was more or less diseased, and the carious portions were gouged out. If anything has been learnt by the experience derived in this hospital from excisions of the hip, it is the propriety of operating at as early a period as is justifiable, and before the patient is much reduced by the constant discharge and accompanying hectic. The usual method of treatment employed here after the operation consists in applying an interrupted long splint, and then at the end of two or three weeks attaching a small weight to the foot.

Excision of the Knee.

Of this there have been three examples. The first case was successful (after a very protracted recovery), and was performed by Dr. King on a delicate girl aged nine, for strumous disease of knee-joint.

The second case was that of a woman aged twenty-four, who was admitted under the care of Dr. Lunn, suffering from acute inflammation of the knee-joint. On the partial subsidence of the inflammation an incision was made into the joint, and a small quantity of pus evacuated. However, this was of no avail, and accordingly, a few days after, excision was performed. The operation was not successful: no attempt at union took place; and six weeks after the excision the limb was amputated in the lower third of the femur. Her recovery after this was rapid, she being discharged twenty-eight days after the amputation.

The third case is remarkable on account of the unusual nature of the injuries requiring the operation. A. H., aged twenty-three, an engineer on board a steamer, was admitted under the care of Dr. King on December 6, 1875. He gave the following account of his injuries:—On August 28, whilst at work, his leg was caught by the chain of a steam-winch, and he was rotated round the barrel. This happened at Port Said. He was taken into the hospital there, where he remained seventy-six days. From what he says, there seems to have been a compound fracture of the tibia and fibula, with dislocation of the knee. The dislocation of the knee (owing, no doubt, to the immense swelling) does not appear to have been diagnosed. The fractured leg united, but the patient has never since been able to bear any weight on his leg. On admission, the right leg is seen to be three inches shorter than the left; scar over the fibula; knee swollen; condyles of femur can be felt projecting behind calf of leg; upper end of tibia dislocated upwards on to the front surface of the femur; the patella can be felt above the upper end of the tibia. The knee allows of slight motion backwards and forwards. The vessels, etc., appear to be pushed to the outer side of the external condyle. Foot swollen. General health good. The knee was excised on December 18. Chloroform having been administered, a semilunar incision was made over end of tibia; quadriceps tendon then divided. The upper ends of tibia and fibula sawn off, and then the end of the femur was exposed (by bending the leg at right angles) and sawn off. The incisions were stitched up, and the limb swung on Ferguson's splint. The after-progress of the case was for a long time very unsatisfactory. Numerous abscesses formed in various parts of the leg, and the man for a considerable time was in a very shaky condition. Eventually, however, good union took place, and he was discharged cured eighteen weeks after the operation.

Excision of the Elbow.

Of three cases, two were performed for strumous disease of the joint. Both the patients were girls, and were aged respec-

tively eight and twelve. Both were under the care of Dr. King. In both the H incision was made. The limbs were saved, but the movement in the joint was not altogether satisfactory.

The third case was that of a boy, aged fourteen, who sustained a gunshot wound of the elbow. The upper end of the ulna was much injured, and there was also great destruction of the muscles in the neighbourhood. As, however, the ulnar nerve had escaped injury, Dr. Lunn determined to try to save the limb. Great sloughing of the bruised integuments and muscles followed; but on discharge from the hospital, although the elbow was quite stiff and bent at a right angle, still the boy had considerable power in the arm, together with perfect movement in the hand and fingers.

Excision of Upper Jaw.

This operation, performed in one case only, was but partial, as the growth for which it was undertaken appeared to be limited in extent. It was of an epitheliomatous nature, and sprang from the gums outside the molar teeth. The patient was a woman aged sixty, under the care of Mr. Craven. An incision was made from the angle of the mouth almost up to the lobule of the ear; then the whole of the alveolar process behind the first bicuspid was removed with the bone-forceps, and after that the hard and soft palate of same side were also removed. The wounds healed rapidly, but shortly after her leaving the hospital the growth returned, and grew so rapidly as to preclude any further operative procedure.

Excision of Female Breast.

Three cases, all for scirrhus; two of them under the care of Dr. Lunn. Death took place in one of these on the seventeenth day from erysipelas. The third case (Dr. King) was a triumph for antiseptic surgery, and is worthy of full record. E. G., aged sixty-eight, admitted November 5. The breast was excised on November 6, and patient, after remaining in hospital for seventeen days, was discharged with a perfect cicatrix. The temperature never rose above 99·8° Fahr. (the day after the operation), after which it was normal. The case was only dressed five times. On dressing it one day, the drainage-tube, inserted at the time of the operation, was found to be missing. On examination the wound was found to be perfectly healed, with the drainage-tube thoroughly incapsulated. The edges of the cicatrix had to be torn asunder at one point to allow of the extraction of the embedded tube. This fact is especially interesting, showing as it does that foreign bodies in themselves are not irritating: it is only when putrefaction coexists that they produce irritation.

CITY OF GLASGOW FEVER HOSPITAL, BELVIDERE.

CASE OF TUBERCULAR DISEASE OF BOWELS, IN SOME RESPECTS SIMULATING ENTERIC FEVER.

(Under the care of Mr. JAMES W. ALLAN.)

Catherine W., aged eighteen, was admitted to Ward XV. on September 8, 1876.

History.—Had headache and shivering, and was dizzy pretty often; had purging, but neither vomiting nor pain in back. First shivering was a week to-day; thinks she has had four or five since then.

Tongue clean but fissured; pulse small and pretty fast; pain in right iliac fossa, increased on pressure. Poultice abdomen. Wine ʒij.

September 9.—Two loose motions, very light. Slept and drank well.

12th.—Motion like pea-soup. Slept well; drinks well.

13th.—Patient stated that during the week before she came into hospital she passed blood from the bowels. It was sometimes thin and red, and sometimes in lumps; it had a very bad smell. Sure that the blood came from the bowels.

14th.—Slept well; seems intelligent. Loose light motion last night, and one like pea-soup yesterday afternoon. Got small dose of "gastric mixture" in night.

16th.—Yesterday patient had two motions, in one of which there was a good deal of clear blood. After the bloody motion she became weak, as if about to faint, but after some wine she revived. This morning had motion loose and light, but no blood. No pain at all. Pulse 114. Getting ʒiv. brandy.

17th.—No blood; loose motion. Prefers wine to brandy. Tongue inclined to be smooth and fissured, with lymphy patches. Mental condition seems good; intellect clear. Pulse 102. Evening: Formed natural motion.

18th.—Loose light-coloured motion. Abdominal pain, made worse on pressure. Linseed poultices, cotton wadding in intervals. Lime-water in milk.

22nd.—Tongue keeps in a nasty condition, still inclined to be smooth, fissured, and with lymphy patches not like ordinary fur. A little sick during night. A little tenderness in right iliac fossa. Abdomen inclined to be retracted.

October 5.—Last night had two loose motions, and a good deal of blood in each of them. Felt weak after. The blood was red and clear, no clots or lumps. ℞. Acid. gallici. gr. xx.; divide in pulv. iv.; one morning and evening.

6th.—On inquiry it is found that this girl has been troubled by piles. This may account for hæmorrhage.

8th.—On examination found patient to have hæmorrhoids. She states that they never troubled her, nor did she ever pass blood from bowels previous to taking this fever.

14th.—Last night and this morning had shiverings and pain across stomach. One loose rather dark motion. No blood.

22nd.—Tongue presents appearance rather difficult to describe. Perhaps it might be compared to a red fruit which had got mildewed and shrunk. Patient wishes something done. Dilute sulphuric acid in water.

27th.—Patient is emaciated. This is well seen on thorax. Abdomen sunk in.

November 2.—Died at ten o'clock.

The autopsy (November 4) showed clearly that the case was not one of enteric fever, but of tubercular disease of the bowels.

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Medical Times and Gazette.

SATURDAY, DECEMBER 16, 1876.

PHTHISIS AND CHANGE OF CLIMATE.

A work has been lately published on the influence of climate on phthisis, the conclusions of which, if correct, would be truly disheartening. The writer considers that various facts and statistics which he brings forward prove the utter uselessness of sending consumptive patients to any of the well-known "health-resorts" of the South of Europe—in fact, he

(a) "Climate and Phthisis; or the Influence of Climate in the Production and Prevention of Phthisis." By John Parkin, M.D., F.R.C.S., etc. London: Longmans, Green, and Co. 1875.

goes so far as to assert that "one of the most *unfavourable* and dangerous climates for chronic diseases of the respiratory organs, and especially for phthisis, is the undercliff of Southern Europe, or the coast-ledge which forms the north shore of the Mediterranean from Cannes to Pisa"! Dr. Parkin discusses at some length the *bad* side of Hyères, Cannes, Nice, Mentone, etc. The piercing winds (which, however, do not always blow), the contrast between sun and shade temperatures, and the (according to him) awful mortality of the natives from phthisis, are all dwelt on in exaggerated terms, and instances are given of cases in which the climate of the South—"that most pernicious climate," as he calls it—has been very disastrous in its effects on phthisical invalids. The author regrets "that there are no statistics to which to refer of the prevalence of phthisis [amongst the natives] at Mentone." We are able to affirm, from the statistics of the hospital at Mentone for twenty-five years (from 1850-74), that only forty-five persons were *admitted* with phthisis during that period—not a very large number for a town of more than 5000 inhabitants. In spite of the "pernicious character" of the climate of the Riviera, the fact remains that numbers of consumptive patients, especially in the earlier stages, do get greatly benefited by their winter sojourn at Cannes, Mentone, Nice, and San Remo. To this we can testify from our own personal observation, and can add the small weight of our own personal experience, believing that our life has been prolonged, if not actually saved, by visits to the South after two severe illnesses connected with the lungs. That it is necessary to be careful to guard against sudden changes of temperature we are ready to admit; but the risks of a southern winter climate are perfectly well known, and "forewarned is forearmed." These risks are not what Dr. Parkin would have us believe. For our part we do not assert that the climate of the Riviera is specially curative of phthisis; but we do assert that curative conditions exist there which cannot be found in winter in the North of Europe—namely, moderate warmth and dryness of the air, with a bright clear atmosphere *which admits of much time being spent in the open air*. In our belief in fresh air as a curative agent in phthisis, it is right to inform the reader that we differ from Dr. Parkin, who holds, as he says, with Hippocrates, that "aer est omnium, rex, morborumque causa," and that the admission of the external air into the rooms of patients is, instead of being a preventive of diseases, "the cause of the great majority of them." In the same way Dr. Parkin disbelieves the generally accepted view that phthisis, among other conditions, is dependent on dampness of soil, and he endeavours to controvert Dr. Buchanan's evidence on this subject. It seems to us that the table he quotes at page 13 is not so difficult to reconcile with Dr. Buchanan's views as he endeavours to prove it to be—the mortality from phthisis at Steyning, for example, being much more in favour of Dr. Buchanan than that at Eastbourne is against it; while it is probable that the death-rate from phthisis at Eastbourne is kept up by consumptive patients who come there from a distance, and not entirely by the natives. With some of Dr. Parkin's strictures on southern and other foreign health-resorts we are able to agree. Our own experience of Naples and Rome, for instance, does not lead us to regard them as places for consumptives to resort to, and the evidence against Madeira seems to us also very strong. We wish, however, that, while deprecating change of climate to the South, and abusing foreign winter health-resorts as he does, our author had been able to offer anything much better in their place to persons who stay in England. But when we read that he does not recommend "Ventnor, or Torquay, or Bournemouth after Christmas," or, in fact, believe that "change of air will ever cure the disease under which consumptives labour," we begin to doubt whether his advice is of much value after all; and when he states that consumption can only be cured by medical treatment (page 98), our doubts come back to us with redoubled force. With living examples to point to, of health restored and life prolonged by his execrated southern climates, and upheld by the opinions and the experience of some of the best and wisest of British physicians, we have no hesitation in telling Dr. Parkin that he has scarcely made good the whole of his case.

THE ASSOCIATION OF CERTIFYING MEDICAL OFFICERS.

A DEPUTATION of this now large and important body waited on Mr. Cross on Monday last, for the purpose of urging on him as Home Secretary the necessity of redressing some of the grievances under which they are likely to labour should all the recommendations of the recent Royal Commission receive an embodiment in legislation. The deputation was introduced by Mr. Lowe, and was accompanied by the Presidents of the Royal College of Physicians and of the Royal College of Surgeons; Mr. Hermon, M.P. for Preston; Mr. Fielding, one of the largest employers of labour in the North; Dr. Royle, of Manchester; Mr. Ernest Hart, on behalf of the Parliamentary Committee of the British Medical Association; and Drs. Simpson and Watson, of Glasgow. In all, the deputation amounted to about thirty in number, and was a highly representative one, including members of the Association from all parts of the country, from Dublin, from Belfast, and, as we have seen, from Glasgow.

The object of the deputation was explained by Dr. Arlidge, President of the Association; and the memorial which he presented on behalf of the Association contains such serious matters, affecting so many of our brethren, that we propose to devote some space to its consideration. The memorial is expressly founded on the Report of the recent Royal Commission on the Factories and Workshops Acts, which will doubtless constitute the basis of the proposed legislation on the subject. The Association fully commends the extension of the Acts to workshops as well as factories in the ordinary sense; and also the recommendation that all children or young persons engaged in labour in such places should be examined medically. There has, as is well known, always been a difficulty as regards the age of children examined as to fitness for labour, but now, with our present system of registration, it is time that such difficulties should disappear; and the recommendation that all presenting themselves for examination should bring with them a certificate of birth, and also sufficient evidence of successful vaccination, seems only reasonable. But here approval of the Report ceases. The memorial goes on to say:—"With reference to the recommendations expressed in the following paragraphs of the Summary of the Report, namely—

"(*a.*) 'The certifying surgeon should endorse the birth certificate with his certificate as to the child or young person's general fitness for employment.'

"(*b.*) 'The certificate should be kept by the employer, and returned to the child or young person on quitting his service.'

"(*c.*) 'No fresh certificate should be required on change of employment.'

we feel bound to record our unqualified disapproval."

This disapproval rests on several grounds. The first is that such certificates would open the way to unlimited fraud, especially in large manufacturing towns, where such endorsed certificates would soon become an article of ready sale, and thus be the means of oppressing the helpless beings they are intended to protect. Moreover, the onus laid upon the employer of collecting, examining, preserving, and distributing such certificates would be considerable, and certainly vexatious. But the most decided practical objection to the system is that it is now exploded and has practically been

found wanting. We are not, however, so greatly concerned with the employer of labour (who generally can well take care of himself) as with the welfare of the young, for whose benefit these Acts were more especially introduced, and for that of their fellow-workers in factory or workshop. Against such a system the following objections raised by the memorial are, to our mind, conclusive:—

"The circumstance that a child or young person passed as healthy and fit for work at one time affords not the slightest guarantee that he is equally healthy and fit for even the same work at another. There is the further fact that he may, in the interim, have contracted an infectious or contagious disease, and may spread that infection or contagion to the detriment and disaster of his fellow-workers. It is by no means improbable that a child or young person may be excluded from a factory or workshop for such a cause as the above, and may straightway go to another factory or workshop, and without medical examination obtain admission to it, whereby the utility of all sanitary regulations as now provided is set at nought, re-examination before each separate employment having, hitherto, been a certain safeguard against such mischief. Further it is not to be lost sight of that, owing to the great diversity in factories, a child passed as qualified for a particular kind of labour may be quite unsuited for another sort in which it may be proposed to employ him; and in the strongest manner, therefore, we again urge the paramount importance of a medical examination not only at each factory or workshop, but at each hiring at the same factory or workshop.

"Important as this is in textile and other large factories, we would urge its almost double importance in the frequently overcrowded and badly ventilated workshops, many of which are at the employers' own private houses, where infection or contagion may, on the one hand, be directly carried into their own families, and on the other be propagated to the public. To use the words of the Report, 'nowhere is contagion likely to be more disastrous than in crowded places of work.'

"The plan proposed would for the most part tend to abolish the practice which generally prevails of the certifying surgeon making contracts with the employers for a weekly visit; in many cases he does so at less than the regulated fee, and thus the moral influence of the weekly supervision, so generally recognised and commended by H.M.'s inspectors, would be done away with. We may add, it is by no means uncommon for the employers to deduct nothing from the wages of the workpeople in respect of such examination, except in very large factories, where it is done to check the hands from too frequently changing.

"We must, moreover, emphatically enter our protest against their recommendation respecting the primary examination by the surgeon being considered sufficient, and we would point out that their reasons for coming to this conclusion—viz., 'that if a child remains in the same factory during the three years of its half-time employment' no other than the first examination is required—is found by practical experience to be unsatisfactory, for the large number of half-timers are continually changing their employment. Moreover, it is between the ages of thirteen and sixteen that young persons (especially females) are more susceptible to various forms of disease, and it very frequently occurs that the sudden change from school life to working, either 'half-time' or 'full factory hours,' produces injurious effects, which for a time may be latent, but will result (unless foreseen and checked) in serious disease."

In the interests of the profession generally another of the recommendations of the Commission should be strongly opposed. This is to the effect that "in places of work where not more than ten protected persons are employed, the employer shall have the power of sending children to be examined by the certifying surgeon at his residence at a fee of 6d. a head."

Such a fee is simply absurd. It is all very well when a medical man agrees with a large employer of labour to examine all candidates for employment at a rate which, taken one by one, is merely nominal, but which, in the aggregate, amounts to a considerable sum yearly; but when such candidates come one by one to the examining surgeon's house for a strict physical examination, coupled with a certificate, the offered remuneration is too ridiculous.

From what has been said, it will be seen that this memorial on the part of the certifying medical officers is well timed and much needed. It will, however, be necessary for the true friends of the labouring classes to look well after the measures likely to be introduced into Parliament, to see that the substance of this memorial is fairly included in them or any of them.

THE EPIDEMIC OF CHOLERA IN INDIA, 1875.

The Report on the Cholera Epidemic of 1875 in India has just been made public. Surgeon-Major Cunningham, M.D., the Sanitary Commissioner with the Government of India, announces that only a few copies of this Report are now issued, in anticipation of his full Report for 1875, of which it will form the first section. A careful consideration of the facts thus collected on this important subject unfortunately only leads to disappointment; so far as can be gathered from the observations of those medical officers who were afforded opportunities for studying the disease, the whole history of the epidemic points to the danger of locality, to a cause or causes which, though spread over a large area, become in some way localised in certain quarters within that area. But what these local cholera and other disease-causes are, it is frankly admitted must be the subject of further investigation. So far, then, the Report on the Cholera Epidemic of 1875 is almost barren of results. Sixty-six medical officers, we learn, furnished returns on the subject, and their evidence is summarised under four heads:—The meteorology of the period when cholera was present; the influence of contagion as exemplified either in the first appearance of the disease in each community, or its subsequent spread; the sanitary defects of the places; and the effect of movement from the locality attacked in checking the disease. On the first of these points it is allowed that the information is scanty and imperfect; but what peculiar features characterise a cholera-epidemic year, as contradistinguished from a non-epidemic year, the Meteorological Department of India, which has been recently organised, may, it is hoped, in time be able to explain. In regard to none of the sixty-seven communities affected with cholera is there sufficient evidence to show that the outbreak was due to importation, and in fifty-nine of the sixty-seven (in fifty-nine hospitals, in which 391 cases of cholera were treated) not one of those coming in contact with the sick suffered at all. This, it is stated, is not to be explained by the comparatively modern method of disinfection; because, writing in 1856, Dr. Kenneth MacKinnon quotes the experience of Dr. H. A. Bruce on this point. "In 1848," he says, "I had cholera in the Fusiliers at Cawnpore from May till September; during the whole of that time I may say the hospital was never free of some cases, and at times it was crowded with them. The whole establishment may be said to have lived in the wards; the coolies for hours together never left the beds of the patients; the medical officers did nothing but administer to their wants: and yet not one man—European, half-caste, or native—ever showed the least symptoms of cholera. I took most particular care to have them mustered and looked at, but there was not in that year even a case of bowel complaint amongst them." Under the third head, again, no information is obtained. In many of the places where cholera occurred everything is said to have been in a satisfactory sanitary condition, whilst in

others there was a want of proper drainage, and in a few there was overcrowding. As a whole, the evidence, however, is strongly in favour of the immediate evacuation of buildings or of particular quarters in which a case of cholera may have occurred, and of moving into camp away from the locality. In many instances recorded, no case occurred among the parties thus removed into camp.

The Report further condemns any attempt at quarantine to insure the safety of a station. It is argued that by means of guards persons ill of cholera may be stopped outside cantonments, and that thus the troops and others inside may be protected from the disease. But the experience of 1875 shows that sick persons are not stopped, except in instances so rare that they merely prove the rule. Again, it exposes the troops, or others employed on the duty, to fatigue and night-work at a time when such exposure is calculated to prove most hurtful, and it fills the minds of the community with needless fears. Cholera, in fact, is always more or less prevalent in the Lower Provinces of Bengal; it was, however, singularly dormant over other parts of the country in 1874; in 1875, on the other hand, it was not only very severe in those Lower Provinces, but extended widely over the peninsula, generally diminishing in violence as it neared the limits of the area which it covered. Widely as it extended, there were marked tracts of exemption, notably part of the Central Provinces, and the Upper Punjaub. The areas of prevalence, however, bear no relation to the facilities for communication, nor those of exemption to the want of such facilities. Within the epidemic area the villages attacked nearly always formed but a small proportion of the whole; and even in those districts where the disease was most severe, many of them escaped. The contrast between the virulence of the epidemic in 1874 and 1875 will perhaps best be shown by a few figures; thus, in Oudh, in the former year the cholera deaths were 68, in the latter 23,321; in the Central Provinces, 14 in the one year, and 14,643 in the latter; in Madras, 313 in 1874, and 97,051 in 1875; in Bombay, 37 in 1874, and 47,573 in 1875. When this terrible loss of human life from one constantly recurring source is considered, it may well instigate that inquiry which, it is to be hoped, will one day enable us to stem, if not entirely to stay, the current of disease in this direction; at the present time, though humiliating, we can but admit our inability to cope with its ravages on its own chosen soil.

THE WEEK.

TOPICS OF THE DAY.

At last week's meeting of the Society of Arts, Mr. Robert Rawlinson, C.B., in the chair, a discussion was held on the paper which was read last week by Major-General Cotton, C.S.I., "On the Construction of House-Drains," a notice of which appeared in our columns. The Chairman, in opening the proceedings, expressed a hope that the subject had been carefully considered by those who listened to the paper. Ignorance on the question of house-drainage was most lamentable. He did not think it was fair, however, to blame the architects, as the system of house-drains was not known before the year 1850. The modern system of sanitary science only originated during the last half-century; as late as 1844, Windsor Castle, on which so much money had been laid out, actually contained fifty-three cesspools full and overflowing. Other public buildings and palaces had been equally shamefully uncared for, the simplest rules for the disposal of sewage having been transgressed. Buckingham Palace had been found to be drained on totally wrong principles, and the same had been noticed with respect to the House of Commons. Houses were erected nowadays absolutely in defiance of sanitary laws, and there was no probability of London being brought into a proper sanitary condition under the existing system. In order to bring about a satisfactory change, it was essential that the present Government should take every possible means to prevent the new streets now forming from becoming a like difficulty to them with respect to the efficient construction of house-drains. Dr. Carpenter regretted that General Cotton had said nothing as to a law being laid down that no communication whatever should exist between the sewers and the interior of houses. The great object was to obtain freedom from sewer-gas by an effective system of ventilation. The Acts of Parliament were amply sufficient to deal with the question of house-drainage, but there was no one who appeared disposed to have these Acts put into force. It was further suggested that before houses were built, plans of the drainage should be submitted to Government inspectors and to the different town councils for their approval, and that in the case of private houses a stringent law should equally apply.

A rather forcible illustration of the necessity for adopting stringent means for the prevention of the pollution of our rivers was afforded last week, so near the metropolis as Brentford. Several tons of fish—roach, pike, eels, etc.—half-dead were taken from the Grand Junction Canal, into which the Brent flows. The poisoned fish were speedily collected, and hawked about the streets for human food, a large quantity being sent to London. At Hanwell a large quantity of eels were taken out of the Brent, and also sent to London. The water was very much discoloured, the discolouring matter coming, it is surmised, from the Greenford Dye Works, where, it is rumoured, an accident had happened to one of the tanks.

Four deaths are reported to have occurred in the Burnley district last week from small-pox. There have also been several fresh outbreaks, making the total number of patients about eighty. Most of these cases are traced to two secret ones. The authorities acknowledge their total inability to deal with these concealed cases, and express their belief that if all medical practitioners in the district would immediately communicate the occurrence of each fresh outbreak, they would be in a position to eventually suppress the disease. Considerable indignation is felt by the public generally with reference to the manner in which these secret cases are kept from the knowledge of the medical officer of health.

We regret to have to record another fatal accident from the carelessness of a nurse in giving carbolic acid by mistake. A nurse belonging to a sisterhood who have undertaken the nursing of the patients in the Hampstead Small-pox Asylum, in the place of administering port wine to a patient, gave him quantity of carbolic acid, from which he almost immediately died.

The Hospital Saturday Fund Association must be looked upon as a most unfortunate body. Whether it is that the class from whom the funds are supposed to be derived are continually repenting of their benevolence, and endeavouring to recover their donations, or from other motives, some person or persons apparently very frequently appropriate the moneys presumably given for charitable purposes. At the recent Middlesex Sessions three youths were charged with breaking open a box at the Notting-hill-gate Station of the Metropolitan Railway, placed there for contributions to the Fund. Captain Mercier, in giving evidence, said this system of theft had prevailed of late rather extensively, several of the Association boxes having recently been robbed; on one night all the boxes on the Metropolitan Railway having been emptied. The three prisoners were duly convicted; but it is clear that this system of placing boxes at the railway-stations, for the good of the London hospitals, requires much more careful supervision, or the use of much safer boxes.

The Honorary Secretary to the Society for the Abolition of Vivisection recently wrote to the Home Secretary to inquire

how many licences had been applied for, and what number granted by her Majesty's Government under the Cruelty to Animals Act; also to whom such licences had been granted, and whether the names of such persons were, or would be, published in the *London Gazette* or elsewhere. The following is the reply to this application:—"I am directed by the Secretary of State to acknowledge the receipt of your letter of the 23rd inst., and to acquaint you, in reply, for the information of the Society on behalf of whom you write, that he must decline to furnish the statement required to private applicants. I am to add that the names of holders of licences under the Act will not be published in the *London Gazette*."

There are doubtless many inhabitants of this vast metropolis who at different times have envied the Lord Mayor his position and his residence; but after a perusal of the following facts it is hardly likely they would care to change places with him. At last week's meeting of the Court of Common Council the Chairman of the General Purposes Committee brought up a report to make good certain dilapidations to the Mansion House. In doing so he took occasion to say that when the members of his Committee and himself was discharging the duty which annually devolved on them, they found three-quarters of an inch of fungi-scrub floating on the top of the largest cistern in the Mansion House, and which supplied all the other cisterns used for domestic purposes in the establishment. Moreover, at the bottom of the same cistern there were three-eighths of an inch of mud, and in a bottle of water placed on the Lord Mayor's table could be seen hundreds of nematoid worms. The Chairman further reminded the Court that in the previous mayoralty a daughter of the then Lord Mayor was attacked with a malignant form of typhoid fever. Other members of his family were also affected, and all their ailments appeared to be referable to a malarious origin. Dr. Sedgwick Saunders, Medical Officer of Health for the City, having been consulted at that time, was of opinion that the illness in the house was directly occasioned by the condition of the soil-pipe intersecting the whole house, and its connexion with the water-cisterns. It further transpired that efficient measures were instantly taken by the General Purposes Committee to remedy such an alarming state of things; meanwhile, it might be judicious on the part of those accepting the hospitality of the chief magistrate if they carefully eschewed any inclination to indulge in a glass of water during the banquet.

A rather extraordinary banquet was held last week at the People's Café, a new establishment not yet opened in St. Paul's-churchyard, when the members of the London Dietetic Reform Society dined together. The *menu* comprised vegetables and fruit only, arranged in courses, and including soups, thirteen kinds of vegetables, seven different sorts of sweet tarts and puddings, and six kinds of fruit. The drink consisted of water or milk, vegetarians not only abstaining from the use of flesh, but from alcoholic liquors also. The President of the Society was in the chair, and he stated that he supposed he had been chosen President because he was a life vegetarian—never having tasted animal food in all his life. Nor did he wear any animal clothing, and he had canvas shoes and even goloshes. But he and other vegetarians took care to get substantial food. Flesh, he argued, was not necessary for the sustentation of the strength of mankind, nor was it necessary for heat-giving; and he maintained, on philosophical grounds, that it was never intended that animals should be the food of man. A discussion followed the banquet, in the course of which two or three benighted individuals asked what substitutes could be found for wool and leather, and what was the use of sheep and oxen if they were not to be eaten. We will content ourselves with adding, as comment, a quotation from friend Horace—"*Denique non omnes eadem mirantur amantque.*"

On Monday last, the Home Secretary, in reply to a deputation of the certifying medical officers of Great Britain and Ireland, assured them that he should take care that their suggestions respecting certain recommendations made by the Royal Commission on the Factory and Workshops Acts should have due weight given them.

The notorious slums of Westminster have of late years gradually diminished in number, owing to the enforced demolition of houses; and shortly, under the Artisans' Dwellings Act, two more of these ineligible localities will have disappeared—namely, Dacre-street and Cooper's-arch. The former runs out of Chapel-street, parallel with Victoria-street, from which, over a space of unoccupied land, the backs of the houses in it can be only too plainly seen; while Cooper's-arch, consisting of about three most dilapidated dwellings, so projects from it as almost to reach the north side of Victoria-street. In Dacre-street there are about ten habitations, several of which are used as common lodging-houses, and it is computed they have afforded shelter to 400 people, many of whom may find some difficulty in obtaining accommodation elsewhere, in consequence of an evil notoriety.

Our contemporary *Iron* remarks "that sooner or later we must come for the supply of our great towns to the copious water-deposits accumulated at very considerable depths. In this way, in certain formations, large supplies of pure water can be got at, free from sewage- and surface-contamination, which it is impossible to keep out of shallow wells or to clear out of river water by any method of filtration. London is favourably situated for a deep well system, and might be supplied with all the potable water it needs from the adjoining chalk formations of Kent and the other transtamesine counties. Some of the largest centres of population in the provinces are also situated upon sedimentary well systems, containing abundance of excellent drinking-water. The second city of the kingdom is supplied from a Highland loch, the water of which is exceptionally pure; but Manchester, Liverpool, and the other populous towns of Lancashire, have quite as rich resources as London, in the triassic and permian strata of Lancashire and Cheshire. Professor Boyd Dawkins, lecturing in Manchester on this topic, observed that the experience of the last forty years now proved that these rocks were an admirable reservoir, capable of affording an almost unlimited supply of pure water; and the conclusion he had arrived at was, that in the area of Lancashire and Cheshire there was a vast lake, fed by subterranean water, and the deeper they made their wells, the greater would be the supply, and the more rapidly would it be replenished, from the larger area that would be laid under contribution."

THE HEALTH OF THE ROYAL NAVY IN THE YEAR 1875.

The Statistical Report of the Health of the Navy for the Year 1875 has just been published, but can scarcely be said to contain much that is novel. Parliamentary blue-books of this nature, which have to be compiled on a rule and line principle, do not admit of much digression on the part of those who work at them, and are, after all, chiefly valuable to the particular department of which they treat, for comparison and reference. It is, however, gratifying to be able to note that the sanitary condition of the Service afloat in the year 1875 was satisfactory. Compared with the preceding year, there was a reduction in the ratio of cases of disease and injury to the extent of 37·5 per 1000; of invaliding of 4·7 per 1000; and of mortality of 0·6 per 1000. Compared with the average ratio for twelve years, there was a reduction in the ratio of cases to the extent of 93·1 per 1000, and in the death-rate of 1·9 per 1000; but in the ratio of invaliding there was a slight increase to the extent of 0·3 per 1000.

The history of disease at foreign stations, as regards this branch of the service, also present few new features. On the

Mediterranean Station the continued prevalence of cases of enteric fever, chiefly contracted in Malta Harbour, was the cause of a Commission being appointed by the Governor to inquire into its origin, but the direct cause of the fever was not satisfactorily traced. Yellow fever has been conspicuous by its absence on the North American and West Indian Station, and also on the South-East Coast of America Station. At this latter the death-rate was reduced from 32·4 per 1000 in 1874, to 5·6 per 1000 in 1875. On the West Coast of Africa the termination of the Ashantee War was succeeded by active operations in the River Congo. The sanitary arrangements connected with this expedition were so excellent that there was a considerable reduction in the ratios of cases of invaliding and of deaths as compared with the previous year. The Australian Station was brought into prominent notice by an outbreak of enteric fever, contracted apparently in Farm Cove, Sydney; also by the disastrous outbreak of measles in the Fiji Islands, where the disease was supposed to have been imported by one of the ships of the squadron; and by the fatal attack on the officers and crew of H.M.'s ship *Pearl*, in Carlisle Bay, Santa Cruz, in the South Pacific. It further appears that as the Arctic Expedition did not return to this country until the present report was in the hands of the printer, only a brief notice of the sanitary condition of the ships employed in it for the year 1875 is given, and no explanation or opinion on the outbreak of scurvy is vouchsafed by the medical officers in charge of the vessels. It is, however, stated that a great mass of information on many points connected with the Expedition is reserved for the annual report for the year 1876. In this Report, tables showing the proportion per cent. of cases of invaliding and of death under the various classes of disease and injury to the total cases, invaliding, and deaths at the different decennial periods of age, have for the first time been added. The importance of these tables is obvious, and in the course of years a series of them may prove instructive and valuable.

Referring to the question of the Contagious Diseases Acts, the Report asserts that ten years' experience of the working of these Acts upon the health of the Royal Navy establishes the fact that they are highly advantageous. During the three years immediately preceding their enactment, the average annual ratio of cases of the combined primary and secondary forms of the disease against which they are more particularly directed was 104·4 per 1000. The Act which was first passed was so imperfect that but little advantage was obtained from it, the ratio of cases of disease during the two years it was in operation only being reduced to 97·1 per 1000. In 1866, however, the Act was much amended, and the effect of the working in its new form was immediately seen in the reduction of the ratio to 69·1 per 1000. This improvement has been steadily maintained, so that in the present year the ratio of the combined forms of disease is reduced to 45·8 per 1000. In 1866 the ratio of cases of primary disease was 53·4 per 1000; in 1875 it was only 33·5 in the same number. These figures, the Report adds, prove incontestably to the most ordinary observer the immense and immediate benefit which the Service has derived from these most valuable Acts. But only those who are conversant with the nature of the terrible forms of disease against which they are meant to operate, not only as regards their hideous effects on the immediate sufferers, but in their blighting influence on innocent offspring, can appreciate in a proper degree the advantages the Acts have conferred on the community at large.

The appendix to the Report contains the usual Medical and Surgical Reports of the Royal Marine Divisions, Her Majesty's Dockyards, and the different Naval Hospitals, for the year 1875; also "Notes on Acute Tonsillitis dependent on Atmospheric Fungi," communicated by Staff-Surgeon Henry F. Norbury, of H.M.'s ship *Juno*; "Notes on the Natural History of the Island of Ascension," by Surgeon James B. Drew, R.N.; and a most interesting paper entitled "An Inquiry into the Reputed Poisonous Nature of the Arrows of the South Sea Islanders," furnished by Staff-Surgeon A. B. Messer, M.D., of H.M.'s ship *Pearl*.

AMERICAN DIPLOMAS IN THE LAW COURTS.

On Wednesday, Mr. Knox, the sitting magistrate at the Marlborough-street Police-court, delivered his decision in the case of John Hamilton, of Oxford-street, who had been summoned by the East London Medical Defence Association for infringing the 40th section of the Medical Act. In delivering his decision, Mr. Knox said that he had gone thoroughly into all the cases of a similar character that have been decided in the higher courts, and he had come to the conclusion that the summons must be dismissed, as it had not been proved that the 40th section of the Medical Act of 1858 had been contravened. He had arrived at this decision very reluctantly, and in opposition to his own strong desires, for he was anxious, if the law would permit him to do so, to put down such practices as were carried on by the defendant in the present case. After reviewing the cases which have been decided by the highest authorities, Mr. Knox gave at considerable length the reasons which guided him in resolving to dismiss the summons. A good deal of misconception exists, he said, as to what can or cannot be done under the Medical Act. As he read the Act, a man must not pretend to be that which he is not; but, before an unqualified practitioner can be convicted, it must be clearly shown that he wilfully and falsely pretended either to be a registered practitioner, or that he held such qualifications as would entitle him to be registered. There was nothing in the Medical Act to prevent unqualified persons from prescribing for those who might be foolish enough to consult them. The defendant, it had been shown, stated on his lamp or door that he was M.D. of New York, and he exhibited his American diploma in his window, so that no one need be deceived as to the sort of person they were about to consult. Evidence had been given as to the character of the institution which had granted the diploma, and as to the manner in which it had been obtained. He had admitted such evidence, as he did not wish it to be said that he wished to throw any obstacle in the way of the prosecution; but it was not relevant to the point at issue. The question was—had the defendant assumed such titles as brought him within the penal clause of the 40th section of the Medical Act? For a man to call himself M.D. of Berlin, New York, or Philadelphia is not such an assumption. Such titles may be borne by a man who is an ornament to his profession, or by a man whose only claim to registration would be on the annals of the criminal courts. For taking such titles, however, he could not, in his opinion, be convicted under the Medical Act. But this would not protect him from prosecution for manslaughter if a patient were to die under his treatment, or for obtaining money under false pretences if anyone could be induced to appear against him on such a charge. Personally, he should be glad if he could stop the practices of those who caused to be distributed those horrid pieces of paper that were constantly being thrust into his hands in the streets; but there are things that magistrates cannot do, and although all his sympathies were with the prosecutors, he was unable to say that the defendant had infringed the Act. This decision furnishes an additional proof of the necessity for an amendment of the Act, in order to stop the practices of a class of persons who do a vast amount of mischief. The East London Medical Defence Association, although unsuccessful in obtaining a conviction in this case, have, at any rate, done public service in showing how ineffectual the Medical Act is to put down illegal practice.

THE SECRETION OF MILK.

Some important experiments have lately been made by Dr. A. Röhrig (Virchow's *Archiv*, vol. lxvii., p. 119) to determine whether the nervous or the vascular element has the greatest influence over the secretion of milk. The animals used were curarised goats, into whose udder a canula was pushed, through the excretory duct, as high as the milk-sac, the outer end being connected with an aspirator of weak suction-power. By this arrangement the milk could be carefully collected during the whole time that an experiment lasted. By means of a graduated tube which was inserted between the canula and the aspirator the milk could be easily measured, and it was found that under ordinary circumstances about ten drops were secreted every five minutes. Now, if the inferior branch of the external spermatic (pudic) nerve, which supplies the chief bloodvessels of the part, were divided, it was found that the secretion of milk was very much increased—even twenty-fold, in fact, in some of the experiments,—while it was arrested by electrical stimulation of the peripheral portion; so that the vaso-motor influence of this nerve appears to have far the largest share in causing variations in the quantity of milk secreted, and this simply by increasing or diminishing the calibre of the vessels. That the secretion of milk is mainly dependent on the blood-supply of the gland was further proved by artificially increasing the arterial blood-pressure by such drugs as strychnine, caffeine, and digitaline, all of which increased the secretion of milk, although the nerves going to the mamma were previously divided. The action of strychnine was especially remarkable, the secretion of milk being raised to as much as fifteen times that of the normal. Jaborandi, too, proved a powerful galactogogue. On the other hand, drugs which diminished the blood-pressure reduced the secretion of milk. In this respect the influence of chloral hydrate was very striking, for the secretion, after a temporary primary increase, which lasted about six or seven minutes, was almost completely suppressed for a whole day. Atropine and bromide of potassium were much less powerful in their effect. The dependence of the milk secretion on the pressure of the blood was further proved by raising and diminishing the latter by stimulation of the central and peripheral portions, respectively, of the pneumogastric nerve, and registering the alterations in pressure by means of a kymograph. The tracings showed that the rise and fall in blood-pressure corresponded closely to the rise and fall in the secretion of milk. Dr. Röhrig directs attention in his remarks on these experiments to the therapeutic importance of his results, and the indications they supply for the rational use of drugs in combating derangements of the mammary function.

DR. T. B. PEACOCK.

The honorary gold medal of the Royal College of Surgeons, which was awarded to this gentleman at a meeting of the Council of the 9th ult., as already announced in the *Medical Times and Gazette*, was presented to him yesterday with the following testimonial engrossed on vellum:—"Royal College of Surgeons of England.—At a meeting of the Council, holden at the College on the 9th day of November, 1876: present [here follow the names of the President, Vice-Presidents, and Council], the honorary medal of the College was unanimously decreed to Thomas Bevill Peacock, Doctor of Medicine, of 20, Finsbury-circus, as a mark of the appreciation of the Council of his liberal and extremely valuable donation of pathological specimens to the Museum of the College.—(Signed), Edward Trimmer, Secretary." The medal has on one side the arms of the College; on the other, Galen contemplating a human skeleton, in bold relief, with the following inscription:—"Awarded to Thomas Bevill Peacock, M.D., 1876." The standing rules of the College state that the leading considerations in awarding this distinction are for liberal acts, or for distinguished labours, researches, and discoveries eminently conducive to the improvement of natural knowledge and of the healing art. Dr. Peacock is only the sixth person to whom the medal has been awarded since its establishment in 1800, when Professor James Wilson was the recipient, followed in 1822 by James Parkinson, in 1825 by Mr. Joseph Swan (subsequently elected a member of the Council)(a), in 1834 by Dr. George Bennett, and in 1869 by Mr. William Lodewyk Crowther.

PROPOSED SMALL-POX HOSPITAL ON WANDSWORTH-COMMON.

A deputation waited upon the Board of Guardians of St. James's, Westminster, last week, in opposition to the proposed conversion by the Metropolitan District Asylums Board (under the sanction of the Local Government Board) of the St. James's Industrial School on Wandsworth-common into a small-pox hospital. It appears that the Guardians had given their consent to the acquisition by the Local Government Board of the building in question, which abuts on the high road leading to and from the metropolis. Immediately opposite to the School, and also within a few yards distance from it, are scattered about many handsome residences and villas, and upon a mansion about a hundred yards off nearly £100,000 has recently been expended by the owner in improvements. The Vestry of St. James's, Westminster, many years ago became the owners of the site on which the School stands, having purchased it from Lord Spencer for a nominal sum, and it is computed that the land, of which there are about twenty-two acres, is worth £1000 per acre. If the hospital were formed on the site in question, property in the neighbourhood would be greatly depreciated, if not destroyed, for residential and building purposes. The London and Brighton Railway runs very near the property, and Wandsworth-common is alive with nursemaids and children on fine days. Among the deputation were Sir Henry Peek, M.P., Mr. Gorst, Q.C., M.P., Sir W. Rose, Mr. R. H. Wyatt, Clerk of the Peace for the County of Surrey; and Mr. Knight, General Manager of the Brighton Railway. Mr. Wyatt said that if the intention of the Local Government Board was carried out, the common would become, not a place of recreation for the inhabitants, but an airing-ground for convalescent patients of the hospital. The inhabitants were taxed for the express purpose of keeping the common intact. The Guardians, after a short consultation, rescinded by an overwhelming majority the order previously made, and decided to retain the Industrial Schools on the present site. The next night Mr. Gorst, Q.C., M.P., occupied the chair at a meeting of the inhabitants at Wandsworth, held at the Trinity School, to protest against the erection of a hospital for small-pox patients on the spot.

MR. G. H. LEWES ON THE CORTICAL CENTRES IN THE BRAIN.

In an extremely interesting review of Dr. Ferrier's new book on the "Functions of the Brain," in *Nature*, November 23 and 30, Mr. G. H. Lewes affirms his belief that the hypothesis of motor centres in the cerebrum is untenable. Nor does he think that the grey substance of the brain has been proved by Hitzig and Ferrier to be excitable. "It is one thing," he says, "to admit that the brain is excitable, another to admit that the excitation so effected is effected by calling into activity the special property of the grey substance." Taking as his definition of "a centre" a place *to* which stimulations are carried, and *from* which motor impulses issue, and, as his definition of a "peripheral region," a place where stimulations begin or end, he points out that since the electrical stimulation of certain spots on the cortex cerebri is followed by movements which may still be produced if these spots be removed or destroyed—in fact, if not only the spots, but the whole hemisphere be removed, "it is doubtful whether the cortex of

(a) The medal cannot be awarded to any member of the Council.

the cerebrum has any claim to be called a centre or group of centres; whether, in fact, it is not *a peripheral region*, the processes of stimulation in it being of the same order as those in the skin or mucous membranes, as when, *e.g.*, laughter is produced by tickling the sole of the foot, or vomiting by tickling the fauces—*i.e.*, simply those of peripheral irritation." Mr. Lewes promises to tell us more about his views with regard to the interpretation of Hitzig's and Ferrier's discoveries, in a volume soon to be published, by which, we presume, he means his work on the "Physical Basis of Mind."

ELECTION OF CORONERS.

At the inaugural meeting of the winter session of the Social Science Association, held last week, under the presidency of Mr. Sergeant Simon, a paper "On the Office of Coroner, the Nature of his Jurisdiction, and the Right Constitution of the Coroner's Court," was read by Mr. A. Herbert Safford. The lecturer, after premising that he was not making any special case the text of his paper, entered into an elaborate discussion on the merits and demerits of coroners' courts, both in bygone days and at the present time, the conclusions arrived at being that the magistrates should elect their coroners subject to the approval of the Home Secretary; or that, if elected by popular franchise, it should be upon the same basis as the Parliamentary, the remuneration to be a fixed salary and allowances, to be settled by the Home Secretary. Not only the police, but the registrar of deaths should be compelled to give notice to the coroner of cases of sudden or unnatural deaths. In conclusion, the lecturer considered that a Parliamentary inquiry on the whole matter was imperatively demanded, and that a Bill dealing with the whole subject should be introduced as early as possible. Mr. Sergeant Pulling was of opinion that an inquiry by a public prosecutor would be better than the present inquests. Mr. Sergeant Cox considered that the coroner's duty was to inquire into the cause of death, and not into the question of who caused the death, which should be investigated by a magistrate, the medical officer of health being held responsible for the necessity of the inquiry. Mr. Carttar, the Coroner for West Kent, supported the principle of retaining the office. The Chairman advocated a change in the manner and mode of appointment of coroners, and added that there was no part of the jurisprudence of the country that wanted so much looking into to restore it to its proper and intended dignity.

THE HEALTH OF SCOTLAND IN NOVEMBER LAST.

The report of the Registrar-General for Scotland for the month of November last shows that there were registered in the eight principal towns of Scotland, during that period, the births of 3566 children—3253 legitimate, and 313 illegitimate, being in the proportion of one illegitimate in every 11·4 births; the illegitimate births thus constituting 8·8 per cent. of the whole number. During this month the deaths of 2183 persons were registered. Allowing for increase of population, this number is 561 below the average for the corresponding month during the last ten years. These deaths were distributed as follows:—18 per 1000 persons in Edinburgh, 19 in Greenock, 20 in Dundee and in Aberdeen, 22 in Leith, 24 in Glasgow and in Paisley, and 27 in Perth. Of the 2183 deaths registered, 966, or 44 per cent., were of children under five years of age. The zymotic class of diseases proved fatal to 367 persons, constituting 16·8 per cent. of the whole mortality; this is the lowest number and lowest proportion of deaths from this class of diseases during any month of November since the year 1855, when the Registration Act came into operation. The towns which suffered most from epidemics were Aberdeen, from the prevalence of measles; and Greenock, from that of scarlatina and diphtheria. Ninety-seven deaths resulted from violent causes, of which 4 were suicides; 7 deaths were caused by delirium tremens; and 3 by intemperance. Three males and one female had reached the age of ninety years, the eldest of whom was a joiner, aged ninety-five years.

A GAS CAUTERY.

A new cautery, devised by Dr. Paquelin, and constructed by M. Collin, of Paris (Charrière's successor), deserves notice. The cautery itself consists of a platinum chamber, the size and form of which vary with the special use to which it is to be applied. This chamber is connected by the inner of two concentric metal tubes, and by an indiarubber tube, with a flask containing ordinary petroleum (*essence minérale*); while a second tube, which passes out of the flask, is connected with two indiarubber balls like those of a Richardson's spray apparatus. The cautery is used in the following way:—Air is pumped by the indiarubber bellows through the flask, where it becomes saturated with petroleum vapour, and it then passes through the inner concentric tube, which is furnished with an appropriate handle, into the platinum chamber. By heating the latter in a spirit-lamp it soon begins to glow, owing to the peculiar and well-known action of platinum on mixtures of air and certain hydrocarbons at a high temperature, and by renewing the vapour by means of the bellows it can be kept in this state until the petroleum in the flask is exhausted. The products of combustion escape through the outermost of the two concentric tubes. The advantages of this apparatus are its portability, its constancy, and the ready way in which the intensity of the heat can be increased by simply pumping the gaseous mixture into the chamber more rapidly. One hundred grammes of petroleum will, it appears, keep the cautery hot for about two hours and a half. In some respects M. Paquelin's cautery resembles the gas cautery of the late Mr. Alexander Bruce, but it seems to be a decided improvement on the latter instrument.

BRITISH MEDICAL BENEVOLENT FUND.

It is now some years since the British Medical Benevolent Fund appealed for support through the periodical press; but the existing depression, which this year seriously detracts from its means of aiding the distressed, has also only too surely increased the needs of those who suffer; and it is trusted that this plea may find acceptance. The objects of the Fund are sufficiently well known; the details of its operation will be gladly forwarded to any inquirer by either of the hon. secretaries. It may be permitted, however, to state that, in addition to providing annuities for the aged, its distinguishing feature is the immediate relief, or re-establishment where practicable, of members of the profession in distress, and the aid of their widows and orphans in destitution; the necessities and desert of the applicants being their sole indispensable passports, and a careful scrutiny of these and a discouragement of improvidence, the rule of action of the Committee. The means at the disposal of the Fund are grievously inadequate to meet the wants of the many distressing and deserving cases which are pressed upon it from all quarters; and the help of the profession is earnestly sought to support the Committee in their work, the executive for carrying out which is wholly honorary. It is further submitted that the good cause of a profession ever willing to devote its best energies, regardless of self-sacrifice, to the succour of all in poverty or sickness, may not inappropriately be advocated by its influential members with a generous laity whose confidence they have so justly earned. The treasurer of the Fund is Dr. Broadbent, 34, Seymour-street, Portman-square.

PATHOLOGICAL SOCIETY OF DUBLIN.

On Saturday, December 9 (Dr. Hayden, President, in the chair), Mr. Tyrrell presented the bony structures removed by excision from the knee of a lad aged sixteen years and a half. He also showed a cast of the limb before operation. The

recovery was perfect. Surg.-Major Jackson, C.B., exhibited a specimen of aneurism which had caused death by bursting into the pericardium. The sac sprang from the sinus of Valsalva, above the right anterior aortic valve. It contained recent non-laminated fibrin. The pericardium was largely adherent to the heart, but was still able to contain twelve ounces of extravasated blood. Mr. Barton showed the calvaria and brain of a man who had fallen on his head a height of four feet and a half, about a fortnight before death. A radiating fracture commenced at the left parietal eminence, whereas an external scalp-wound lay over the right parietal eminence; there was right paralysis of motion. Sansom's symptoms of laceration and contusion of the brain were present; and the cause of death was most probably destructive secondary cerebral inflammation. Mr. F. W. Warren showed specimens from a case of embolic pyæmia in a pet monkey. It was the "embolæmia" of Weber, going on to "pychæmia multiplex" of Hueter, or the formation of metastatic abscesses in remote organs. There were hæmorrhagic infarctions in the lungs, which stopped short of becoming abscesses owing to early death.

ARCTIC SLEDGING.

The Royal Geographical Society had a densely crowded meeting on Tuesday evening, the readers of the papers being the commanders of the Arctic Expedition, and the President of the evening his Royal Highness the Prince of Wales. All the papers were listened to with great attention and interest, and were warmly applauded; but the most interesting to the non-scientific hearers—if we may venture to suppose that any such were present—was Captain Markham's, which was on "Sledge Travelling." In this all the great difficulties and hardships met with were ably and graphically described, but we can afford space for only the following quotation, describing the temperature-hardships with which the brave travellers had to contend. "When we started," Captain Markham said, "the temperature was as low as 33°, falling in a couple of days to 45°, or 77° below freezing point. The cold then was so intense as to deprive the majority of the party of sleep, in spite of the weariness induced by a hard and toilsome day's work. Comfort, with our sleeping bags and tent ropes frozen so hard as to resemble sheet iron more than a woollen substance, was quite out of the question. The very appearance of our coverlet when passed into the tent was sufficient to banish all ideas of comfort or sleep: so hard was it frozen that it was with the greatest difficulty unfolded, and not all the beating with which it was assailed would reduce it to anything like shape. When it eventually thawed from the heat of our bodies it became a 'wet blanket indeed.' The lowest temperature recorded inside the tent was one night shortly after supper, when the thermometer was as low as 25°. No temperature above zero was registered until April 28, and it never rose to the freezing point until June. The operation of putting on our duffle-jumpers after camping for the night, although a severe one, afforded us much merriment, such strenuous exertions having to be made to struggle into them, so stiff and hard had they become from the intense cold—they resembled 'strait jackets' more than articles of ordinary apparel. For the first three or four weeks after leaving the ship our bacon was frozen so hard as to be almost uneatable; after a time, however, we made it palatable by soaking it in our warm tea until thoroughly thawed. This of course had the same effect on the tea as if pieces of ice were put in, cooling it rapidly, which was a disadvantage; but then it had the effect of converting that beverage into a decoction resembling soup, which, perhaps, on the whole was more strengthening, however disagreeable it might be in flavour. As a rule we were assailed by an intolerable thirst, which we were unable to assuage for two reasons—first, that we could not afford sufficient fuel to condense extra water; and, secondly, it was quite impossible to prevent the water in the bottles from being converted into ice, in spite of the tin water-bottles being kept inside the waistband of the trousers." The lime-juice question was not even alluded to in any one of the three papers.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The third meeting of the twenty-first session was held at the Royal Kent Dispensary, Greenwich-road, on Friday, December 1; Dr. Creed, President, in the chair. Dr. J. C. Thorowgood, M.D., F.R.C.P., read notes of cases illustrating the treatment of phthisis. In the first series of cases it was shown how patients with a cavity in one lung only might recover and live for years. The cavity might become lined with a fibrous membrane, and so remain in a quiescent state. At times inflammatory action might be set up by cold in the cavity wall, and after such an attack it was possible that the cavity might contract and get smaller. Thoroughly quiescent cavities were not likely to contract much, owing to the rigid character of their fibrous walls. Hæmoptysis, in the case of one who was known to have a pulmonary cavity, was a serious thing, and might proceed from an aneurismal bulging of a vessel into the wall of the cavity. Among remedial measures, much stress was laid on a dry, bracing climate. Humid and relaxing climates promoted softening and breaking-down of lung-tissue. The hypophosphite of lime Dr. Thorowgood had found a valuable medicine in checking excessive expectoration and controlling diarrhœa. In the second series of cases, illustrating the arrest of phthisis when in the first or second stage, much benefit had resulted from the use of the hypophosphite of soda, a remedy which the author began to use in 1863, and of which he had still a very high opinion. Phosphorated cod-liver oil had been used in some cases with very beneficial results.

TRANFUSION OF BLOOD AT THE LONDON HOSPITAL.

An occurrence, probably without parallel in the history of surgery, occurred at the London Hospital on Saturday last. Mr. James Adams, Surgeon to the Hospital, had decided to exarticulate the hip-joint on account of extensive and long-standing hip-joint disease. The patient, a lad about fourteen years old, was in a very low condition. A consultation of surgeons had been held, at which even those who did not urge the operation agreed that unless something could be done for the boy he would certainly not last many days. In the hope, therefore, that by removing the limb the boy might have a possible chance of recovery, Mr. Adams decided to operate. The limb, after the application of Esmarch's bandage, was removed in a marvellously short time, and the arteries secured; scarcely any blood was lost. The boy, however, got very low, and his pulse could scarcely be felt. It so happened that Dr. Roussel of Geneva, who is now on a visit to London, was present. He had been, we believe, invited to the Hospital in order to demonstrate his new transfusion apparatus. Instead of a simple demonstration, it was agreed by the surgeons present to perform a complete operation, by transfusing some blood into this patient; and Mr. Adams himself insisted on supplying his own blood for this purpose. Dr. Roussel, therefore, applied his instrument to Mr. Adams' arm, and transfused into the boy six ounces of blood, through one of the muscular branches of the anterior flap. The operation succeeded admirably, and the instrument proved itself as efficient in actual practice as it had been in theoretical demonstration. Mr. Adams then completed his operation by the application of the necessary bandages. The boy revived, and his pulse at once became firmer and fuller. We heartily congratulate Mr. Adams on the enthusiasm which he displayed towards his patient. We regret to hear, however, that it availed but little; the boy sank from exhaustion on the third day.

SMALL-POX IN LONDON.

In London, during the week ending Saturday, December 9, the deaths from small-pox, which had been 43 and 67 in the two previous weeks, were 50, of which 19 were certified as unvaccinated, and 16 as vaccinated; in the remaining 15 cases the medical certificates did not furnish any information as to vaccination. Of the 50 fatal cases, 23 occurred in the three Metropolitan Small-pox Hospitals at Homerton, Stockwell, and Hampstead, 4 in the Highgate Small-pox Hospital, and 1 each in the North-street (Poplar) and Chelsea Workhouse Infirmaries; the remaining 21, or 42 per cent. of the total cases, occurred in private dwellings. After distributing the hospital cases, it appears that 12 of the deceased small-pox patients had resided in Hackney, 7 in Lambeth, 7 in St. Pancras, and 5 in Bow and Bromley; in all (excluding one case admitted to the Highgate Hospital from Kilburn, which is situated outside Registration London), 3 belonged to the West, 22 to the North, 2 to the Central, 9 to the East, and 13 to the South groups of districts. The three Small-pox Hospitals at Homerton, Stockwell, and Hampstead contained 586 patients on Saturday last, against numbers increasing steadily from 185 to 529 in the six preceding weeks.

THE MANCHESTER ROYAL INFIRMARY.

Last week a special meeting of the trustees of the Manchester Royal Infirmary was held to consider the question of removing the building from its present site to a more open one at some distance from the city, and it was resolved by 115 votes to 104 to retain the present site. This decision should be final, but those who are anxious to remove the Infirmary do not seem disposed to accept the vote of the special meeting. The arguments, however, in favour of retaining the Infirmary in its present most central and advantageous position are very strong, and it is doubtful whether further ventilation of the subject would not have the effect of inducing a larger number of trustees to vote in favour of the present site. Of course the Infirmary should be entirely rebuilt, as the present building is inadequate in point of size, badly constructed, ill-arranged as regards wards, offices, etc., and the drainage is hopelessly bad. The cost of rebuilding will be very great, but we have no doubt that the citizens of Manchester would respond in the most liberal manner to an appeal for money to carry out this object.

HOMICIDAL INSANITY.

In the case of the convict Drant, on whose behalf some of our best alienists have interested themselves, Dr. Bucknill, who had written to the Home Secretary on his behalf, has received the following reply:—

"Whitehall, December 9, 1876.

"Sir,—I am directed by Mr. Secretary Cross to acquaint you that, having carefully considered the case of William Drant, he has felt justified, under the circumstances, in advising her Majesty to commute the convict's sentence to penal servitude for life. "I am, Sir, your obedient servant,

"J. C. Bucknill, M.D." "A. F. O. Liddell.

ITEMS FROM THE REGISTRAR-GENERAL'S LAST WEEKLY REPORT.

The annual rates of mortality per 1000 last week in twenty English towns, ranged in order from the lowest, were as follows:—Newcastle-upon-Tyne, 19; Brighton, 19; Sheffield, 21; Birmingham, 21; London, 22; Bradford, 22; Bristol, 22; Sunderland, 24; Oldham, 24; Portsmouth, 24; Nottingham, 25; Plymouth, 25; Wolverhampton, 26; Leeds, 26; Liverpool, 27; Norwich, 27; Hull, 27; Leicester, 28; Manchester, 30; and Salford (again the highest rate), 34. The annual death-rate from the seven principal zymotic diseases averaged 3·5 per 1000 in the twenty towns, and ranged from 1·1 in Sheffield, Hull, and Nottingham, to 6·7 and 8·7 in Sunderland and Salford. Measles and scarlet fever were both fatally prevalent in Portsmouth, and the death-rate from scarlet fever was excessive in Brighton, Wolverhampton, Sunderland, and Leicester. In the twenty towns 78 deaths were referred to small-pox, against 65 and 85 in the two preceding weeks; 50 occurred in London, 12 in Salford, 15 in Liverpool, 1 in Brighton, and not one in the sixteen other towns. In Queen Charlotte's Lying-in Hospital, London, a death was referred to puerperal fever; six deaths from this disease have there been recorded since the beginning of November last.

FROM ABROAD.

On the "Abortive" Treatment of Typhoid in Children.

M. Bouchut has been delivering a clinical lecture at the Children's Hospital in Paris, *àpropos* of the present outbreak of typhoid. The remarks (as reported in the *Gazette des Hôpitaux*, November 30) bear chiefly on the treatment of this malady in children. We are informed that this acute specific disease, if seized early enough, can be "strangled, its flight arrested, and its gravity diminished" by the "abortive treatment." There is nothing new in this abortive treatment; it consists in bleeding for adults and emetics for children—a distinction in practice made long before M. Bouchut by Sydenham himself. The great English physician, speaking of the manifold diseases known to him only under the common title of "continued fever," says, in his modest way—"it is *just possible* that we *may* quash the disease at its onset" by the use of emetics. We will not deny that some cases of gastro-enteritis may be arrested by such means; but if M. Bouchut asserts that by giving tartar emetic as late as the fourth day of the disease he can strangle typhoid, will he kindly tell us what proof he has to offer that it really was typhoid? French treatment is nothing without its *rationale*. We are told first that the value of tartar emetic is that it is an antipyretic. Doubtless; but we protest against the assumption that merely converting a patient's condition from pyrexia into collapse is to be regarded with unbounded satisfaction. Collapse has its dangers as well as pyrexia. In order to harmonise the abortive treatment with the modern views as to acute specific diseases, M. Bouchut says that the vomiting set up expels the "ferments" which would otherwise multiply in the stomach, etc. Does the effect of the vomiting reach to Peyer's patches? Is the poison wholly contained in the mucus which is expelled? Are we certain that even in the earliest condition the poison exists nowhere but in or rather on the alimentary tract, as M. Bouchut's therapeutics would seem to imply? M. Bouchut follows up his emetic by giving thirty grammes (nearly an ounce) of sulphate of soda or sulphate of magnesia. This, we are told, is "very efficacious against the development of monads" in the intestine. We know nothing about monads; we can only say that the treatment of early typhoid by strong saline purgatives has appeared to us "very efficacious in the development" of intractable diarrhœa. Deliver us from scientific therapeutics?

The Localisation of Functions in the Cortex Cerebri.

M. Proust has just communicated to the Académie de Médecine (*Gazette des Hôpitaux*, December 2) a case of extreme interest bearing on the doctrine of localisation of functions in the cortex cerebri. A young man, aged nineteen, on October 8 was drunk. In struggling with somebody he received a severe wound on the left side of his head from a bayonet. Blood escaped freely, and in a few moments later the man lost consciousness for about a quarter of an hour. The day following there was a second loss of consciousness equally short. Throughout the day the man felt giddy and dull, but he had no trouble in movement or in speech. He had been taken to Mazas. On the 17th, when he left prison, he was in a satisfactory condition. It was only on October 19 or 20—that is to say, eleven days after the accident—that the phenomena appeared, for which he was admitted under Dr. Proust, at Saint Antoine. First he had difficulty in finding his words, then the embarrassment of speech gradually increased, and he lost power in his right hand. According to his account he had had very little pain, no vomiting, no convulsion, and no "contracture" when he was admitted to Saint Antoine. On October 24 he had right facial paralysis limited

to the muscles supplied by the lower branches. His tongue pointed towards the paralysed side—that is, towards the right; the uvula pointed to the left. The sensibility of the pharynx and palate was intact. He had incomplete motor paralysis of the right arm, but sensation was unaltered. At times there was itching in the fingers of the right hand. The movements of the hand were very awkward. The paralysed muscles responded well to faradism. The patient showed a certain amount of hebetude, a little drowsiness, and considerable indifference to what passed around him. Nevertheless his intelligence did not appear sufficiently altered to explain the trouble which he had in stating his ideas—the difficulty with which he found his words, which he often substituted for one another. He had, in fact, a certain degree of aphasia. The lower right limb and all the left side were free. There were no ophthalmic or auditory changes. His pulse was 52, and his temperature 98·6°. On the left parietal region there was an oblique wound extending downwards and forwards about an inch and a quarter long; it was situated at the level of the parietal eminence, at a vertical height of about three inches and three-quarters above the external auditory meatus. The localisation of the paralysis on the side opposite to the wound of the scalp evidently established the existence of some compression or irritation of the surface of the brain corresponding with the parietal; and as the phenomena were not manifested until more than ten days after the accident, M. Proust thought that the compression or irritation was the result of a secondary inflammatory action set up by the depression of the skull in that region. M. Proust now called in the aid of his surgical colleague M. Terrillon, and trephining was decided upon. The operation was performed on October 27. Scarcely was it completed—the patient was not yet dressed,—when, desiring once more precisely to define the previously observed morbid phenomena, the medical men were struck with an almost instantaneous improvement. The facial paralysis was not very sensibly diminished, but the paresis of the arm was much less intense. It was the same with the aphasia. The patient could "find his words" easily, he could even count from 80 to 97 very distinctly, which he could not do before. His hebetude almost completely disappeared. The improvement continued, and, with the exception of an attack of erysipelas, which disappeared on November 9, the results of the operation were entirely satisfactory. The patient now is completely recovered. MM. Proust and Terrillon instituted a series of experiments, having for their object to determine the point of the cerebral convolutions which had been irritated. They arrived at the conclusion that the seat of the lesion ought to be the ascending parietal convolution at the level of the second frontal, and that the ascending frontal and the second and third frontal convolutions ought to be secondarily affected. This case harmonises with the results of Ferrier's experiments, and also with autopsies in a certain number of cases of superficial softening recorded by Charcot and others. On the 5th inst. a letter was read at the French Academy of Medicine from Dr. Raynaud, of the Lariboisière, bearing on M. Proust's case as above recorded. Dr. Raynaud had a patient suffering from phthisis, who, three days before death, was taken suddenly with a paralysis limited to the left upper limb, affecting almost exclusively the extensor muscles of the hand on the forearm. At the autopsy, Dr. Raynaud could only find a single lesion—viz., a very small focus of red softening developed in the right hemisphere around a meningeal tubercle. This patch, which did not exceed the dimensions of a twenty-centimes-piece, was situated on the ascending parietal convolution in the grey substance forming the floor of the fissure of Rolando, less than two inches from the upper internal edge of the hemisphere. This point, according to Ferrier's experiments on monkeys, is in relation with the movements of the forearm. Dr. Raynaud's observation was, to the best of his belief, the only one in which brachial monoplegia had existed to the exclusion of every other cerebral phenomenon, and which permitted a relationship to be established between the anatomical lesion and the functional trouble.

Independence of Ovulation and Menstruation.

M. de Sinéty read an account on December 2, at the Société de Biologie, of the autopsy on one of M. Charcot's cases of hysterical hemianæsthesia and pain in the situation of the ovary of the same side. This patient had begun to menstruate at thirteen years, and had menstruated almost regularly since that time. The right ovary was further removed from the uterus than the left. On the side of the right ovary was a small hemispherical tumour the size of the end of a finger. Histological examination showed that there was not a single Graefian follicle arrived at what is called the "ascensional period." The uterine mucous membrane was swollen and vascular; its glands were hypertrophied, and even infiltrated with globular elements. In fact, this mucous membrane presented the aspect of the uterus during menstruation. This patient had menstruated two months before her death. There were no corpora lutea or cicatrices in her ovaries. It was therefore evident that no ovule had been expelled from these ovaries for some considerable time. It was, in fact, a case of menstruation without ovulation. M. de Sinéty also referred to cases where, on the other hand, there had been ovulation without menstruation; and recorded one case of a patient who had undergone double ovariotomy, and in whom, a few months afterwards, menstruation recommenced, and recurred at regular intervals.

REVIEWS.

A Text-Book of Electricity in Medicine and Surgery, for the use of Students and Practitioners. By George Vivian Poore, M.D. Lond., M.R.C.P., etc., Assistant-Physician to University College Hospital; Senior Physician to the Royal Infirmary for Women and Children; Fellow of University College, etc. London: Smith, Elder, and Co. 1876. 8vo, pp. 291.

Dr. Vivian Poore's Text-book, which we ought to have noticed long ago, is one of really exceptional excellence, and eminently well calculated to prove, as he intended it should prove, "of practical use to students and practitioners." He has treated his subject not as an electrician, but as "a physician who has access to many therapeutic agents, and who is expected to use his judgment in the selection of a remedy for any particular case," having it as an aim to supply students and practitioners with such a knowledge of the scientific "principles which underlie the subject in hand that they may approach the treatment of a case with intelligence"; and he has thoroughly well carried out his purpose.

The first chapter of the work is on the first principles of electricity and electrical forces; the second on the best batteries for medical purposes; the third on the physiological relations of electricity; and the fourth on the methods of using it. All these chapters we commend to the earnest attention and careful study of all who desire to gain a real and practical knowledge of the therapeutic value and application of electricity. The first two chapters are perhaps of special merit and initial importance. We do not mean to suggest that they contain anything new, anything that may not be found elsewhere, as in the writings of Althaus, Tibbits, and others; but the subject-matter is of the first importance, as affording a knowledge of electrical principles, and explaining the methods of producing the three forms of electricity used in medicine—viz., Galvanism, Faradism, and Franklinism; they are written with admirable clearness, and they are not long.

The fifth chapter explains the diagnostic uses of electricity, and in the five following Dr. Poore treats of its employment and value as a stimulant, an anodyne and sedative, as a caustic, as a styptic, and as a cautery. At the very beginning of this part of his subject he wisely takes care to warn his readers against excess of zeal in the employment of electricity as a therapeutic agent; and in speaking of its use as a stimulant he advises the practitioner "to make himself thoroughly acquainted with the fact that a muscle may be completely tired out by the injudicious use of electricity," and tells him how to learn this fact in the most practical way by an experiment on himself. "Select," he says, "a small muscle (and it is well to select one not very frequently called into voluntary use for ordinary purposes)—such, for example, as the first dorsal interosseous muscle of the left hand. Faradise it, using a current of sufficient strength to cause a contraction which is too forcible to be overcome by the will, and it will be found that, after three or four minutes, the contraction becomes less and less strong as the irritability diminishes, and that the will is soon able to overcome the artificial contraction; while the same current, applied to the corresponding muscle on the opposite hand, causes a contraction against which the will

is absolutely powerless. Ultimately, the faradised muscle will refuse to respond either to mental stimulation or to faradism." The practitioner will thus have learnt, in the most telling and practical way, the lesson not to overfatigue and exhaust muscles and nerves by this agent when its employment is useful, and not to use it to drive into action muscles and nerves already exhausted, and needing repose. Through the rest of the chapter the use of electricity as a stimulant, the class of cases in which it may be usefully and hopefully employed, and the cases in which it ought not to be used, are carefully discussed, and illustrated by examples. In Chapter VI., which treats of electricity as an anodyne and sedative, Dr. Poore enters naturally very fully into the subject of the treatment of "*fatigue diseases*"—a subject which he has made peculiarly his own. He points out that the symptoms of *local fatigue*, whether acute or chronic, are referable usually to the muscles, though it has to be remembered that "muscle and motor nerve are one and indivisible." The symptoms of acute local fatigue are—*loss of power* to a greater or less extent, *tremor*, *cramp-like contraction*, and *pain*; and the symptoms and causes of *chronic local fatigue* are similar to those of acute local fatigue. He "believes that electricity will be found of more genuine service, perhaps, in *fatigue diseases* than in any other class of diseases"; and taking for special comment and illustration the hitherto very unmanageable disease, *writers' cramp* or *scriveners' palsy*, he gives five cases treated by himself by the galvanic current with marked success, "alleviation of the patient's distress following immediately on the first application."

In the last three chapters Dr. Poore treats of electricity as a caustic and a cautery, giving a description of surgical electrical instruments; and of the use of electricity in the treatment of internal aneurism. This last subject is considered at some length; and Dr. Poore gives notes of thirteen cases, collected from various sources, the results of which certainly are, as he confesses, not very encouraging. But he considers that "the operation of galvano-puncture is admissible in certain cases"; that it must be employed "for internal aneurisms only," and "for such as are not too far advanced." He agrees with Ciniselli, "that elements of low electro-motive power are to be used, and that their surface can hardly be too small"; and he gives very useful directions as to how the operation should be performed.

The author supports his teachings by frequent reference to the best writers on electro-therapeutics; and his text is freely illustrated by cases recorded by such scientific workers as the late Dr. Anstie, Drs. Buzzard, Bastian, Hilton Fagge, and Wilks, and Mr. Brudenell Carter, as well as from his own experience; the teaching value of the book being thus not a little increased. Throughout, the work is a thoroughly good one; the Index also is good—a point of no slight value; and the book is well got up.

Précis d'Opérations de Chirurgie. Par le Dr. I. Chauvel, Paris: Baillière et Fils. 1877. Pp. 692.

Compendium of Operative Surgery. By Dr. I. Chauvel.

The classes of operative surgery, as conducted at the Paris Military School (le Val-de-Grâce), are too well known to require here any but the merest mention. The fact that our author is professor of this subject at the School is ample proof of his ability, not only as an operator, but also as a teacher.

The book before us will, however, add greatly to his reputation. It is a well-written and well-considered exposition of the subject as taught to-day. It is very largely illustrated with some excellent woodcuts; those which are given in the chapters on amputations are outline drawings of the limbs, together with a dotted outline of the bone; the various lines of incision for the different operations are much stouter, so that they are at once appreciated, and their relation to the soft parts and to the bone easily made out. This is especially useful in operations about the hands and feet. The author states that the book is written for the amphitheatre, as a guide for surgical operations, and that it does not contain either the clinical indications for operation or the practical value of the various methods given. He has divided the work into two chief parts: general operations—amputations, ligature of arteries, resections of bones and nerves, tenotomy; and special operations—on the eye, congenital malformation of mouth and lips, operations on the urethra, œsophagus, stomach, intestine, and plastic operations.

The description of the various procedures is very clear and concise; each subject is preceded by a few general remarks; thus ligature of arteries is preceded by a short description of the methods of ligature, the material used, the instruments required, and the method of tying the knots. He divides this, as all other operations, into stages, thus—"Method of operation: The operation consists of three stages—(*a*) Exposure of artery, (*b*) isolation of artery, (*c*) ligature." Each of these points is described in detail. He then passes on to the subject proper. First of all he gives the normal anatomy of the artery to be ligatured, then the more usual deviations from the normal, with the name of the authorities from whom he quotes. He describes the position of the patient and of the operator, and details each step of the operation very accurately; there is also a drawing showing the position of the incisions. This part of the work is very carefully done; it is ample without being tedious, and sufficiently explicit to enable the student to do his operations anatomically without the aid of any work on general anatomy. In this point it differs from many of our own books, which seem to aim at brevity as a *sine quâ non*.

The chapters on amputation are equally thorough and exhaustive, and, with the aid of the excellent woodcuts, will be readily understood, even by English readers who do not understand French. We are bound to say that a very large share of the operations is attributed to surgeons of the French school; some of which, if every man had his own, we really think, ought to go by English or German names.

In the chapter on staphyloraphy, there is one English name which is conspicuous, chiefly by its absence. Mr. Thomas Smith's name certainly is just mentioned, but that is all. It is mentioned in connexion with his "mouth-gag." The author even gives a very short description of it; but nothing whatever is said concerning Smith's improvements on the older methods of sewing up the soft parts, nor of his excellent needle-holder, nor of his many little instruments which ought to be in the hands of every surgeon who practises this operation at all extensively. These are omissions which can be rectified in future editions. Neither is Sir William Fergusson's new operation at all mentioned. This, too, is a very serious omission.

It is not our wish to find too much fault with a book which, as a whole, we consider unequalled at its price. But there is, at all events, one operation which, as here described, ought to be expunged from future editions—the operation for empyema. We will transcribe it:—"Opening the pleural cavity with a bistoury is adapted for cases of purulent effusion. Although authors have indicated the seventh or eighth intercostal spaces as the seat of incision, we think it preferable not to descend below the sixth space. However, it is easy to avoid the viscera by dividing the tissues layer by layer, and we may even operate in one of the lower intercostal spaces." "The patient is seated, or lying on the sound side, if this position can be borne. The operator, stretching the integuments with the left hand, divides the skin transversely to the extent of five or six centimetres, at the mid-point of the sixth intercostal space, and equidistant from the two ribs. He cuts successively, layer by layer, the muscular plains in the whole extent of the wound. The pleura laid bare, he pushes his finger into the wound in order to make sure of the presence of a collection of fluid (*sic*), then slowly divides the serous membrane, and, if necessary, the false membranes which line it. The pus let out, the wound is kept open by a drainage-tube." Fancy cutting down on to a man's pleura in order to make sure of the presence of fluid in his chest! and especially in cases where such operations as this would be indicated—viz., large effusions occupying the entire or the greater part at least of the chest-cavity.

Fortunately for humanity, the operation for empyema is generally taught and learnt at the bedside, and those who have practised it the oftenest are best in a position to know that there is no fixed point at which to puncture or incise the chest-cavity. In loculated empyemata the aspirator must be put in at the spot which corresponds with the maximum dulness and resistance, wherever that may happen to be; and in large effusions, let the permanent opening correspond with the lowest point of the cavity, so that the fluid may quickly and thoroughly drain away.

We are much pleased with the book, in spite of these one or two shortcomings, and confidently recommend it as a reliable guide for the performance of operations on the dead subject. It is published by a well-known Paris firm, and it is turned out in a manner which does them great credit.

GENERAL CORRESPONDENCE.

THE TRANSFUSION OF BLOOD.

LETTER FROM DR. ROUSSEL.

[To the Editor of the Medical Times and Gazette.]

SIR,—My transfusion apparatus is made on a new principle, and has now been tested by a long experience. It can easily be imitated, but its perfect construction and the absolute purity of the material of which it is made are conditions which are essential to the preservation of the life of the blood which is to be transfused.

After having devoted upwards of fourteen years to the perfecting of my instrument, I naturally resent any attempts to impose a worthless imitation on the public under cover of my name. I am sorry to say that many such attempts have been made, and I already know of more than one such instrument (imitation) in London.

It is for the purpose of cautioning surgeons against this *contrefaçon* that I address these lines to you. I wish it to be understood that none of my instruments can yet be obtained in England; and in order to prevent the sale of *any* spurious instruments, I have decided to have the apparatus addressed to me from the manufactory in Russia, in order to verify their accurate construction, and then to stamp them as mine. Any surgeon who may wish to procure one can do so at the price of five guineas by applying to me direct. I am, &c.,

23, Gloucester-place, Hyde-park. DR. ROUSSEL.

CASE OF SECOND ATTACK OF SMALL-POX.

[To the Editor of the Medical Times and Gazette.]

SIR,—I was allowed to inspect the case-book of the late Mr. Charles Mayo, in order to compile the obituary notice which you published on December 2. Amongst a series of papers I find the following written on the blank sheet of a letter bearing the post-mark 1818. I believe the case was written soon after that time. It may be of some service to publish it, now that people are disputing the protective power of vaccination, and wish to leave us to the tender mercies of small-pox.

I am, &c., THE WRITER OF THE OBITUARY.

"Sarah D. caught the natural small-pox at the age of five months, and had a plentiful eruption of pustules, with a considerable degree of fever. Everything, however, terminated favourably; a few marks or pits being the only vestiges of her having suffered from this loathsome malady. In April last, at the age of three years and four months, she was again attacked with small-pox. The eruptive fever was very high, and from the general redness of the skin was at first considered to be measles. Pustules at length appeared, very full, and in some parts confluent. The child died during the secondary fever which accompanied the scabbing and desquamation of the pustules. The mother supposes she caught it the first time in consequence of her taking the child to a sale, where some children had been with the small-pox; and the last time, in the month of February last, she refers it to children and others who came to her shop with the small-pox on them, or from houses where the disease existed, and who were in the habit of playing with or otherwise handling the child. The case was under the care of Mr. Lyford, surgeon, of this city, who remembers perfectly the circumstances of both attacks, and has allowed me to give this description. I saw the child in the late disease a few days before her death."

THE NEW GERMAN TARIFF.—The German Minister of Education, Herr Falk, has announced that the new Bill for the Regulation of Medical Fees will not be brought forward until all parties interested in it, and especially the medical men themselves, have had a full opportunity of expressing their opinion on the subject. The *Berliner Klin. Wochenschrift*, November 20, in a leading article, sums up its own views in this pithy sentence:—"Let us be unanimous in demanding the total abolition of a Government tariff (*taxe*)." We agree with our contemporary that such restrictions as are entailed by a Government tariff of medical fees are inconsistent with the liberty of citizens in a country which is professedly free like Germany, and are more fit for cabmen than for the members of a noble, dignified, and unselfish profession.

REPORTS OF SOCIETIES.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

WEDNESDAY, NOVEMBER 22.

Mr. CARTWRIGHT, F.R.C.S., President, in the Chair.

MR. H. HAYWARD, M.R.C.S., L.D.S., Mr. Isidor Lyons, M.R.C.S., L.R.C.P., L.D.S., Mr. A. Morley, M.R.C.S., Mr. G. Moore, F.R.C.S. (Dublin), and Dr. W. C. Grigg, were admitted Fellows of the Association.

The PRESIDENT then read a paper on "Teething and its Complications." He commenced by pointing out how great was the importance of the subject he had chosen to those practising any branch of medicine, alluding to the extensive sympathetic connexions of the nerves supplying the teeth, and their intimate relation to the system generally. He then spoke of the effect that the "habits of the age" exercise on healthy dentition, mothers being careless of their responsibilities not only after but before the birth of their offspring. He next considered the difficulties of the first dentition, and the many constitutional affections synchronous with that period—cerebral, cerebro-spinal, cutaneous, and other diseases, treating them in their two relations of dependence on and independence of eruptive complications. After giving the results of his experience in hospital and private practice, he remarked that he did not believe in the somewhat indiscriminate crusade against lancing of modern times, and quoted many instances of its proved efficacy when resorted to on rational principles. Finally, he considered the subject of the second dentition, pointing out how nearly every organ of the body might be more or less affected sympathetically by dental lesion; concluding a paper of much interest with several illustrative cases and a *résumé* of those points which he considered to be especially worthy of discussion.

Mr. T. EDGELOW said that Mr. Cartwright had alluded to the subject of lancing, and he was pleased that he did not condemn the practice. He alluded to several sympathetic disorders connected with dentition, and proved that many of these might be relieved by the judicious use of the lancet.

Mr. GAINE, Bath, mentioned a case in which he was interested, and said that in his experience lancing was often resorted to very indiscriminately. He was much opposed to the practice when the operation was performed only on expectant principles.

Mr. NAPIER pointed out the multifarious nature of the complications which are apt to owe their origin to abnormal development of the teeth. Amongst others, he was inclined to attribute a large proportion of cases of infantile convulsions to too rapid or retarded development of the teeth. Half a century ago infantile convulsions were ascribed almost unconditionally to teething; now some were inclined to almost entirely ignore its influence on the brain; but the relief that is sometimes afforded by the lancet, when applied at the right time and with judgment, is sufficient proof that there are cases in which the child is suffering from a mere mechanical obstruction which is thus easily removed. He then reviewed some evils more immediately connected with imperfect dentition, remarking that in strumous cases they are sometimes of a formidable nature. The subject of dentition, he said, was one opening a wide field of interest to the physiologist, not the less so that our present knowledge of the nature, formation, and relative influence upon the human frame of these dense structures is imperfect. He called attention to the fact that these dense structures must have a more delicate and complex organisation than those whose constituent parts are less compact, and were therefore more liable to get out of order.

Dr. LITTLE regarded the evils of dentition as the product of unfavourable influences in operation either before or at birth, or about the teething period; he remarked that infants born with an excess of vitality, from want of breast-milk, pure air, etc., become the subjects of "difficult dentition," rickets, infantile paralysis, bowel and brain diseases. He thought that the accumulated hindrances to development occurring during the early months of life produce effects during dentition which are often attributed to it instead of to disorder of more important organs, consequent upon errors of management or hereditary influence, though he quite agreed with the speaker who preceded him that difficult dentition

reacted mischievously upon the hypersensitive nervous structures of the infant. He thought that the benefits which followed lancing of the gum were due to the relief of pain and tension, and to its counter-irritant effect; and he asked for information from the Society as to the nature of the force which propels the tooth from the jaw through the gum, he regarding it as the result of progressive addition of material to the body and the fang.

Mr. Cattlin agreed with Dr. Little that errors in diet and constitutional weakness might and did add to the danger of the many disorders occurring synchronously with teething, but he had no doubt that convulsions and other serious nervous lesions often arise solely from irritation connected with teething, though the fact that infants in country districts suffer far less than those living in large towns proves that the weakly and scrofulous are more predisposed to danger at that period. The use of the lancet ought to depend upon a correct diagnosis, and should never be resorted to empirically. He quoted several cases proving its efficacy, and notably one of a child who always suffered from croupal cough when a tooth was about to be erupted, which incision of the gum invariably relieved.

Mr. Hamilton Cartwright said that instances of sympathetic lesion connected with the teeth were innumerable, and he had only recently seen a case where the extraction of a tooth had relieved supposed amaurosis, and he now had under his care a lady who invariably referred pain to certain teeth on the recurrence of each menstrual period. The occurrence of otalgia and otorrhœa during the eruptive stage of dentition was particularly interesting. Mere pain was explicable by the connexion of the fifth with the auriculo-temporal and Vidian nerves; but the occurrence of suppuration was still more important, probably having its origin in long-continued irritation of Jacobson's plexus, which, supplying the tympanic structures, is in connexion with the otic and Meckel's ganglia, as also with the facial nerve and the carotid branch of the sympathetic—facts which should never be forgotten in obscure neuralgic cases. He then alluded to the frequent occurrence of skin diseases during dentition, and mentioned a case of neuralgia connected with the fifth nerve, which was always preceded by a rash. Pointing incidentally to the known association of shingles with neuralgia, he suggested that, in considering the pathology of cutaneous diseases occurring at this period, the development of the teeth from *dermal* structures as well as their nervous connexions should be remembered, there probably being a mere then chance connexion between the skin, nerves, and teeth in such cases.

Dr. Little, in relation to cutaneous disorders connected with dentition, said that he could not forbear mentioning a case in which a lady was attacked by a severe impetiginous eruption whilst cutting her wisdom teeth; this covering her head, ears, and face. Her mother said that she suffered from crusta lactea when cutting her first teeth—a remarkable confirmation of the views advanced.

Dr. R. Lee was inclined to ascribe most of the constitutional derangements occurring during dentition to a primary constitutional cause—as, for instance, the various forms of cutaneous eruption, diarrhœa, and such like,—though he had no doubt that some of the remarkable disturbances in the nervous system of the young child were to be ascribed to the local irritation of teething. Still, even then it must be allowed that a constitutional condition might favour such irritation—indeed, he thought that the cerebral excitement incidental to that period seemed to belong to the same class of temporary nervous disturbance as that produced by worms, the development of which is also primarily favoured by constitutional conditions. Nevertheless, the symptoms must, in a practical point of view, be ascribed to them, the same view seeming to him to hold good with regard to the teeth.

Mr. Risdon said that, having been formerly a practitioner of medicine, and now a specialist connected with a children's hospital, he thought that the importance of the eruptive period in the child could not be overrated; and although he would not say that all ills connected with that epoch were owing to dentition, he thought that very many were.

Dr. West said that he was much pleased at finding himself amongst a body of gentlemen practising a speciality, who, holding the degrees of physicians and surgeons, were determined to keep up their connexion with, if he might so express it, the parent. He felt certain that no branch of special surgery would thrive unless it maintained the closest bonds with the general science of medicine and surgery, and that whatever opposition those constituting the Society might encounter, they were adopting the right and only means of obtaining a proper status for their branch of the profession. He then alluded to the subject discussed that evening, and said that it alone would show how closely dental surgery, practised by those qualified to practise it rationally, was allied to general medicine, and how necessary it was that the practitioner should distinguish between those diseases which were dependent upon, and those which were distinct from, dental irritation. He mentioned the great predominance of the spinal over the cerebral system in early infancy, and showed how any eccentric source of irritation was thus liable to be the origin of serious mischief. He himself believed that to dentition directly might be ascribed many diseases, especially those connected with the nervous centres. Lancing had been mentioned as a method of treatment, and he thought that no one who had seen its results could doubt its great efficacy. He concluded by calling attention to the many interesting questions that Mr. Cartwright's suggestive paper had called forth.

The President then briefly replied, the hour being so late that Mr. Edgelow's paper was obliged to be postponed to another meeting.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 28.

Sir James Paget, Bart., D.C.L., LL.D., F.R.S., President, in the Chair.

Complete Absence of both Upper Limbs, and Faulty Development of Right Lower Limb.

Mr. J. W. Hulke read a paper, of which the following is an abstract. Mary B., four years and a half old, is, excepting the deformity above described, a well-grown, healthy, pretty, and intelligent blonde, the youngest of four children, none of whom, save herself, have any bodily peculiarity; her father and mother are both well formed and healthy. The clavicles and scapulæ appear well formed, and the muscles attached to them act vigorously. There is no external mark except a minute congenital scar, and a little dimple below the outer end of the right collar-bone. When placed upright on her left foot, the right foot does not reach the ground by several inches, but the thigh is plump, and the leg well shaped, though smaller than the left; the foot has slight talipes equino-varus, the femur is short and misshapen, but its mobility upon the pelvis is great in abduction and circumduction; the knee-joint is loosely knit, the axis of the tibia rotating upon the lower end of the femur, both in its flexion and extension. The left lower limb is perfect, and dexterously performs offices usually devolving on the hands. The child readily grasps and holds even small objects with the foot, can pick up a comb, arrange her hair, feed herself with a spoon, and even use a needle with it. The author thought that—passing by the vexed question of the influence of maternal emotion—the case supported the theory of absence, arrest, or misdirection of development rather than amputation of already formed limbs by constriction; the small scars and appendages which are often present being the only evidence in favour of the latter hypothesis. The total absence of scar in this case from the child's left shoulder excludes absolutely the notion of amputation, and the scar and dimple on the right shoulder imply that there a limb-bud had begun to grow out, but was blighted in the inception; the defects in the right lower limb signifying a still later disturbance of development. The equino-varus may be regarded as an exaggerated continuance of the normal condition of the foot at birth, which has the sole turned slightly inwards.

Mr. Lowne said he had dissected a good many such limbs at the College of Surgeons, and considered the abnormality as due to certain changes in the ovum. He ridiculed the notion of maternal impression.

Mr. Wood considered such abnormalities were due to pathological changes in the ovum, just as were the want of brain, etc. Mr. Frank Buckland, in the course of his experiments on the hatching of fishes, proved that, even experimentally, almost any kind of monstrosity could be produced. He thought ectopia vesicæ and epispadias were due to like causes. But he was not prepared to say that this was the true causation of Mr. Hulke's specimen. As to amputation by the umbilical cord, he did not believe in it.

Mr. Morris referred to certain cases where one bone would be present and its neighbour absent, as when the radius was present and the ulna absent. Again, when certain portions of a bone were absent, which sometimes happened with the clavicle. He inquired what was the condition of the muscles forming the axilla, as the pectorales, etc.

Mr. D. Napier mentioned a case where the arm was absent, but the hand existed attached to the shoulder, and where the fingers could be moved.

Mr. Wood said that in such a case the bones might not be developed, but the muscles might.

Mr. T. Smith could scarcely conceive of the possibility of an umbilical cord causing amputation of a limb; for any severe degree of compression would stop the circulation in it. He had, however, seen marks of compression on the limbs of infants, probably due to cords of lymph; so, also, he had seen a foot apparently stuck on to a pelvis. He narrated a case where cleft palate seemed in some measure due to a maternal impression.

The President thought it quite impossible to pass on one side altogether amputations in utero. Such had been carefully narrated by Sir James Simpson. Some instances of deformity were very hard to be accounted for on the theory of arrest of development. He had dissected limbs from new-born infants where the parts were exactly similar to those in limbs amputated in the ordinary manner.

Mr. Howard Marsh said he had seen a case where there was a deep indentation in one limb above the ankle, another higher up on the other limb, and another on the arm.

Mr. Hulke certainly did not mean to imply that all such cases arose from arrested development, though this case seemed to be so. Apparently both the pectorales and latissimi dorsi were present in the case recorded.

On the Use of Flexible Tracheotomy-Tubes.

Mr. W. Morrant Baker, in a paper on this subject, said that the evils which so frequently result from the use of silver or other rigid tracheotomy-tubes are well known. Pain and difficulty in their introduction and withdrawal, and more or less bleeding, are common; while ulceration of the trachea from pressure is frequently found after death, and in many instances has been the cause of the fatal result. Cases in illustration of these facts were quoted from various authors, and the endeavours which had been made to remedy the evil by altering the construction of the tubes were referred to. The author then described a tracheotomy-tube which was made, at his suggestion, by Mr. Millikin, under the superintendence of Mr. Paley, House-Surgeon to the Evelina Hospital for Sick Children, and which he believed would be found to possess all the advantages of the silver tube, without its disadvantages. It is constructed of vulcanised red indiarubber, and in shape and size resembles the ordinary tubes. Only one tube was used at a time, as it had been found quite easy of introduction and withdrawal—more so, indeed, than the innermost of the tubes in the usual double-tube arrangement. Hitherto, the elastic tubes had been employed at periods varying from one or two days to as many weeks after the operation; and they had been used continuously, in different cases, for periods varying from a week to six months. They should not, as a rule, be introduced until about three days after operation. In no case had there been any sign of obstruction on account of the tube yielding to the pressure of the edges of the wound in the trachea. It was necessary, however, to have always at hand, for an emergency, a simple trachea-dilator, or silver tube, especially during convalescence, inasmuch as, when the tube had been left out for a few hours, there might be temporary difficulty in replacing it, on account of contraction of the wound. The elastic tubes had been found very durable, and while in use became less clogged with mucus than silver ones. They could also be cleaned as easily as the silver ones, or more so. Cases were quoted in which the flexible tubes had been employed at various London hospitals.

Lodgment of a Tracheotomy-Tube in the Right Bronchus: Extraction.

Mr. J. W. Hulke read a paper on a case as above. The tube which had become lodged was not an old one which by chemical action or friction had broken from its shield, but a nearly new one not previously used. The patient, H. D., aged thirty-seven, was a tall, thin woman, admitted on July 29 last into Northumberland ward, Middlesex Hospital, with laryngitis. Her symptoms were so urgent, that, with Dr. Greenhow's concurrence (in whose charge the patient was), immediate tracheotomy was performed. She at once breathed freely, passed a quiet night, and for a week her relief, interrupted occasionally by cough, seemed nearly complete. On August 10, whilst the inner tube was being replaced after cleaning, the outer tube slipped through the collar and shield, and she felt it slide from the wound deeply into her chest. Several attempts were made to seize the tube with slender long forceps, and other measures were adopted, but unsuccessfully. Direct interference was for a time deferred. Trousseau's largest tube was inserted (which was more comfortable, she said, than Durham's), and she breathed tranquilly, but felt pain at the right of the lower part of the sternum. Her cough grew more troublesome during the next few days, with pain in the left side; and by August 13, her temperature being 103° and her pulse 120, the tube was evidently provoking inflammation. Its immediate removal seemed the only prospect of rescuing her. Chloroform was given; Trousseau's tube withdrawn, and a long piece of German silver wire (one end of which was bent into a blunt hook about one-eighth of an inch long, and the wire again bent at about one inch and a half above this at an angle, roughly estimated as that which the right bronchus and trachea include), was passed through the wound down the trachea. The other end of the wire was bent in a large loop, the plane of which coincided with that of the tracheal end of the wire beyond the angle, and thus allowed it to be guided into the right bronchus. The tube was distinctly felt, and on the hook being slid onwards to the known length of the tube it was slowly withdrawn, and, from the resistance, it was found that the tube was hooked, and was moving upwards. When near the tracheal wound the hook became disengaged, but the tube was here easily seized with a forceps, and taken out, and Trousseau's tube reinserted. The patient's temperature soon fell to 99, and her pulse to 96. On the 14th she felt, she said, very well; her cough was less troublesome, she breathed with ease, and had lost all pain and tightness in the chest. All threatening symptoms gradually disappeared, and on September 15 she was discharged convalescent. She continued to use the tube till October 26, when she returned to the hospital for a couple of days; the tube was taken out, and in forty-eight hours the wound had contracted so as scarcely to admit a small probe. She has continued free from tracheal embarrassment. Some critical remarks followed as to the cause of the screw in Durham's tube becoming loosened, and on the defect of the outer tube in having no flange to prevent it slipping through the collar, and being drawn into the trachea. Other defects of Durham's tube noticed were the jointed composite structure of its inner cylinder necessitating a great thickness of metal, and reducing thus its efficient lumen, and allowing it to be more easily clogged by the mucus lodging on the ridge of its joints. Reference was then made to the necessity of forceps for extracting foreign bodies from the air-passages being light enough to serve as a sound, and flexible enough to be bent in any desired curve. Such forceps are figured by Gross in his treatise on Foreign Bodies in the Air-Passages, published in 1854, but appear to be unknown to London instrument makers. The benefits of the German silver wire used were, its flexibility combined with sufficient stiffness, and its angulated sectional figure which made it superior to cylindrical wires previously tried. The author finished with some remarks on the circumstances which enabled him to conclude that the tube had lodged in the right bronchus, and with a description of a plan of operation mentioned in a German treatise on Tracheotomy, by which the bleeding, usually of an embarrassing amount, was rendered comparatively insignificant.

Mr. Durham said the sample of his tube exhibited was not a very good one. He then explained at length the principles of his tube. He thought Mr. Baker's tubes very good.

Mr. Howard Marsh thought the improvements in Mr. Baker's tubes very considerable, as ordinary tubes often did much harm. Mr. Baker's tubes had been used in four cases at the Children's Hospital, and had given satisfaction. They were inserted, not immediately after the operation, but as soon as possible thereafter. Nurses can easily manage their introduction. He did not think Durham's tubes good; they were costly, and apt to get out of order. They also projected awkwardly from the neck.

Mr. Howse had seen a case where the end of the tube ate its way into the innominate, and the child bled to death. This impressed him deeply with the risks of the tube, to obviate which he thought Durham's tube useful. Accidents might arise from their bad manufacture.

Mr. NAPIER said that no sulphur was used in the manufacture of red indiarubber tubing, antimony taking its place. It was infinitely preferable to the other kind.

After a few words of reply from Mr. Morrant Baker and Mr. Hulke, the meeting dispersed.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following candidates recently passed the B.S. Examination for Honours:—

First Class.—Pepper, Augustus Joseph (Scholarship and Gold Medal), University College; Duncan, Andrew, M.D. (Gold Medal), King's College.

Second Class.—Ottley, Walter, University College.

UNIVERSITY OF DUBLIN. — SCHOOL OF PHYSIC IN IRELAND.—MICHAELMAS TERM, 1876.—At the examinations for the degree of Bachelor of Medicine, held on Monday and Tuesday, November 27 and 28, the successful candidates passed in the following order of merit:—

Story, John B.
Pim, William J.
Nelis, J. Alexander.
Blyth, Howard.
McCartie, Frederick F.
Browne, John St. George A. G.
Malone, Jonathan H.
Fraser, William J.
Connolly, William R.
Thompson, James E.
Houghton, John F.
Flood, John W.
McDermott, Ralph.
Lynch, Gilbert.
Duckworth, Richard H. D'Olier.

At the examinations for the Degree of Bachelor in Surgery, held on Monday and Tuesday, December 4 and 5, the following were the successful candidates:—

Story, John B.
Pim, William J.
Fitzgerald, Dudley L.
Marshall, Joseph.
Nelis, James A.
Power, Edward R.

At the examination for the Diploma in State Medicine, held on Thursday, December 7, and subsequent days, this candidate was successful:—

Fenton, Mark Antony, M.D.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College having undergone the necessary examinations for the Fellowship, at the half-yearly meetings of the Court of Examiners terminating on the 25th ult., were reported to have acquitted themselves to the satisfaction of the Court, and at a meeting of the Council on the 14th inst. were admitted Fellows of the College, viz.:—

Appleyard, John, M.B. and L.R.C.P. Lond., Bradford, Yorkshire, diploma of Membership dated July 24, 1872, student of University College.
Davies, Francis Joseph, Newport, Mon., April, 1876, of University College.
Deakin, Charles Washington Shirley, L.S.A., H.M. Bengal Army, May 14, 1872, of University College.
Fisher, Frederic Richard, L.S.A., Grosvenor-street, April 26, 1867, of St. George's Hospital.
Jackson, George, L.R.C.P. Lond. and L.S.A., St. George's-terrace, Plymouth, November 15, 1864, of University College.
Macready, Jonathan Foster Christian Horace, Cheltenham, July 28, 1874, of St. Bartholomew's Hospital.
Odell, William, L.S.A., Hertford, November 13, 1872, of St. Bartholomew's Hospital.
Tyson, William Joseph, L.R.C.P. Lond., Folkestone, April 23, 1874, of Guy's Hospital.
Verdon, Henry Walter, L.S.A., Eccles, Manchester, July 23, 1873, of St. Thomas's Hospital.
Whittle, Edward George, M.B. Lond., New Steyne, Brighton, November 19, 1873, of University College.

Another candidate from University College, who passed this examination, will be admitted a Fellow of the College when qualified in Medicine; and four candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months.

At the same meeting of the Council, Mr. James Reid, L.S.A., Surgeon to the Kent and Canterbury Hospital, who was elected a Fellow of the College at a previous meeting, was admitted as such, his diploma of membership bearing date August 4, 1843. The following gentlemen were elected members of the Board of Examiners in Anatomy and Physiology in the vacancies occasioned by the retirement of Messrs. Luther Holden and J. Cooper Forster—viz., Mr. Arthur E. Durham, Surgeon and Lecturer on Surgery at Guy's Hospital; and Mr. T. Pickering Pick, Assistant-Surgeon and Lecturer on Anatomy at St. George's Hospital. The retiring members of the Board were re-elected.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice on Medicine, and received certificates to practise, on Thursday, December 7:—

Brumwell, Ernest, Kendal, Westmoreland.
Parry, George Halca, Dacking, Norfolk.

The following gentlemen also on the same day passed their primary professional examinations:—

Good, Wm. Ernest, University College.
Hepburn, Alfred, St. Bartholmew's Hospital.
Macgeagh, Thos. Edwin F., University College.
Satchell, Wm. Morris, St. George's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BENNETT, WILLIAM H.—Surgical Registrar and Administrator of Anæsthetics, St. George's Hospital.

CARTER, ALFRED H., M.D., M.R.C.P. Lond.—Physician to the Queen's Hospital, Birmingham, *vice* Dr. Mackey, resigned.

GRAINGER, FARINGTON M., M.R.C.S. Eng., L.S.A.—House-Surgeon to the Chester General Infirmary, *vice* Dr. Chambers, resigned.

LEESON, J. RUDD, M.B., M.R.C.S. Eng.—House-Physician to St. Thomas's Hospital.

HART, NEVILLE, M.B.—House-Physician to St. Bartholomew's Hospital.

JAQUET, JOHN LEWIS, M.R.C.S. Eng. and L.S.A. Lond.—House-Surgeon to the Westminster Hospital, *vice* George Frederick Poynder, L.R.C.P. Lond., M.R.C.S. Eng., whose appointment has expired.

QUICKE, WILLIAM JENKINS, L.S.A. Lond.—Resident Obstetric Assistant to the Westminster Hospital, *vice* John Lewis Jaquet, whose appointment has expired.

BIRTHS.

BOOKLESS.—On December 4, at 12, Mansel-villas, Wimbledon, the wife of James Pitcairn Bookless, M.D., of a daughter.

CHEADLE.—On December 9, at 2, Hyde-park-place, Cumberland-gate, the wife of W. B. Cheadle, M.D., of a son.

FENWICK.—On December 6, at Chilton Hall, Terry Hill, Durham, the wife of J. C. J. Fenwick, M.D., of a daughter.

GRAHAM.—On December 6, at Holmwood, Weybridge, the wife of Arthur Robert Graham, M.A. and M.C. Cantab., M.B.

MACNAMARA.—On December 5, at 13, Grosvenor-street, the wife of Charles Macnamara, F.R.C.S., of a daughter.

PRINGLE.—On November 6, at Meerut, North-West Provinces, India, the wife of R. Pringle, M.D., Surgeon-Major H.M.'s Bengal Army, of a daughter.

MARRIAGES.

ALDRIDGE—COOPER.—On December 5, at Whitcombe Church, Dorchester, John Petty Aldridge, M.D., J.P., of Shirley House, Dorchester, to Selina, widow of the late A. L. Cooper, Esq., of Whitcombe House.

ANDERSON—MURRELL.—On October 25, at St. Andrews Cathedral, Singapore, A. F. Anderson, M.D., Colonial Surgeon, Singapore, to Selina Louisa, daughter of the late James Murrell, Esq., of Norfolk.

DEATHS.

CARROLL, JOHN W., late Lieutenant 66th Regiment, youngest son of William Carroll, M.D., of Waterford, at 37, Lady-lane, Waterford, Ireland, on December 3.

PLUMBE, SAMUEL ALDERSON, M.D., eldest son of the late Samuel Plumbe, M.R.C.S., of Southampton-street, Bloomsbury, at Maidenhead, Berks, on December 6, aged 52.

ROBINSON, MARK ANTHONY, M.R.C.S. Eng., at Ditchling, Sussex, on November 29, aged 61.

WADE, JOHN BIRCH, M.R.C.S., at Irwell-place, Lower Broughton, Manchester, on December 7, aged 44.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOURNEMOUTH GENERAL DISPENSARY AND COTTAGE HOSPITAL.—Resident Surgeon. Candidates must be registered, unmarried, and possess a qualification in medicine and surgery. Testimonials, diplomas, etc., to the President of the Bournemouth Dispensary, care of A. A. Johnston, Esq., Hon. Sec., on or before December 31.

FLINTSHIRE DISPENSARY.—House-Surgeon or Dispenser. Applications and testimonials to the Hon. Secretary, on or before December 19. Candidates must be conversant with the Welsh language.

PARISH OF LISMORE AND APPIN.—Medical Officer. Testimonials and private references to be lodged with Dr. Laurie, Chairman of Parochial Board, Drumniel, Appin, Argyleshire, on or before December 20.

WESTBOURNE PROVIDENT DISPENSARY AND MATERNITY, 29, WESTBOURNE-PARK-CRESCENT, HARROW-ROAD.—Surgeon. Candidates must send in their applications, with testimonials, to the Hon Sec., at the Dispensary, on or before December 18.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY AND FEVER HOSPITAL.—Resident House-Surgeon and Dispenser. Candidates must be duly qualified and registered. Applications to the Hon. Sec., at the Infirmary, Whitehaven, on or before December 19.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bosmere and Claydon Union.—Mr. Hammond has resigned the Claydon District; area 8589; population 2555; salary £42 per annum.

Bradford (Yorkshire) Union.—The North-East District is vacant; salary £80 per annum.

East Retford Union.—Mr. Daniel Rossiter has resigned the Leverton District; area 17,046; population 2768; salary £30 per annum.

Rothbury Union.—The Rothbury Eastern District is vacant; area 27,279; population 2015; salary £27 per annum.

APPOINTMENTS.

Ashbourne Union.—John H. Maclean, L.R.C.P. Edin., L.R.C.S. Edin., to the Longford District.

Cosford Union.—Fredk. Thos. Barkway, M.R.C.S. Eng., L.S.A., to the Lavenham District.

Machynlleth Union.—John E. H. Pughe, M.R.C.S. Eng., L.A.H. Dub., to the Llanwrin District.

Tisbury Union.—Wm. Bey, M.B. and C.M. Aber., to the Donhead District.

PROFESSOR VALENTIN'S JUBILEE.—Professor Valentin, of Berne, the discoverer of ganglion cells and ciliated epithelium, celebrated the fortieth anniversary of his academical career on November 6, and was presented by the Medical Faculty with a congratulatory address and a bronze statue of himself. The Philosophical Faculty also gave him a doctor's degree *honoris causâ*.

DEATH UNDER CHLOROFORM.—We hear that a death under chloroform took place in Charing-cross Hospital yesterday week. The deceased was about to be placed under the influence of the anæsthetic to facilitate the application of the taxis for the reduction of a hernia. Very little chloroform had been given, when suddenly alarming symptoms showed themselves; and although the chloroform was stopped at once and restoratives were applied, death took place immediately.

THE STUDY OF CHEMISTRY AT OXFORD.—It appears from a statement just published, that the average number of students working in the Chemical Laboratory, Oxford, was 20 in 1871, 29, 30, 39, and 46 in the four succeeding years, and has now reached 50. During the last three years under-graduates have been frequently refused admission to the laboratories for want of room. This state of things having been represented to the authorities by the professor, an extension of the premises is under consideration.

PLUMSTEAD-COMMON.—Vice-Chancellor Hall gave his judgment on Monday, in the action brought by the Provost and Scholars of Queen's College, Oxford, against the Enclosure Commissioners. It will be remembered that the Metropolitan Board of Works suggested to the Commissioners the preparation of a scheme for the protection of Bostall-heath, a part of Plumstead-common, for the enjoyment of the public. The plaintiffs, or lords of the manor of Plumstead, disapproved the scheme, because it did not provide any compensation to them, and did not follow the provisions of the Act, and they applied for an injunction. The Vice-Chancellor said that no scheme, though approved, could have any force till approved of by Parliament; that he could not grant an injunction to restrain the defendants from going to Parliament, but, if they did so, the defendants would have every opportunity of having their rights and interests fully protected. The action was dismissed, and with costs as against the Enclosure Commissioners.

"ADULTERATION" APPROVED.—Mr. Wigner, public analyst, in a special report to the Woolwich Local Board of Health, draws attention to some samples of gin which he had found to be 50° under proof. The analyst, in answer to inquiries from the Board as to the presence of any deleterious agent, stated that there was nothing mixed with the gin but water, and that, as ordinary "gin of commerce" was lawfully 22° under proof, the spirit in question had been mixed with only one-third water. All the samples appeared to have been bought in bottles from wine merchants or grocers, one sample of which was marked "half-proof"; the analyst, therefore, thought a prosecution would not be successful. A member of the Board observed that he deemed it as an act of philanthropy to make gin as weak as possible, and that he would rather prosecute people who sold it too strong. Ultimately it was unanimously decided not to prosecute. Whatever may be said in favour of the motives which actuated the Board in arriving at this decision, it is scarcely capable of being deemed impartial as concerning general cases of adulteration.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Boston Correspondent.—The matter to which you refer, and the correspondence which you enclose, shall receive our most careful consideration.

Mr. Lawrence.—Professor Marshall will bring his interesting course of lectures to a close this evening (Friday) at Burlington House.

C. H.—Mr. R. W. Keate, who was sometime Governor-in-Chief of the West African Settlements, was a son of the Senior Surgeon of St. George's Hospital, who was President of the Royal College of Surgeons in 1830 and 1839. Mr. Charles Hawkins, a late member of the Council, was the Treasurer.

Nugæ Chirurgicæ.—Perhaps some of our readers may be able to assist one who wishes to know something of the "*Clan Hawkins.*" Sir Cæsar Hawkins, whose portrait by Hogarth may be seen in the council-room of the College of Surgeons, was, we think, the grandfather of Mr. Cæsar Hawkins, F.R.S., Sergeant-Surgeon to the Queen. Dr. Francis Hawkins, the late Registrar of the General Medical Council, is his brother; but what relationship there is between the benevolent Dr. Bissett Hawkins and Mr. Charles Hawkins, Government Inspector of Anatomical Schools, we cannot say. John Adair Hawkins lived in Great Marlborough-street, near the police-office. Robert Adair, "the favourite of princes, of women, and of fortune," married Lady Caroline Keppel, sister of the Earl of Albemarle.

Histologist, Andover.—Professor Quekett died on August 20, 1861, at Pangbourne, Berkshire.

Professor of Medical Jurisprudence.—In the *Times* of July 13, 1865, you will find an account of the notorious Dr. E. W. Pritchard.

Bulbous Roots, M.D.—See St. John i. 42. We have an inspired translation of *Cephas*—"Thou shalt be called Cephas, which is by interpretation πετρος, a stone."

Dr. Campbell.—You will find an interesting account of Sergeant-Surgeons to the Sovereign in the *Times* of October 14, 1867, reprinted partly from the *Medical Times and Gazette.*

L.R.C.P., Manchester.—Halford's "Essays and Orations" contain an account of the opening of the coffin and examination of the remains of Charles I. in the presence of the Prince Regent. Sir Henry Halford, Bart., M.D. Oxon., was elected President of the Royal College of Physicians in 1820. He was succeeded by Dr. Paris, M.D. Cantab., in 1844.

Moses, Portsmouth.—Herodotus states that the Babylonians and Chaldeans had no physicians; and in cases of sickness the patient was carried out and exposed on the highway, that any persons passing by, who had been affected in a similar manner, might give some information regarding the means that had afforded them relief.

T. T., Essex.—You will find that the thirty-seventh section of the Sanitary Act of 1866 empowers the vestries to provide hospital accommodation for infectious diseases.

Patent Medicines.—In France, and in some other countries, each ingredient used in the concoction of patent medicines, as well as the respective proportions in which the ingredients are admixed, must be exactly specified, and must be officially registered before a patent is granted for their sale. A shield of protection this, which we in England have not yet, or which the law does not accord to us.

A Nurse.—1. Yes. 2. Ass's milk more nearly resembles human milk than the milk of the cow. The latter is most commonly used because of its being most easily and cheaply obtained.

Foreign Medical Students.—The University of Zürich, which has 332 students, has comparatively a very large number of students of medicine and philosophy. There are 193 medical students, among them twenty-four women; and ninety-six students of philosophy, of whom six are women.

Data.—The commencement of our system for the registration of the cause of death was in 1838.

Dr. Williams.—Yes; at a very early age, Percy Bysshe Shelley attended a winter session, for the purpose, he said, of acquiring some slight knowledge of surgery, which might enable him to alleviate the sufferings of the poor.

M.D., Clapham.—The person named has no right, legally or by courtesy, to the *doctorate;* his qualifications are M.R.C.S. Eng. and L.S.A., the same as those held by Mr. Pope.

Mr. Gosse.—In the Irish capital it is customary for gentlemen practising as surgeons to have the prefix "*Surgeon*" on their door-plates. In this metropolis we only know of its adoption by one gentleman, a hospital surgeon, who has since discontinued it.

Inquirer.—Yes; the Irish Lunacy Laws are much more numerous than the Scotch, and a Lunacy Board was established in Ireland much earlier than in Scotland, its first annual report having appeared in 1850, and its *tenth* in 1859, when the *first* Scotch report was published.

COMMUNICATIONS have been received from—

Mr. R. J. Gooler, London; Mr. W. E. Poole, London; Dr. Bruce, London; The Registrar of the Pathological Society, London; Dr. Hughlings-Jackson, London; Dr. Julius Althaus, London; Mr. George Brown, London; Dr. Barlow, London; Mr. Jonathan Hutchinson, London; Dr. F. Ogston, Aberdeen; Dr. J. M. Sutton, Oldham; Mr. Fred. Lownds, Liverpool; Dr. Henry Lawson, London; Dr. Hitchcock, Lewisham; The Honorary Secretary of the Society of Medical Officers of Health, London; Mr. Ed. Fuller, Manchester; Dr. J. C. Cullinoworth, Manchester; Miss Chanoos L. Hunt, London; Dr. Urban Pritchard, London; Dr. Rougsel, London; Dr. Seares, Mentone; Mr. James Barr, Liverpool; Dr. J. W. Moore, Dublin; Mr. Balmanno Squire, London; Mr. A. Maclure, jun., London; Dr. Dowse, London; Mr. T. M. Stone, London; Mr. Jas. B. Austin, Bloomsbury; Dr. C. R. Francis, Sutton; Mr. Eo. B. Gray, Oxford.

BOOKS AND PAMPHLETS RECEIVED—

Bentley and Trimen, Medicinal Plants, part 15—I. Zacharie, Surgical and Practical Observations on the Diseases of the Human Foot—Statistical Report on the Health of the Navy for the Year 1875—Miss Chandos Leigh Hunt, Vaccination Brought Home to the People—Reports of the Chief Registrar of Friendly Societies for the Year ending December 31, 1875—Charles Darwin, M.A., F.R.S., The Effects of Cross- and Self-Fertilisation in the Vegetable Kingdom—Charles Elam, M.D., Winds of Doctrine; being an Examination of the Modern Theories of Automatism and Evolution—Dr. Nathan Allen, The Treatment of the Insane—Report of the Chemical Analyser to the Indian Government for the Year 1875-76—John G. M'Kendrick, M.D., F.R.S.E., Animal Physiology—W. J. Moore, L.R.C.P. Edin., M.R.C.S. Eng., etc., A Manual of Family Medicine for India—Captain Fred Burnaby, A Ride to Khiva—Edward S. Dunster, M.D., The History of Spontaneous Generation.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—The Colonies—Toronto Sanitary Journal—Dublin Journal of Medical Science—Yorick—American Supplement to the Obstetrical Journal of Great Britain and Ireland.

APPOINTMENTS FOR THE WEEK.

December 16. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

18. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. J. Astley Bloxam, "A Man (Case of Lupus) on whom the Indian Operation for making a New Nose has been performed." Dr. Broadbent, "On Warburg's Tincture, with Therapeutical Comments."

19. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Coupland (for Mr. Balding)—Sequel to Case of Tumour of Sciatic Nerve. Dr. Coupland—Biliary Calculi encysted in Peritoneal Adhesions. Dr. Goodhart (for Dr. Lewis Marshall)—Aneurism of Aorta. Dr. Ord—Spontaneously Fractured Vesical Calculi. Mr. Gould—1. Valvular Disease of the Heart; 2. Recovery from Pyopericardium. Dr. Mahomed—Adenoma Hepatitis (two cases). Dr. Pye-Smith—Xanthelasma. Dr. Gowers—Mitral Disease. Dr. Goodhart—1. Cerebral Aneurism from Embolism; 2. Cerebral Tumour.

20. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Association of Surgeons practising Dental Surgery (Council Meeting, 7½ p.m.), 8½ p.m. Mr. Hamilton Cartwright, "The Position of Dental Surgery in its Social and Ethical Aspects."

Meteorological Society (25, Great George-street, Westminster), 7 p.m. Meeting.

21. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. Harveian Lecture—Mr. James Lane, "On Syphilis."

22. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Queekett Microscopical Club, 8 p.m. Ordinary Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 9, 1876.

BIRTHS.

Births of Boys, 1247; Girls, 1163; Total, 2410.
Average of 10 corresponding years 1866-75, 2164·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	733	713	1446
Average of the ten years 1866-75	834·9	832·3	1667·2
Average corrected to increased population ...	...	...	1784
Deaths of people aged 80 and upwards ...	...	...	54

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	...	2	1	2	...	2	1	1
North	751729	34	6	6	2	11	...	10	1	1
Central ...	334369	...	1	3	...	3	...	1	1	2
East	639111	6	4	11	2	7	...	4	...	1
South	967692	9	13	20	3	5	...	7	3	10
Total	3254260	50	24	42	8	28	...	24	6	15

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·045 in.
Mean temperature	47·6°
Highest point of thermometer	56·2°
Lowest point of thermometer	35·9°
Mean dew-point temperature	43·9°
General direction of wind	Variable.
Whole amount of rain in the week	1·40 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 9, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Dec. 9.	Deaths Registered during the week ending Dec. 9.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2410	1446	56·2	35·9	47·5	8·61	1·40	3·56
Brighton	100632	42·7	41	37	56·0	37·6	49·2	9·55	1·42	3·61
Portsmouth ...	124867	27·8	90	57	56·5	37·5	49·7	9·83	1·81	4·60
Norwich	83430	11·2	54	43	55·0	37·2	47·6	8·67	1·03	2·62
Plymouth	72230	51·8	47	34	58·6	34·0	49·8	9·89	1·61	4·09
Bristol	199539	44·3	137	83	53·3	31·1	47·3	8·60	1·68	4·27
Wolverhampton ...	72549	21·4	60	36	52·8	35·7	45·4	7·44	0·90	2·29
Birmingham ...	371839	44·3	312	147	55·0	37·7	46·1	7·81	1·81	4·60
Leicester	113581	35·5	82	61	51·5	35·5	46·1	7·84	0·82	2·08
Nottingham ...	93627	46·9	74	41	54·6	34·4	46·0	7·78	1·33	3·38
Liverpool	521544	100·1	413	266	52·6	38·6	45·3	7·39	0·70	1·78
Mancheater ...	357917	83·4	260	208	54·0	35·0	44·5	6·95	1·14	2·90
Salford	138425	26·8	122	91	54·3	31·1	44·2	6·78	1·17	2·97
Oldham	88609	19·0	63	40	...	...	...	...	...	...
Bradford	173723	24·1	135	72	50·6	38·0	45·1	7·28	2·17	5·51
Leeds	291580	13·5	252	146	53·0	39·0	45·6	7·66	1·57	3·99
Sheffield	274914	14·0	215	108	53·0	39·0	46·2	7·89	1·84	4·67
Hull	136933	37·7	103	72	54·0	35·0	45·7	7·61	1·43	3·63
Sunderland ...	108343	32·8	87	49	57·0	37·0	45·1	7·28	1·39	3·53
Newcastle-on-Tyne	139929	26·1	126	51	...	...	...	...	...	...
Edinburgh	216146	51·3	134	97	...	...	...	...	0·93	2·41
Glasgow	545144	90·4	409	244	50·7	30·5	43·7	6·50	0·87	2·21
Dublin	314666	31·3	177	147	54·1	32·0	44·3	6·84	0·65	1·65
Total of 23 Towns in United Kingdm	6028595	37·7	5833	3579	58·5	30·5	46·2	7·89	1·32	3·35

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·05 in. The lowest reading was 28·23 in. on Mooday, and the highest 30·02 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON OPHTHALMOLOGY.

DELIVERED AT GUY'S HOSPITAL.

By CHARLES HIGGENS, F.R.C.S.E.,
Assistant Ophthalmic Surgeon to the Hospital, and Lecturer on Ophthalmology in the Medical School.

LECTURES III. AND IV.

DISEASES OF ACCOMMODATION — ASTHENOPIA; STRABISMUS.

(*Continued from page* 671.)

WE have now to consider some diseases of the accommodative apparatus, and some affections which are in a great measure dependent on anomalies of refraction.

I explained in a former lecture what we understand by accommodation, and what are the theories respecting its production. The ciliary, like other muscles, may be paralysed or in a state of spasmodic contraction.

Paralysis of accommodation occurs in paralytic affections of the trunk of the third nerve when it is associated with ptosis, divergent squint, and more or less dilatation of the pupil. It is also met with without paralysis of the external ocular muscles; it may be caused by blows upon the globe itself, or in its immediate vicinity; may arise spontaneously; and can always be produced artificially by the instillation of a solution of atropine. Paralysis of the accommodation has also been met with in cases of facial paralysis; the connexion between the two, however, is not very evident.

The symptoms are—dilatation and immobility of the pupil; general mistiness of vision, with, specially, inability to see near objects plainly, and often diminution in size of the objects looked at—the two latter of which can be remedied by the use of a convex lens. The treatment depends upon the cause, which, excepting in the case of injury, is obscure.

If the paralysis of accommodation be associated with paralysis of other branches of the third nerve, we should direct our treatment against any existing constitutional disease (syphilis, rheumatism, etc.), most improvement being brought about by the use of iodide of potassium in increasing doses, alone or in conjunction with bichloride of mercury. If dependent on injury, the eye should be kept bound up, and inflammatory symptoms treated as they arise; if arising idiopathically, without apparent cause, Calabar bean(a) should be used two or three times a week, in order to stimulate the ciliary muscle to contract. In any case a convex lens may be used if required.

Spasm of accommodation is met with in some cases of hypermetropia, and occasionally, indeed, in myopia. It often masks a considerable amount of hypermetropia, and may at times even make the eye appear to be myopic. If it exist with myopia, the degree of short sight is increased.

The *symptoms* are—severe and constant pain in the eyeballs and forehead, increased on any attempt to use the eyes; as a rule, associated with some anomaly of refraction (generally hypermetropia); inability to see near or distant objects distinctly: these symptoms being modified or entirely removed by the use of atropine.

The *treatment* should be—paralysis of the accommodation by constant use of a strong solution of atropine (gr. iv. of sulphate of atropia to ℥j. of water), and accurate neutralisation of any existing anomaly of refraction by suitable lenses.

ASTHENOPIA (OR WEAK SIGHT).

The symptoms of asthenopia manifest themselves upon the sufferer attempting to read or do any kind of near work. He finds that after looking for a longer or shorter time, near objects—lines, letters, etc.—run together and become indistinct; in fact, exactly the same phenomena occur that I have mentioned when speaking of hypermetropia. Asthenopia depends upon actual weakness, or, as in many cases of hypermetropia, on too great strain of the ciliary muscle. In some cases pain is complained of; in others the indistinctness of vision is the only inconvenience.

The treatment consists in resting the eyes, improving the general health, and neutralising hypermetropia if it exist.

This form of asthenopia is sometimes called true asthenopia, in contradistinction to an extremely painful and irritable condition of the eyeballs—sometimes met with in myopia, but more especially in myopic astigmatism—known as apparent asthenopia.

Insufficiency of the internal recti muscles—muscular asthenopia, as it is called—gives rise to somewhat obscure symptoms. Patients thus affected make complaints very similar to those of hypermetropics: they cannot do near work for any length of time, as the objects looked at become misty. They also complain that near objects appear double; and they suffer from giddiness, pain in the brows, and general headache. Muscular asthenopia occurs most frequently in myopia, but is sometimes met with in hypermetropia or in emmetropia.

We should always suspect insufficiency of the internal recti in cases of myopia where complaints are made of pain, dimness of vision, or diplopia, when reading or doing near work; and in all cases of hypermetropia, or in emmetropia, if the symptoms described continue in spite of the use of convex glasses. It is of importance that we should recognise the symptoms caused by insufficiency of the internal recti, as I have more than once seen cases in which they were attributed to cerebral disease, which, however, I was able to cure by suitable spectacles.

The diagnosis is easy enough. We have only to hold a pen or pencil in front of the patient's eyes at a distance of about eighteen inches, then gradually move it nearer. We shall soon find a distance at which the eyes become unsteady, the patient manifesting an inclination to draw back, and eventually one or both eyes will diverge, the divergence being accompanied by double vision.

The treatment depends upon the cause of the insufficiency. In myopia the muscles need not be absolutely weak, but have not sufficient power to maintain convergence to the point at which vision is distinct; *e.g.*, suppose a patient has myopia $\frac{1}{5}$, he may not be able to keep both eyes fixed on a point five inches distant, but can easily do so on one situated at ten inches. Consequently, all that is necessary in such a case is to prescribe glasses that render vision distinct at a distance to which convergence can be easily maintained. In the case supposed the use of spectacles with lenses of — 10 would render near work quite easy; the myopia in this case would be reduced from $\frac{1}{5}$ to $\frac{1}{10}$ $\left(\frac{1}{5} - \frac{1}{10} = \frac{1}{10}\right)$, and the farthest point of distinct vision would lie at ten inches from the eye, instead of at only five inches.

If the symptoms of insufficiency are associated with hypermetropia, or emmetropia, the muscles are really weak, and cannot maintain convergence to a point beyond which a small object cannot be seen on account of its size. In either case we can take the strain off the weakened muscles by suitable spectacles.

In the case of hypermetropia we order convex glasses (which exactly neutralise the anomaly of refraction) to be so placed in the spectacle-frame that their outer halves are looked through. They will thus act as prisms, which cause the images of the object to be displaced outwards, so that the object itself appears to be more distant than it really is. Such glasses are called decentrated. In emmetropia simple prisms can be used, their bases being placed inwards.

STRABISMUS.

Strabismus, or squint, we usually find described amongst affections of the ocular muscles, but I think it more reasonable to introduce the subject in this place, as its primary cause is almost invariably to be found in some anomaly of refraction. Convergent strabismus is associated with hypermetropia; in 150 consecutive cases I have never found this anomaly absent. Divergent strabismus is associated with myopia, but the association is not so constant as is that of convergent strabismus with hypermetropia. Strabismus may be defined as a deviation in direction in the axes of the two eyeballs, in consequence of which the two yellow spots receive images from different objects. In convergent strabismus the two visual lines do not cross each other in the point it is desired to observe; only one of the two—that of the undeviating eye—reaches it. In divergent strabismus the visual lines do not cross at all, but one or other turns vaguely outwards.

CONVERGENT STRABISMUS, as I have just said, is nearly always the result of hypermetropia. The question naturally arises, How does hypermetropia produce it? The hypermetropic

(a) The Calabar gelatine is a convenient form for application, but a watery solution of the extract may be employed. Quite recently, however, a solution of sulphate of eserine has come into use; it may be employed of the same strength and in the same manner as solutions of atropine.

individual has always to accommodate, more or less, when looking at even a distant object; as the object is brought nearer, the tension of accommodation must be increased. As I stated in my first lecture, accommodation is associated with convergence of the visual lines. Now, the greater the degree of convergence, the more strongly can the accommodation be brought into play; consequently there is an ever-increasing inclination on the part of the hypermetropic individual to converge too strongly, in order to bring his accommodation into the highest possible state of tension. If the convergence of the visual lines be excessive, or if they do not meet in the same point, convergent strabismus results.

The question next arises, Why do not all hypermetropic individuals squint? The reason is, that if both eyes are of the same refraction, and have equal acuteness of sight, there is always such a desire to maintain binocular vision that the visual lines will remain directed to the same point, even though the eyes are not accurately accommodated for that point, the individual being content with ill-defined retinal images, rather than increase his convergence, and thus sacrifice binocular vision. But let vision of one eye be less acute than that of the other, or let there be a difference of refraction between the two, the desire for binocular vision is lost, or its value very much lessened; the necessity for a well-defined image on one retina is immediately felt; the accommodation is put fully on the stretch; and with it the degree of convergence becomes excessive.

Treatment.—Slight cases of convergent strabismus, especially if the deviation is not constantly present, but only occasional, may be cured by the use of glasses which accurately neutralise the existing hypermetropia.

More marked cases require division of the internal rectus tendon in one or both eyes.

A difficulty often arises in deciding whether only one or both eyes shall be operated on.

If it is found that one eye squints habitually, the other being always used for fixing an object, only deviating slightly when it is excluded, and an attempt made to fix with the habitually squinting eye, division of the internal rectus of that eye which habitually deviates alone is necessary.

If each eye deviates alternately (alternating strabismus), and to the same extent, division of one internal rectus may be sufficient; but if, after the operation, the squint continue, tenotomy of the internal rectus of the other eye should be performed.

If one eye squints habitually, the other having an inclination to deviate at times, and if this deviation becomes well marked when the eye is excluded, and an object fixed with the more or less habitually squinting eye, then the internal rectus in both eyes must be divided. In any case, if there be a doubt as to whether one or both eyes should be operated on, it is well to be on the safe side and do only one at a time; otherwise we may do too much, and produce a much worse deformity—divergent squint.

Operations for Convergent Strabismus.

We usually divide the internal rectus either subconjunctivally, or by cutting through the conjunctiva over the tendon and thoroughly exposing it. The subconjunctival operation is, I think, to be preferred.

Whichever method be adopted, we place our patient prone upon a suitable couch or table, stand in front of him at the right side, and fix the eyelids well open with a wire speculum.

Then, if we have determined upon the subconjunctival operation, we seize with toothed forceps the conjunctiva and subconjunctival fascia a short distance below the insertion of the internal rectus tendon, and make an opening with the strabismus scissors, through both these membranes, down to the surface of the sclerotic. We next pass the strabismus hook through the opening well backwards between the muscle and the globe, draw it forwards towards the cornea, when, if it have been properly passed, it will be brought up short at the point of insertion of the tendon into the sclerotic, at some little distance from the corneal margin. We then pass the strabismus scissors through the wound, one blade following the hook between the tendon and the globe, the other passing between the tendon and the conjunctiva, or rather subconjunctival fascia. When we are satisfied that the tendon is well included between the scissor-blades, we divide it by one or two sharp strokes. So soon as the tendon has been cut through, the hook will pass easily up to the corneal margin; we should, however, withdraw the hook and pass it afresh, as some part of the tendon may slip off it and escape division. Should this have happened, we shall find the hook stopped as before, at the point of insertion into the sclerotic, in which case we reintroduce the scissors and divide the remaining fibres.

On division of the tendon the muscle retracts, the distance being limited by the subconjunctival fascia, with which it is intimately connected. If the eye is not properly directed after simple division of the tendon, a greater effect may be produced by further freely severing the subconjunctival fascia.

In order to expose the tendon of the internal rectus before dividing it, we make an incision with scissors through conjunctiva and subconjunctival fascia, over the insertion of the tendon instead of below its inferior margin, then pick up the tendon with the strabismus hook, and divide it close to the sclerotic, the wound in the conjunctiva being afterwards closed with a fine suture. No after-treatment is required for strabismus operations; the patient may go about as usual, and simply keep the eyes clean. But if, when the effects of the operation have been quite recovered from, an inclination to return of the squint is manifested, the degree of hypermetropia must be carefully ascertained, and glasses which thoroughly neutralise it ordered to be used for all purposes. In most cases this will be found sufficient; but if, after the glasses have been perseveringly worn for some weeks, no effect is produced, the operation should be repeated in one or both eyes, or, if only one internal rectus have been divided, tenotomy of the other must be practised.

Use of Anæsthetics in Operations for Convergent Strabismus.

Whether anæsthetics should be employed or not in squint operations, appears to be a matter of opinion; some eminent oculists never employing them, others, again, rarely operating without. For my own part, I prefer not to employ an anæsthetic if the patient is pretty steady; but with children and nervous adults I always use one. But take care that a full effect is not produced; and should there be any doubt as to whether one or both eyes are to be operated on, I allow the patient to partially regain consciousness after finishing one eye, so as to ascertain the effect produced by what has been done. If an anæsthetic be given to such an extent as to exert its fullest influence, and produce thorough muscular relaxation, an erroneous idea of the effect of the operation is likely to be formed, and on the return of consciousness the squint may remain as bad as ever.

Convergent strabismus, when not dependent on hypermetropia, may be caused by disease of the brain, paralysis of the external rectus muscle, or inflammatory or other changes in the internal rectus muscle itself, producing shortening. In the first two cases no operation is advisable; the third may sometimes be remedied by operative interference.

Divergent Strabismus, as I have already stated, is usually the result of myopia. It is a consequence of high degrees of the anomaly, and is brought about as follows:—The highly myopic individual, as is well known, requires to bring objects very near the eyes to see them distinctly; consequently, a very high degree of convergence is necessary to keep both visual lines directed to the same point. Now, not only has a high degree of convergence to be maintained, but in myopia the length of the eyeball, and the consequent impairment of its mobility, place the internal recti at a disadvantage. Moreover, in order to direct the visual lines of myopic eyes to the same point, a greater proportionate amount of convergence is required than in emmetropia. As a consequence, the internal rectus of one eye sooner or later becomes wearied, gives in, and the eye deviates outwards, binocular vision being sacrificed.

Many cases of divergent strabismus may be remedied by the use of concave glasses, which enable the individual to see distinctly at a distance up to which convergence of the visual lines can be maintained without undue strain of the internal recti muscles—in fact, by treatment similar to that I described to you when speaking of muscular asthenopia.

If, however, in spite of the use of glasses, the divergence continues, it must be remedied by operation. In cases where the eye only deviates outwards after an object has been looked at for some considerable time, subconjunctival division of the external rectus of the deviating eye will suffice for a cure; but in cases where one or both eyes diverge constantly, and the visual lines can only be made to meet in one point by a great effort, or not at all, the operation of readjustment must be had recourse to.

This operation can be performed as follows:—The patient being placed in the same position as for tenotomy of internal rectus, and thoroughly anæsthetised, we stand behind his head, fix the lids open with a wire speculum, with scissors

make an incision through conjunctiva and subconjunctival fascia, over the insertion of the external rectus, hook up the tendon, and divide it close to the sclerotic. An incision should then be made through conjunctiva and subconjunctival fascia, about midway between the insertion of the internal rectus and inner margin of the cornea; the incision being of such a length as to reach about four lines above and a like distance below the margins of the tendon, which should then be hooked up and divided. The muscle and subconjunctival fascia should be freely separated from the parts beneath, and, together with the conjunctiva, turned back towards the caruncle. Two curved needles holding fine silk should then be passed through the tissues next the margin of the cornea, and the silks firmly tied, two free ends being left; the needles should then be carried from within outwards, through the muscle, subconjunctival fascia, and conjunctiva, as near the inner canthus as possible, and the silk drawn through; a considerable portion of the muscle and other tissues should then be removed with scissors, the free ends of the two fine pieces of silk, and the portions to which the needles are still attached, then tied firmly together (the eye being rolled well inwards by an assistant as the knots are pulled tight); the ends of the two sutures should then be cut off close. The last step of the operation is to unite by a single suture the wound in the conjunctiva, made for the division of the external rectus.

The eye should be bound up with wet lint and a bandage. The sutures will probably require removal in about four or five days, but may be left longer if they cause no irritation.

Divergent strabismus is also met with in cases of paralysis of the third nerve; may occur if the sight of one eye has become much impaired, and binocular vision no longer possible; and may follow a too free use of the scissors in the operation for convergent strabismus. In the first of these cases no operation is advisable; in the last two readjustment should be performed; but no improvement of sight must be expected in cases where vision of one eye is much impaired.

ORIGINAL COMMUNICATIONS.

ON THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
Physician to the Hospital for Diseases of the Nervous System.

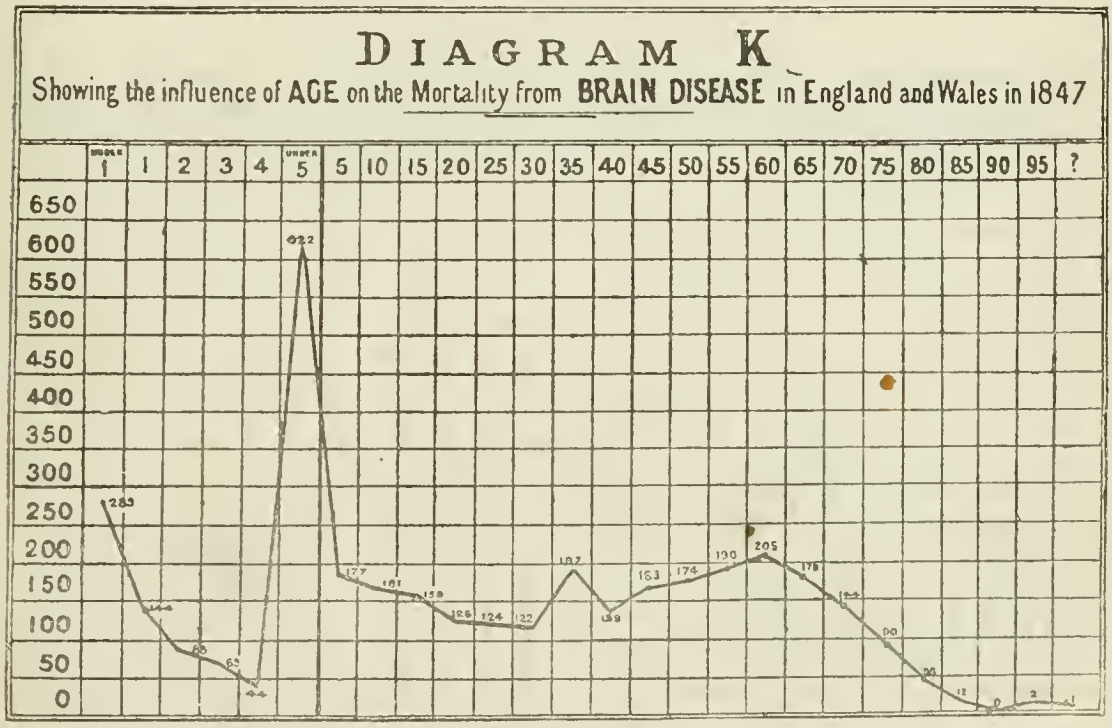
(*Concluded from page* 676.)

10. *Cerebral disease*, etc., is, like convulsions, most fatal in the first year. The curve in Diagram K is seen to descend after that until the fifth, and reaches its summit in the first lustrum of life. After that it descends, rises again somewhat at thirty-five and forty, and falls more decidedly at fifty-five. At sixty there is another small rise, but after that the fall is steady, and at ninety there is nothing left.

The three subsequent Diagrams, L, M, and N, show the relations of the two sexes, as far as the influence of age on the mortality from paralysis, epilepsy, and insanity is concerned. The thin curve is for women, and the thick one for men.

In Diagram L, which shows the deaths of males and females from *paralysis* at the different periods of life, the curves run a nearly identical course up to twenty years of age. At twenty-five the thick overlaps the thin curve, and continues to do so until forty-five, but at fifty the relations become reversed, and the thin curve keeps generally at the top from then. Both reach the summit at seventy, but the thin apex is considerably higher than the thick. At seventy there is a slight, and at eighty a quick descent, which now continues to the end.

For *epilepsy* these relations are portrayed in Diagram M. The thick curve begins at a higher point than the thin one, but the aggregate of the first lustrum of life is nearly identical. At five both curves fall, the thin more than the thick; and then the thin one begins to overlap the thick, rising

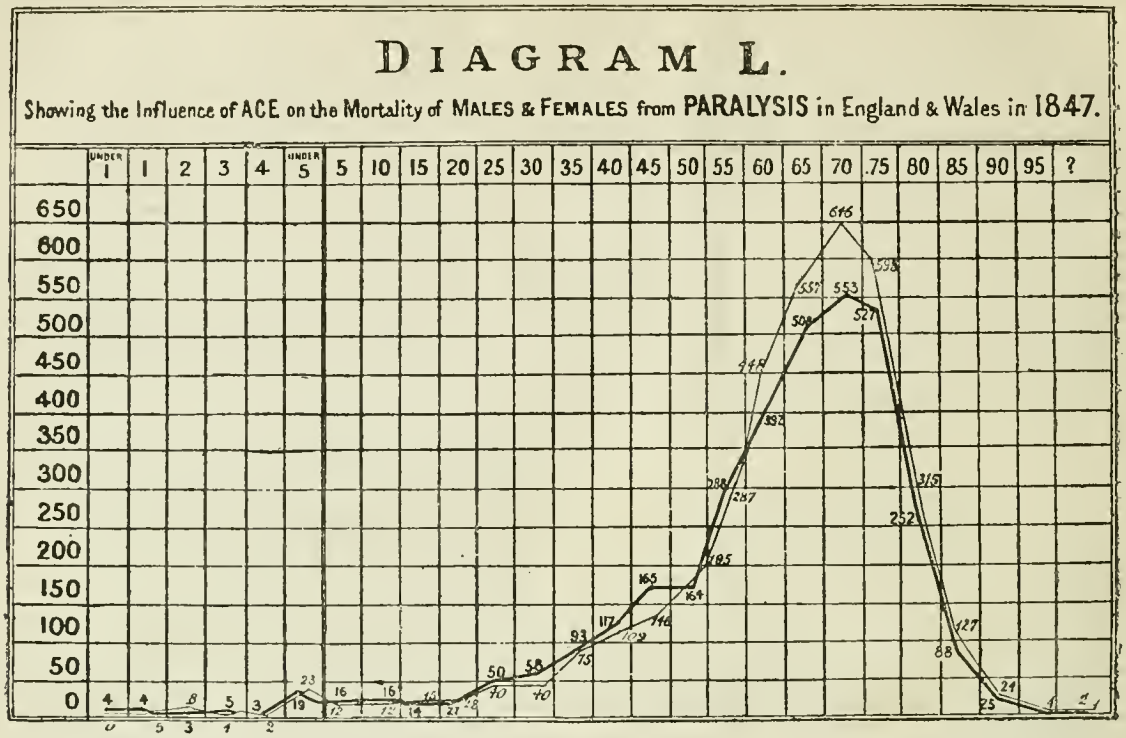


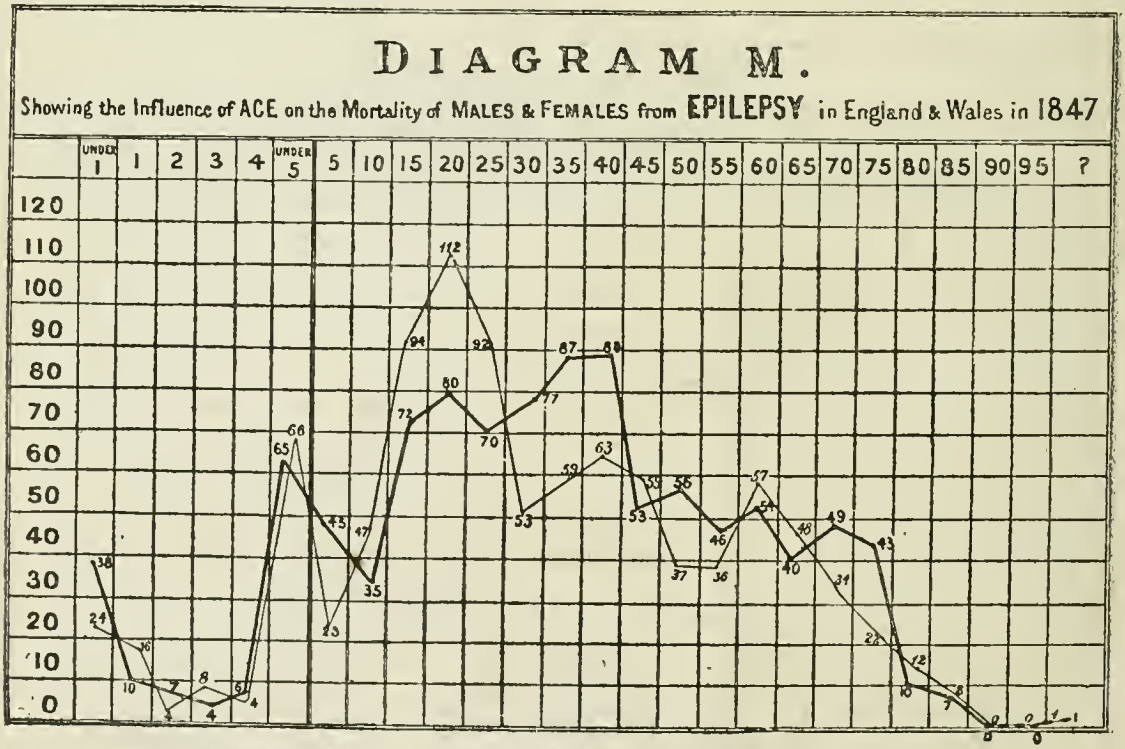
at ten and reaching its summit at twenty. The thick curve rises in its turn and goes to the top at forty; thick and thin meet at forty-five. There are further slight alterations of rise and fall until seventy-five, after which both curves meet.

For *insanity*, the thick curve in Diagram N shows a slight ascendancy over the thin one until ten, after which the thin curve rises and keeps steadily overlapping the thick one, although otherwise the excursions of the two curves appear very analogous. The summit of the thick curve is at fifty, and that of the thin one at sixty-five.

VII. I now consider the last question brought forward, viz., *What is the death-rate from delirium tremens in the different counties of England and Wales?*

In order to show this at a glance, I have constructed Diagram O, proceeding in the following manner:—The mortality from delirium tremens, and the entire mortality from all causes, were



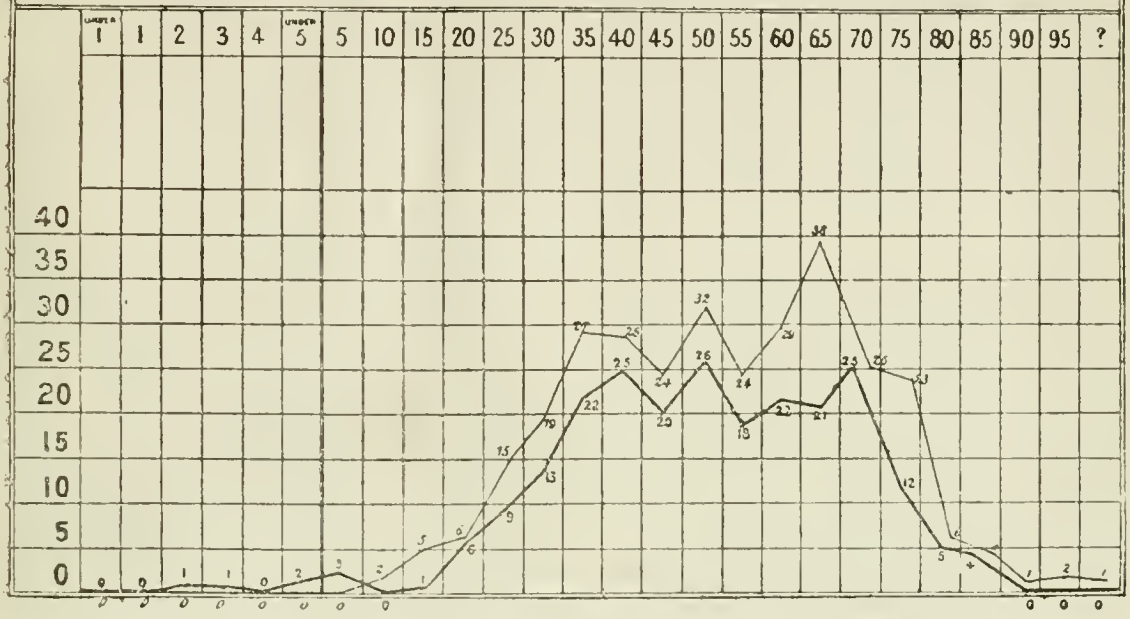


The thin curve shows the deaths of females, and the thick curve those of males.

first extracted for each of the twenty-five years, for London and all the different divisions of England. The deaths from delirium were then divided into all deaths, when the death-rate for each year and each division appeared, and the results were then added together for the entire period. London, which was seen to be the highest of all, was then taken as a standard of 100, and the proportion of the other divisions to this found by the usual calculation. It is seen from the diagram that London heads the list with 100, the South-Eastern counties follow with 62, the North-Western with 57, the South Midland with 55, the Northern with 54, Yorkshire with 42, the Eastern division with 41, the West Midland with 40, the South-Western with 39, the North Midland with 36, and last of all comes Wales with only 27.

DIAGRAM N.

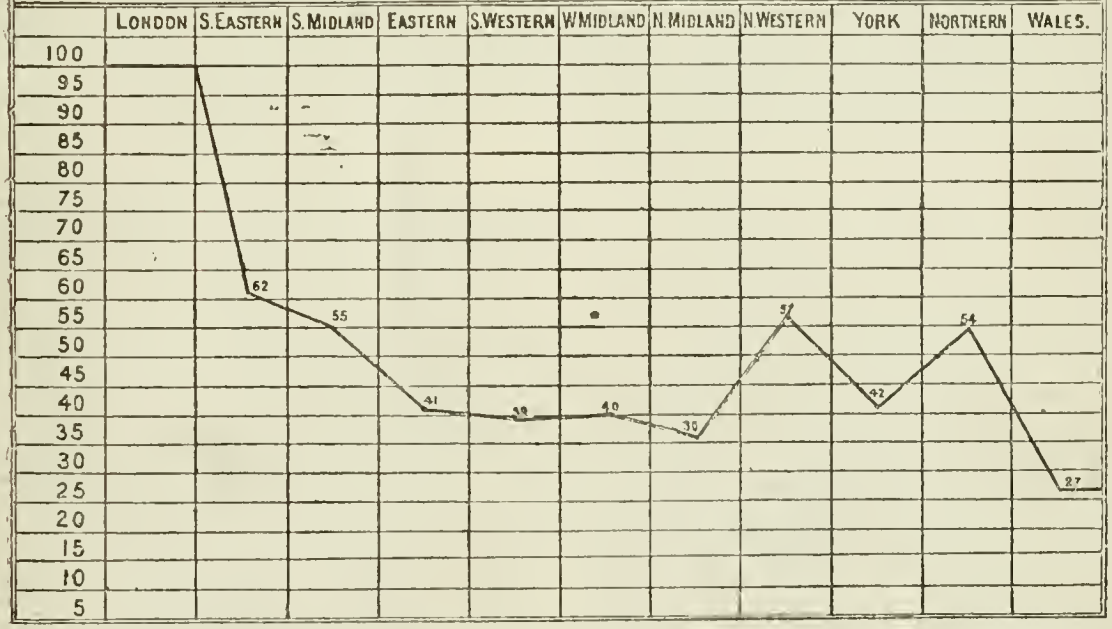
Showing the Influence of AGE on the Mortality of MALES & FEMALES from INSANITY in England & Wales in 1847.



The thin curve shows the deaths of females, and the thick curve those of males.

DIAGRAM O.

Diagram showing the comparative Mortality from DELIRIUM TREMENS in the Several Divisions of England & Wales, FROM 1847 TO 1871 RESPECTIVELY.



As the number of deaths from delirium tremens is known to correspond very closely with the amount of strong alcoholic drinks consumed altogether by a population, it appears very significant that London, where we have seen nervous diseases to be at a comparatively low ebb, should consume proportionately so much more alcohol than Wales, where these maladies are so singularly rife. The question, therefore, naturally presents itself, whether a large consumption of strong alcoholic drinks is really *always* prejudicial for the nervous system, as has been perhaps too sweepingly asserted by many well-intentioned men of late years; whether whisky [is really "the devil in disguise"; and whether alcohol does not, in many instances,

act as a preservative against the invasion of diseases of the nervous system. There are as yet, however, not a sufficient number of accurate data at our disposal to enable us to decide this point.

Until now, we have only considered the *mortality* from nervous diseases, which, although it bears a definite relation, yet does, of course, not altogether correspond to their *prevalence during life*. There is only one disease of which we actually know the number of living sufferers year by year—viz., *insanity;* while for finding out the prevalence of the other complaints, as distinguished from mortality, we have to lean altogether on clinical experience. It appears from the Reports of the Commissioners in Lunacy to the Lord Chancellor, that there were in 1859, under treatment in the various public and private asylums of England, 36,762 lunatics; in 1869 this number had risen to 53,177; and in 1875 to 63,793. The deaths of all lunatics in 1859 amounted to 2332, or 7·22 of the total number under treatment; in 1869 to 3805, or 7·94 of the entire number; and in 1875 to 4210, or 7·79 of the entire number.

It will be seen that the deaths of all lunatics, as given by the Commissioners in Lunacy, do not at all correspond to the deaths from insanity recorded by the Registrar-General; which is explained by the circumstance that in the former reports the deaths from all causes occurring amongst the lunatic population, and in the latter only the deaths from the various forms of brain disease producing insanity, are included. Thus, the Registrar-General gives only 446 deaths from insanity in 1859, against 2332 of the Lunacy Commissioners; the numbers being 722 and 3805 respectively for 1869. This gives a proportion for the two years of 1 to 5·2; from which it appears that out of five lunatics only one actually dies of lunacy, while the other four die from other diseases.

The ratio of lunatics to 10,000 of the population was 18·67 in 1859, and had risen to 26·64 in 1875. This would at first sight appear to constitute a very considerable increase of insanity during the last seventeen years; but it should be considered that this increase of insanity, under care, has occurred chiefly among the pauper class; for, while during the period just mentioned the insane paupers have increased from 16·14 to 23·55 for 10,000 of the whole population, the private patients have during the same time increased only from 2·53 to 3·09. Nevertheless, there can be no question that there has been an increase, not only in the mortality from, but also in the prevalence of, insanity within the last few lustra.

The excess of females over males, which I have already adverted to in the *mortality* from insanity, is likewise perceptible in the *prevalence* of that disease during life. The ratio for living *male* lunatics was 17·44 in 1859, against 19·85 for living *female* lunatics. In 1869 the respective numbers were 22·51, against 25·27; and in 1875, 24·87, against 28·32. These numbers show that the greater liability of women to go out of their mind has decidedly increased of late, as the excess over males was only 2·41 in 1859, and had gradually risen to 3·45 in 1875.

The proportion of deaths from insanity to the living lunatic population averaged, for the ten years from 1862 to 1871, as 1 in 88.

With regard to the prevalence of the other diseases of the nervous system we have no such certain data as for insanity. It is, however, well known that only few patients suffering from *cephalitis*, more especially in the first year of life—when that complaint is most common,—recover; so that the number of deaths is probably not very much below the number of cases which occur altogether. *Apoplexy* is an essentially temporary condition, which must, within a very few days at most, end in death or complete or partial recovery; but the proportion in which the deaths stand to recoveries is at present not known with any degree of certainty. The number of persons who survive an attack of *paralysis*, on the other hand, is very large; and the results of my own hospital and private practice would lead me to think that there are about twelve living sufferers to one death. *Chorea* is known to be only rarely fatal; and its prevalence during life may be taken as of about 100 cases to one death from it. It may be assumed that three cases out of four recover from *delirium tremens*, which would give four cases to one death. *Epilepsy* is not a very fatal disease, and I am inclined to consider that there is about one death to fifty living sufferers. Of *tetanus* there are two forms—viz., the acute, which is generally rapidly fatal; and the subacute or chronic, in which recovery takes place after a longer or shorter time. These forms of tetanus appear generally to occur in the proportion of two to one, so that three cases may be taken to occur to every two deaths which are registered.

Of *convulsions* it would be exceedingly difficult to say in what proportion the deaths stand to recoveries, as the death-rate from them is in the process of changing considerably at the present time.

Hysteria is very prevalent, but hardly ever fatal; and the rubric of *brain disease*, etc., is altogether too indefinite to enable us to draw any conclusions from the deaths as to prevalence during life.

A final question which forces itself on our minds, on surveying the entire field of observation which I have now presented to your notice, is this—Will medical science, which hitherto seems to have been almost powerless to favourably influence the mortality from nervous diseases to any great extent, have more chance of doing so in future, with improved modes of treatment? In looking at the tabulated facts, together with the teachings of recent clinical experience, we may reasonably expect a further considerable diminution of convulsive disorders. Convulsions have, in the natural order of things, steadily decreased in fatality during the last quarter of a century; and when it becomes more largely known to the body of the profession, with what safety large doses of the bromides of potassium and sodium may be administered to infants, a further great reduction of the mortality from eclampsia may be expected. The mortality from epilepsy has likewise diminished during the last decade, most probably under the influence of better treatment; and there is good reason to believe that it will be further reduced in course of time. Even for tetanus, recent researches on the action of hydrate of chloral in that disease seem to hold out a prospect of its becoming eventually more amenable to treatment; while chorea is known to kill but rarely. Paralysis, apoplexy, and insanity, on the other hand, will, no doubt, always carry off large numbers of victims, as long as the present conditions of our existence, with its passions and sorrows, its troubles and disappointments, continue.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

LONDON HOSPITAL.

NOTES ON CASES OF DISEASES OF THE NERVOUS SYSTEM.

(Under the care of Dr. HUGHLINGS-JACKSON.)

The following are brief notes of Dr. Jackson's remarks on various cases:—

On the Diagnosis of "Coarse" Cerebral Disease.

A boy lay in bed, blind, hemiplegic, and he had an enlarged head. Dr. Hughlings-Jackson said that we should in such cases make stages of investigation. First for localisation. The hemiplegia was the only symptom in this case which was "localising": it pointed to disease of the opposite side of the brain, but it did not point to the nature of the disease. The *mode of onset* of hemiplegia is of diagnostic value as to the nature of the disease causing the paralysis; in this case its slow onset was some evidence of tumour. A *very* slow onset of hemiplegia points strongly to tumour, but Dr. Hughlings-Jackson mentioned a case in which he was misled in diagnosis by trusting to this kind of evidence.

The symptoms which point to the general nature of the disease in this case—that it was a "coarse" change, such as tumour—were the optic neuritis, the intense headache, and the vomiting. The order of this enumeration is the order of the degree of their diagnostic values; they were of no value in localisation. That the boy was blind from the neuritis made no difference, so far as Dr. Jackson knew, in the diagnostic bearing of the ophthalmoscopical condition; optic neuritis with good sight would have the same value. These signs were only of the *general nature* of the disease: they were of no value towards the diagnosis of tumour in particular, or of any one kind of adventitious product; they were, in other words, only signs of the existence of *some* "coarse" local change. After remarking on the points of diagnosis of abscess, scrofulous tumour, glioma, etc., and confessing that he could not determine the particular nature of the coarse disease in this

case, Dr. Hughlings-Jackson said that (the hemiplegia and other signs being considered) the enlarged head warranted the diagnosis of a *voluminous* adventitious product. The boy's mother had had to get for him much larger caps. In one similar case he had found a scrofulous tumour weighing eleven ounces; in each of two other cases an enormous cyst. Such cases, in their earlier stages, in young children were easily mistaken for cases of cerebellar disease. In this case the hemiplegia makes the diagnosis of cerebral disease. In most cases where there is very slowly increasing compression of the brain (as in cases of voluminous adventitious products in the cerebral hemisphere, and in cases of hydrocephalus from tumour of the median lobe of the cerebellum), there is a very notable mental condition—a negative one. There is a sort of imbecile placidity.

Paralysis of the Third Nerve and Hemiplegia.

There is a case of paralysis of the right third nerve, with hemiplegia of the opposite side of the body. These symptoms point to disease of the right crus cerebri, but they only do so when they come on together. In this case, as they came on at different times, there can be no certainty that there are not two lesions. Dr. Hughlings-Jackson has reported a case in which there was neuroma of the third nerve, and an independent lesion in the base of the cerebrum.

On Heredity in Nervous Diseases.

Dr. Hughlings-Jackson frequently insists on the fact that nearly all nervous diseases of which the pathology is known are not nervous in the sense that the pathological changes begin in nervous tissue. For example, it is plain that that most common affection of the nervous system—hemiplegia—is, pathologically, nearly always of non-nervous origin; it is due nearly always to rupture or blocking-up of some arterial branch of a nervous centre. Of the neuroses—chorea and epilepsy, we shall suppose—the pathology is considered to be unknown, and, if so, we are obviously unable to say whether they are due to pathological changes beginning in nervous tissue, or not. Dr. Hughlings-Jackson's hypothesis is, that in chorea and in those cases of epilepsy where no morbid alterations have been as yet discovered post-mortem, the changes begin in the arterial system. It may be said "that this is only an hypothesis." So at present is every view as to the pathology of the neuroses.

We can have no clear ideas as to the inheritance of "diseases" of the nervous system until we have clear ideas of their pathology. Suppose a current hypothesis (and it is an hypothesis, just as much as the one which supposes the two neuroses mentioned to be owing to pathological changes beginning in arteries)—that the two neuroses we have mentioned are owing to changes *beginning in* nervous tissue—were verified, the fact that the patient's father or mother had hemiplegia (an arterial disease) is no evidence that their son inherits a tendency to his nervous affection.

In working at the hypothesis of the "arterial pathology" of the two neuroses, and we may add migraine, we should note the presence or absence of all diseases which go along with disease of the arterial system (arteries, heart, etc.). It is not meant to fix a limit to our inquiries; but, in the midst of scientific investigations, we must consider things separately for awhile, not to the prejudice of a completer inquiry afterwards. We inquire for gout, rheumatism, and renal disease. One association Dr. Hughlings-Jackson has often noted, either in one patient or in one family—viz., chorea, migraine, and rheumatism. His hypothesis is that migraine, like chorea, and certain cases of epilepsy, is owing to local changes of instability induced by embolism or thrombosis. It must never be forgotten that plugging of cerebral arteries can produce increased afflux of blood, and often, indeed, extravasation in the capillary regions to which the plugged vessels belong. This is an important matter for consideration in cases where, as the excessive expenditure shows, there is greater "storing up" of force."

Idiocy in a Patient the subject of Inherited Syphilis.

The following notes were taken chiefly by Mr. Mercier:—

Walter C., aged twelve, was admitted April 13, 1874, for a node on the tibia, which was believed, both by Mr. Hutchinson and Mr. Tay, to be the result of syphilis. There was, however, no strong additional evidence in support of this diagnosis in the patient's family history. The node had been coming, his mother said, four or five months; it had been very painful, especially at night. Whilst pregnant with this child the mother suffered severe abdominal pains, for which she was, according to her report, treated with strong narcotics.

Mother's Account.—Mother has had twelve children. Three miscarriages occurred about the middle of the series. Patient is the youngest child. Seven children are living; the others all died of scarlet fever. Her children are all delicate, but not subject to any special ailments. The child (a girl) elder than this stammers, and is delicate. Except that one cousin died of rheumatic fever, there is no history of rheumatism or gout. She says that all her children are nervous, "are all frightened," and, in reply to a leading question, says they are excitable. Her sister died of "consumption."

An uncle (of the child), who had had a great deal of trouble, and had been recently drinking—though not a drunkard—died in this hospital, and, she believes, "raving mad." Her mother's father's brother died in a madhouse. She says that her relatives are quiet people. For the first part of her husband's married life he drank heavily, but for the last ten years he has been a teetotaler. The drink did not make him wild.

In all cases, inquiries as to predisposition to disease in the families of our patients lead to results of doubtful value. Especially among the poor, little is known precisely of the ailments even of near relatives. The statement in the above, that the patient's maternal aunt died of "consumption" is worth about nothing as establishing a tendency to tuberculosis; for even supposing she died of phthisis, most cases of phthisis are not tubercular.

The patient was delicate even as a baby, and used to have fits. He did not grow; was three and a half before he ran alone; was a long time before he talked. The other children began to talk—*i.e.*, to say "da-da"—at the age of twelve months, and to walk at the age of eighteen months, and cut their teeth very early. Patient did not cut his first tooth until fourteen or fifteen months. These facts point to rickets quite as much as to imperfect or arrested cerebral development.

At two months of age he had fits, in which he was at first supposed to be laughing. She did not call in a doctor until he was three months old, when it was decided that they were fits. He used to fall forwards. He has had fits at short intervals ever since, but his mother has known him to be without one for three months. The paroxysms occur always at night. He goes to sleep well. The first thing that happens in the fit is that he snores. It is not a crowing noise. His mother's account of the paroxysm is as follows:—He stoops forwards; the upper arm, arm, and hand of both sides are in a state of flexion—the upper regions slightly, the lower considerably. His legs are very little affected; his soles and palms are like ice. His face is unaltered; he does not foam at the mouth; does not bite his tongue. The fit lasts ten minutes, sometimes a quarter of an hour, or half or even a whole hour. Then he is quite well, and goes to sleep. The "stiffening" only lasts a few minutes. All that is certain from this account is that the lad has nervous, and no doubt epileptic, paroxysms.

His mind has been bad all his lifetime. From the time he ran about he has been tiresome. The mother gives an intelligent account of the tediousness with which he was taught to know simple things; instancing chair and table. He will steal money that he sees about, but does not take things and sell them; he has no idea of it. If asked to choose a penny or a shilling, he would choose the penny. He swears, and uses nasty language. When eight years old he lit some papers in a cupboard, and nearly set the house on fire, but probably this was not mischief, but silliness. In the night he will strike his sister, but if roused he is sorry for it and will kiss her. His mother has had to leave three lodgings because he hammered against the wall at night, and disturbed the inmates. He is more tiresome if he goes some time without a fit. Up to the age of eight he used to pass fæces and water in the rooms. This was apparently not spitefulness, but silliness. He can say his letters, but cannot read. Does not draw, but is very fond of music. He follows the organ-men all over London. "If I take him out, I cannot get him away from them until the man stops." He will get out of bed to go to the window and hear one. According to his mother's account, he learns tunes with great rapidity and with minute accuracy; "he knows every tune." He is very fond of following vehicles, and "turning the wheel" as they go along—*i.e.*, putting a hand on a spoke, and moving his hand with it as if turning it.

Present State (1874).—His corneæ are quite bright. Bridge of nose well developed. Left central upper incisor appears to Dr. Jackson normal, but Mr. Hutchinson considers it suspicious.

The right has not yet appeared. There is a nodosity on the right tibia which Mr. Tay and Mr. Hutchinson believe to be a node and syphilitic.

Except that his lower jaw is underhung, there is nothing very striking about his cranial conformation. Chest well formed, except that he is slightly pigeon-breasted; no hair on pubes; discs normal, except for posterior staphyloma. Says he sees better when a concave glass is placed before his eye. His speech is good, and there are no paralytic symptoms.

April 25.—Very noisy and very troublesome. Does not swear, but is obscene; is not dirty; rubs his greasy fingers on the walls. Crumbled his bread upon the floor, and drank his medicine, which was by the bedside. Uses beastly language—not swearing—to himself. Exposes himself, especially (a patient next to him believes) when women are passing. He sings. He left the hospital in the same state, and was sent to a workhouse.

Slight Mental Symptoms after Epileptic Paroxysms.

There is a lad in the hospital, under Dr. Sansom's care, for mental symptoms after epileptic seizures. He had been under Dr. Hughlings-Jackson's care some time before as an out-patient for epileptic seizures, beginning by loss of consciousness, *i.e.*, without any warning. The very first symptom of his ailment was that some years ago, when with his father in the streets, the lad suddenly went up to a stranger and said, "You've got my mother's saucepan." Dr. Hughlings-Jackson supposes that this was not the first symptom of a fit, but the after-effect of a very slight fit. He believes all elaborate paroxysmal mental states occurring in epileptics, from such as this even to epileptic mania, are post-paroxysmal. His hypothesis is that there is first an epileptic discharge, which *exhausts* more or less of the highest centres. This temporary exhaustion is a negative physical condition, and its corresponding mental condition is negative—viz., defect or loss of consciousness. The positive and elaborate mental symptoms occur during over-activity of next lower nervous arrangements; there is an over-activity "from," as Dr. Dickson Thompson puts it, "loss of control." Dr. Hughlings-Jackson adopts Dr. Dickson Thompson's hypothesis as regards the indirect causation of all elaborate mental states in all cases, but does not adopt his hypothesis in explanation of the epileptic paroxysm.

Such cases have a practical bearing. The slighter the fit, the more elaborate and the more "purposive" the post-epileptic actions. The slighter the fit, the slighter the discharge; and thus the less the temporary exhaustion it causes of the very highest nervous arrangements. And as there is a gradually increasing complexity and speciality (not necessarily with equal steps) from the lowest to the highest nervous centres, it follows that the less the highest centres are affected, the more complex are the nervous arrangements left "uncontrolled"; and consequently the more complex is the mental automatism possible from their over-activity.

If the epileptic paroxysm be very slight indeed, it may, early in a case which later is evidently one of epilepsy, be overlooked, and sole attention may be given to the elaborate post-paroxysmal mental automatism; in children these attacks may be taken for outbursts of wilfulness. Sudden and transient outbursts of temper and strangeness in children should always make one search most carefully for signs of epileptic paroxysms, which may be only slight—transient pallor and vertigo; we should inquire for nocturnal incontinence of urine. Again, medico-legally these cases are important. A man after a very slight epileptic fit—one which may escape observation—may commit a "crime" with the appearance of normal possession of his faculties.

Intellectual Warnings of Epileptic Seizure.

Referring to the second of the two important cases of epilepsy reported by Dr. Joseph Coats in a recent number of the *British Medical Journal*, Dr. Hughlings-Jackson said that he believed the "thought" which that patient had was subsequent to a very slight discharge of the very highest cerebral centres. It is not very uncommon for epileptics to have vague and yet exceedingly elaborate mental states at the onset of epileptic seizures, or rather, Dr. Hughlings-Jackson thinks, just after the very earliest part of the discharge. For, as stated in the last note, he believes that *all* elaborate, although morbid, mental states arise during activity of centres which are healthy, except for loss of "control." The epileptic discharge places the highest or controlling centres *hors de combat*. Moreover, they will be equally *hors de combat during excessive discharges*, as when left exhausted by that excessive discharge. Some illustrations are taken from Dr. Hughlings-Jackson's case-books. The elaborate mental state, or so-called intellectual aura, is always the same, or essentially the same, in each case. "Old scenes revert." "I feel in some strange place" (a boy expressed it—"in a strange country"). "A dreamy state." "A panorama of something familiar and yet strange." "If I were walking along and had a fit, I should think, 'Oh, I saw that before!'" Such a feeling of "reminiscence" is not very uncommon. Another patient, trying to explain the feeling he had at the onset of a fit, put it thus:—"If I were to have a fit, and see that fender, I should say, 'Dear me, I saw that fender before!'" It is well known that such sensations of "reminiscence" are not uncommon in healthy people, or in trivial disorders of health. Some healthy people occasionally have the *feeling* that they had seen something exactly like what they were then seeing, although *at the same time* they *believe* that they could not possibly have seen it before. But we have been adducing instances of these feelings in epileptics—in patients who have them often and have them as premonitory symptoms of their paroxysms. An educated patient has called the condition one of "double consciousness," which Dr. Hughlings-Jackson believes is a perfectly accurate account. There is, he thinks, diminished object-consciousness, with increased subject-consciousness, a revelation of the normal duality of all healthy mental action.

Feelings like the above are sometimes called "Intellectual Aurae." Dr. Hughlings-Jackson thinks they are not comparable to ordinary warnings; they are not, he thinks, the result of the epileptic discharge of the highest centre, but are owing to over-activity of next lower centres, as yet untouched by the discharge. It is very common—indeed, he thinks it is the rule—for patients who have these so-called intellectual warnings to have slight abortive attacks stopping short at them—to have the so-called intellectual aura only. And here is a practical point—viz., that these "abortive" seizures are sometimes early in the case the sole ones. If a man has these vague "reminiscences" or "reveries" frequently and suddenly, we should inquire of him and his friends for vertigo, for sudden "epigastric sensation," for transient pallor of the face, etc., preceding them, or perhaps apparently accompanying them. These physical symptoms are signs of involvement of the higher centres, permitting activity of those next lower. And if we hear of these physical states we should expect that serious epileptic seizure will occur. When, however, they herald a severe fit, the epileptic discharge spreads to the lower centres, the over-activity of which produces the "intellectual aura," and renders all mental action impossible. There are convulsion and coma.

Lower than these in degree of elaborateness are much more definite mental states, as seeing spectral faces at or directly after the onset of the paroxysm.

On Paralysis after Convulsion.

In the last two notes Dr. Hughlings-Jackson speaks of temporary exhaustion by epileptic discharges. He wishes to point out that as regards the explanation of temporary paralysis after convulsion, this principle, he has recently found, has been stated by the late Dr. Todd in his Lectures, and also by Dr. Alexander Robertson, of Glasgow (*Edinburgh Medical Journal*, December, 1869). Dr. Hughlings-Jackson first stated it in 1870; he has since applied the principle, as in the above notes, to the explanation of mental symptoms *after* epileptic discharges beginning in the highest centres. These highest centres are left exhausted by epileptic discharges; thus "control is removed," and over-activity of next lower centres is permitted (see *Medical Times and Gazette*, July 10, 1873. "On the Double Condition of Loss of Consciousness and Mental Automatism following certain Epileptic Seizures").

THE PERMISSIVE ACT, CANADA.—It is stated that the Drunken Act of Canada is producing considerable excitement throughout the provinces of Ontario. A majority of the ratepayers can by this Act veto the sale of liquor in any municipality. It has been carried by large majorities in the counties of Prince Edward, Mississiquite, Grey, Lennox, Addington, Lambton, and Frontenoe. The temperance party are enthusiastic, and propose to submit the by-law to the elections in every county. The only county which has carried an opposing majority is Haldemand.

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Medical Times and Gazette.

SATURDAY, DECEMBER 23, 1876.

PHOSPHORUS IN LEUCOCYTHÆMIA AND LYMPHADENOMA.

Again and again in our therapeutic efforts we have to fall back upon the study of the natural history of disease. The more we become acquainted with the endless mobility of features which nature in her morbid moods presents, the less we are inclined to dogmatise about any good that we can do. Let us be honest, and acknowledge that many of our efforts are as likely to be toxic as curative. If any ardent therapeutist thinks this too despondent a tone to take, let him read the reports of the last two meetings of the Clinical Society. We are quite ready to concede the reasonableness of Dr. Broadbent's request for a further trial of phosphorus, but it behoves everyone who makes such a trial to bear in mind the *variables* in leucocythæmia and lymphadenoma which were brought into relief at the meetings just referred to. The most important of these we take to be the possibility of subsidence of some of the glandular swellings in lymphadenoma without improvement in the general cachexia. This occurred in Dr. Gowers' case, and likewise in Dr. Greenfield's.

In another case, where new growths occurred on the skin, recorded by Dr. Greenfield in the *Pathological Transactions* for 1876, subsidence of these nodules on the skin occurred. Dr. Moxon laid especial stress on the subsidence, and sometimes the recrudescence, of glandular swellings in lymphadenoma.

Are there any "infective" signs manifested at such periods? We have seen the *rapid* disappearance of multiple scrofulous swellings of the skin followed immediately by tubercular meningitis.

The second variable to be borne in mind is, that the number of leucocytes may change enormously, and frequently. This was very striking in Dr. Goodhart's case.

The third point to be borne in mind is, that although the number of leucocytes may steadily diminish, the patient's general condition may proceed from bad to worse. This was shown in Dr. Gowers' case. Dr. Gowers was of opinion that the leucocythæmia in his case was of glandular origin; if that be so, it seems a corollary to his proposition that the diminution in number of leucocytes was due to the rather rapid degeneration of the glands. The question raised by Dr. Gowers, as to whether the phosphorus in his case had anything to do with initiating or hastening the fatty degeneration of the kidneys, is so important that we think everybody who prescribes this drug for a patient ought to make a point of examining the urine.

Dr. Broadbent grouped together leucocythæmia, lymphadenoma, essential anæmia, Addison's disease, and intermittent hæmaturia. In all these he believed the starting-point was some altered reaction between the blood and the glands. On this we cannot even speculate, but it appears to us that no classification is sound which does not recognise the close affinity of Hodgkin's disease and Addison's disease with tuberculosis.

In reading over Dr. Wilks's cases in the *Guy's Hospital Reports*, it is impossible not to be struck with the frequency of lesions similar to tubercle, and Dr. Wilks admits that in many cases they were indistinguishable therefrom. In Mr. Haward's case also, recorded in the *Clinical Transactions* last year, there was miliary tubercle; and Dr. Fox referred to a case of leucocythæmia or lymphadenoma—we cannot recall which, but where also there occurred miliary growth in the lungs,—indistinguishable from tubercle.

We cannot agree with Dr. Broadbent that the prognosis in this group of diseases is necessarily bad.

Dr. Hughes Bennett records a case of general eczema with extremely enlarged glands and considerable leucocythæmia. The glands subsided, and the number of leucocytes greatly diminished. He records some other cases where there was slight increase of the number of leucocytes and ultimate improvement. It is true that these cases would not strictly come under what we should now designate as the definite disease, leucocythæmia; but we refer to them because it is essential in any further record of cases treated by phosphorus that the numerical estimate of leucocytes should be carefully given, as well as the symptoms.

There is, certainly, a group of splenic cases to which Dr. Goodhart made some reference, which, as regards symptoms, are grave enough, and in which, nevertheless, recovery occasionally occurs without the use of phosphorus.

Slightly rickety children are seen sometimes with considerable enlargement of the spleen, and some enlargement of the liver and glands. There is excessive pallor, great proneness to hæmorrhages (both subcutaneous and from mucous membranes), and now and then extreme dyspnœa, without any pulmonary disease to account for it. They differ clinically from leucocythæmia in that there is not any pyrexia proper to the disease, and in that there is no increase in the number of leucocytes. Such cases now and then recover absolutely, and the spleen ceases to be palpable where once it extended across the middle line and to the iliac crest. We have never seen such cases in children pass into the condition of leucocythæmia; they have either got well absolutely, or died from asthenia. In adults also this may occur, as proved by one of Dr. Hughes Bennett's cases.

To sum up the results of the debate: Phosphorus was not proved in these maladies to be of notable or, to say the least, of persistent benefit; on the other hand, the evils resulting from its administration were not sufficiently established to prevent our using it again with due precautions. Above all things, it appears essential to bear in mind the *variables* alluded to, and in further records to let us have *complete cases*.

HOSPITAL REPORTS.

The great majority of the annual Hospital Reports seem to us to have their value a good deal lessened by certain faults and shortcomings. The present season, when each hospital is getting ready its forthcoming report, is a fitting time to invite attention to this subject. Our remarks will, for the present, have exclusive reference to those of provincial general hospitals.

Certain features are common to all these documents. Everyone, as matter of course, gives its lists of officers, subscribers, and benefactors, with their respective privileges; its general and detailed statement of income and expenditure; and some account of what the money spent has done in the way of relief to suffering. Now, the first complaint we have to make is this: that the reports too often give us nothing but the crude masses of facts and figures which such statements entail. Further sifting and analysis are wanted to make them yield some results of general interest and value. Let us illustrate what we mean.

No one who turns to a hospital report will fail to find due prominence given to the sum total of its in- and out-patients for the year. But, supposing he is curious to know further—whether the said hospital is working up to the full limit of its accommodation. This can only be ascertained by information (1) as to the whole number of beds *available*, (2) as to the average daily or weekly number of beds *occupied*. Now, in ten out of twelve reports taken at random these items of information could not be gleaned. Nearly all state only the second point, not the first; while one is silent on both points. Other statistical items, which those interested in hospital administration look for in a report, are (3) the average length of stay of each in-patient. This would show the average number of times each bed changed its tenants, and involve (4) the proportion of patients to beds occupied. Such items would afford some test of the *sort* of work the institution is doing; whether it is really treating curable or relievable diseases in as quick succession as possible, or whether it is giving merely prolonged shelter to undue numbers of chronic and hopeless cases. Of such tests and checks no hospital can give too many. Now, in many reports (in six out of the twelve above mentioned) these obvious desiderata are not given. In some, it is true, they may be got at after a good deal of calculation; but points of this sort, which are the very pith and "extract" of a report, should never be allowed to lie latent in columns of words and figures,—they should be cleanly worked out, and so prominently put forward as to catch the eye, even on a cursory glance. Another piece of information, which will be sought for in vain in the majority of reports, is (5) the average daily number of the household —*i.e.*, officers, nurses, and servants. When the number of mouths to be fed is not stated, who is to say whether the consumption of food is extravagant or not? This leads us on to the matter of expenditure and the way it is dealt with in different reports.

The details of income and expenditure are always explicit enough. The prevailing fault is want of uniformity of plan in the statement of accounts, so that much difficulty is often found in fairly comparing the expenditure of two or more hospitals under particular heads. Some years ago, Mr. Wilkinson, Secretary to St. Mary's Hospital, London, suggested(a) an excellent scheme for the uniform keeping and analysis of hospitals accounts, by the adoption of which the comparative cost of different items in the working expenses of different hospitals might be seen at a glance. It is to be regretted that this or some such scheme has never been generally adopted; and we take this opportunity of once more urging the matter upon the attention of hospital authorities. It is a safeguard against extravagance (as well as parsimony), which they should do their best to put into the hands of their subscribers. It is not enough to give a comparison of the various items of expenditure in the same hospital in successive years. Comparative tables of this latter kind are given in most reports, but, as they very rarely give the yearly variations in the average contract prices of the chief items of consumption, they are very apt to mislead. A supplemental check is wanted, such as is supplied by the means of ready comparison of such items at different hospitals in the same year.

In perusing any hospital financial statement even the listless are generally on the look-out for one bit of information—viz., the average cost of each in-patient; but, strange to say, the majority of hospital reports do not give this, nor yet the average cost of each bed occupied. If their silence on such points is misinterpreted, they have themselves to thank. The statements, where given, of the average cost of each in-patient would be of more value if the basis of calculation in each case were briefly explained. A grave difficulty, we suspect, is to settle the sum to be deducted for out-patients. In only three out of some score of reports is this stated, the figures for the average cost of each out-patient being 3s. 2½d., 3s., and 1s. 10½d.

Some few reports add not a little to their general value by giving the diet tables of their respective hospitals. Those which do not should lose no time in following so good an example. A copy of the diet table is always welcome, if only as affording the means of comparing the practice of different hospitals in a matter so vital to the well-being of their inmates. Appended to the diet table should be the allowance of food and stimulants made to the nurses and domestic servants.

We turn now to a wholly different section of the hospital report, and that is the account of work done. This gives the total numbers of in- and out-patients treated, with (at least in the case of in-patients) the modes of their discharge, lists of the accidents and injuries treated, and of the higher operations done during the year. Most reports add some classification of the in-patients' diseases, that of the Nomenclature of the London College of Physicians of 1869 being chiefly followed. Some give also an analysis of the causes of deaths.

First with regard to these classifications. The common fault is the absence of any attempt to turn to useful account the crude masses of names and figures. No mention is ever made of special prevalence of certain diseases in certain localities or among certain classes of people (as will often be the case), and no attempt made by hospital authorities from the data in their possession to elicit the causes of such diseases and make them known. For instance, we see by one report that over forty cases of typhoid fever were admitted into a certain hospital during the year. Surely the subscribers to this hospital, and visitors to the town, would like to have known where these cases came from. Was the epidemic general, or confined to certain districts of the town? How was it, so far as could be learned, that a preventable disease thus managed to run riot? On no one of these points is a single word said. Now, surely, by helping to diffuse knowledge of this sort through their official reports, hospitals might lend a welcome hand in the prevention as well as in the relief of the diseases of the communities in which they lie.

Whether inquiries of this sort are to become a feature of hospital reports or not, the repulsively dry statement of work done might easily be invested with a dash of life and interest. Where is the use (save to the printer) of filling column after column with statements, that of such and such a disease there were so many cases—giving to all cases, the most rare and most common alike, the same prominence of mention and the

(a) "Hospital Relief and the Cost of its Administration in the Metropolis; being an Analysis of the Working Expenses of the principal London Hospitals for the year 1867: with Commentary, presented to the Weekly Board of Governors of St. Mary's Hospital." By J. G. Wilkinson, Secretary. Printed by order of the Board. London. 1868.

same dead level of interest? Instead of multitudinous items which no one cares to know, why not give outlines (the briefest possible) of the medical and surgical cases of rare interest, or bring to a focus the collective experience of the hospital staff on some question of treatment or of hospital hygiene? As noble examples of work of this kind from hospital authorities, we would point to recent annual reports of University College Hospital, and the last report of the London Hospital. Country hospitals, of course, have not the requisite machinery to produce anything on this scale; but besides their regular staff, they all have their one or two resident medical officers, who, by undertaking a very small amount of registration work in addition to their present duties, could hardly fail, at the end of each year or two years, to make some small contribution to medical science.

Take next the matter of the mortality occurring within the hospital walls. Very many reports content themselves with the bare statement that so many patients have died during the year, without adding the cause of death in each case, and the number of cases brought in to die twenty-four or forty-eight hours afterwards. Such bare statements are worse than useless. They are dangerous, because, if used at all for statistical purposes, as they often are, they are sure to mislead. Nor will it suffice to give, as some reports do, a mere analysis of the causes of death. The latter have little interest, except in connexion with the living cases of which they were the termination. The two should stand side by side. If the cause of death have been verified by post-mortem examination, then the briefest possible *résumé* of this should be added. Publicity on all these heads is much to be desired (*a*) as evidence of a love of scientific work in the institution; (*b*) as a further test of the sort of cases which are filling the hospital beds; (*c*) as a guarantee that there is no hushing up of discreditable occurrences, such as deaths from preventable diseases contracted within its walls; and (*d*) as tending to undermine popular prejudice against post-mortem examinations.

The last feature inviting criticism in these documents is the general absence of any official sanitary report worthy the name—the absence, that is to say, of full and frank disclosure of the health of the hospital, as evidenced by the quick or slow healing of wounds, and, above all, by the prevalence or absence within its walls of erysipelas or other traumatic infections, such as diffuse cellulitis, pyæmia, gangrene, or phagedæna. It is now a received axiom of hospital hygiene that the occasional occurrence of one or other of these diseases does not of necessity reflect upon its sanitary condition, but that any frequent visitation, or any concurrence of several cases, is clear proof of some fouling or some defective hygienic precautions in the wards.

Now, what we complain of is this: that hospital authorities, in their annual reports, are too often either altogether silent about the facts of any such diseases which may have infested their wards during the year, or, if not wholly silent, they speak of them (we do not say intentionally) in such a cursory manner and such vague general terms as to blind the public to the real foulness of their bill of health. For instance, a certain provincial hospital was for a great part of a certain year much infested with erysipelas. In the opening page of that year's report this fact is mentioned, and, further, that it had formed the subject of a special inquiry. We turn now to the detailed report of the medical and surgical in-patients for some further information about this epidemic, and find the whole thing absolutely ignored! In the tabular statement of the diseases only two cases of erysipelas are mentioned (these appear to have been admitted from outside); but of the fact, which we happen to know from another quarter, that upwards of thirty patients admitted with other diseases or injuries contracted erysipelas in the hospital,—that several of these had very critical attacks,—that some three or four actually died, if not *of*, at any rate *with*, the superadded disease,—of all this, positively not a hint is to be found. In justice to this particular hospital, it must be added that full details of the epidemic were given to the governors in a special pamphlet; but the fact remains that, *from the official annual statement about the in-patients' diseases*, it cannot be gleaned that a single case of erysipelas had originated in the house.

In the report of another hospital, in which we know erysipelas to have prevailed for some months in one year, no hint of the fact can be got either from the chairman's report or from the resident medical officer's tabular statement of in-patients' diseases. Among the latter the word erysipelas does not occur.

In another report—that of a large hospital—one sees in the tabular statement of medical and surgical in-patients' diseases a total of over fifty cases of erysipelas. Whether in any or all of these cases the patients brought the disease in with them, or contracted it afterwards in the hospital, not a word is said. Is this right?

Surely every annual hospital statement should give a sanitary report, complete and trustworthy—a *résumé* of the weekly sanitary register, which should be an institution in all hospitals. Such a report would serve as an historic record of the health of the institution during successive years. At the same time it could hardly fail to accumulate data for the elucidation of unsolved problems in hospital hygiene (the differentiation, for instance, of the causes of the several traumatic infections). Lastly, such statements are a duty which hospitals owe to the communities for whose benefit they exist, and in particular in the interests of those poor creatures who go to them in blind trust that, if they do not get cured, they at any rate shall not, in addition to their existing maladies, run any avoidable risk of contracting others perhaps still more dangerous.

We cannot see any real harm likely to ensue from a hospital taking the opportunity once a year to make a clean breast of all such matters. By so doing it will probably provoke free criticism and jealous inspection from outside. If it should, so much the better. Without the frequent outside stimulus of sharp tongues and keen eyes, that "discipline of watchfulness" which is the secret of keeping a hospital healthy is very apt sooner or later to slacken, and then we know the consequences.

THE ARROW-POISONS OF THE SOUTH SEAS.

The unfortunate loss of several British subjects who have been attacked by various tribes of South Sea Islanders in recent times has drawn attention to the mode in which they are alleged to have met their death. Notable among these catastrophes was the tragic end of Commodore Goodenough, of H.M.S. *Pearl*, who, having landed on the island of Santa Cruz, was treacherously attacked by the natives, and was wounded, together with some of his men, by arrows supposed to be poisoned. In the result, out of seven men thus wounded the Commodore and two seamen died; the rest escaped. The surgeon of the *Pearl* (Dr. Messer) had thus ample opportunity of studying the effects of the so-called poisoned arrows, and a paper by him on the subject, full of interest, has been published in the Appendix to the Navy Reports for 1875. The inhabitants of the Santa Cruz group have been from the earliest times notorious for their hostility to whites, and for their treacherous character; and assuredly if they had the means they did not want the will to render the weapons used against such new comers as deadly as possible. But the question has been raised and fairly argued, whether the natives of these parts do possess the means of rendering their arrows poisonous. The use of poisoned arrows among various foreign tribes has been received as an article of faith from time immemorial; and that some do use powerfully poisonous substances as arrow-poisons is abundantly proved by

the fact that the poison known to us nowadays as "curare" was first imported on the points of arrows. But that the greater number of so-called poisoned arrows are tolerably innocuous seems fairly clear. Thus, among many tribes fetishism enters largely into their idea of the effects of these weapons. Arrows may be anointed with substances filthy enough, such as putrid human fat and the like; but in such cases the idea was, and is, not that the arrow would kill by poison, but that the fetish attaching to it would do so. The latter plan is certainly in use among the South Sea Islanders; but the former may be so also—that is to say, that really poisonous substances may be employed for anointing arrow-heads. It is to the investigation of this last point that Dr. Messer has set himself, by a careful clinical study of the phenomena presented by the wounded men under his care; and we are bound to say that this study is most careful, complete, and valuable. Its value arises—in part, at least—from the fact that heretofore we have had no careful or intelligible account of the symptoms presented by these wounded by such arrows, navigators contenting themselves with broad general statements, but condescending to no particulars. The notion, however, that such poisoned arrows were used seems to have been, and to be, universal among seamen from the highest to the lowest. The result of this was manifest among the crew of the *Pearl*. As soon as a man felt himself wounded he began to give up hope, however slight the wound might be, and this hopeless condition could not fail to foster untoward events. In illustration, let us trace Dr. Messer's account of the wounded on board the *Pearl*.

The wounds were received on the afternoon of August 12, 1875, and were treated within half an hour. The Commodore was wounded in two places, but both wounds were slight. The wounds were sucked, enlarged, treated with nitrate of silver, and poultices subsequently applied. Two of the seamen were slightly wounded, three more severely. One sub-lieutenant got a scratch on the shoulder, but that was of the slightest possible description. The treatment was similar in all, save that in two carbolic acid was injected into the wounds. The climate was very hot and moist, and it was considered advisable to make at once for the cooler winter climate of Sydney. On the day of the mishap none of the wounded showed any constitutional disturbance. On the next day, in five of the seven there was slight headache, with a little nausea and vomiting, but these symptoms lasted only throughout the day. Beyond a little loss of appetite in one case, and some pain and swelling about the wounds of two who had been more severely injured, nothing unusual occurred until the fifth day. On that day the Commodore complained of want of sleep, some uneasiness about the wound in his side, and pain in the back. After this there was no more sleep without narcotics; the pain became more severe, extending to the back, exciting spasms, which soon extended to the neck and chest, and finally became general. Death from exhaustion followed on the eighth day after receiving the wound. In the next fatal case there was a deep wound in the deltoid, and in it was subsequently found an arrow-point. Up to the sixth day, beyond pain and swelling of the wound nothing unusual was noticed in this case, but on that day it is noted that there had been no sleep the night before, and that there was pain and spasm near the wound; these rapidly extended, ending in general tetanus, and death by spasm followed on the eighth day. The third fatal case occurred in the person of a seaman who was injured on the head, and whose cranium had been laid bare. The first note of anything serious as regards him was on the seventh day after injury. He had slept well, but there was some stiffness of the jaws. Next day the spasms had extended to the back, and on the ninth day after the wound he died in a state of spasm. In all the symptoms began in a mild form, and gradually became aggravated till death.

Now, examining into the history thus roughly traced, we are compelled to the belief that there is nothing very unusual in these symptoms. What poison is there which will lie more or less dormant in the system for five or six days, and then suddenly give rise to tetanus-symptoms? The only poison with which we are at all well acquainted, that gives rise to symptoms resembling in the slightest degree those described above, is strychnine; but assuredly the action of strychnine would not be delayed so long after its introduction into the system,—it would act at once. On the other hand, wounds like arrow-wounds, inflicted in such a climate, especially if they contain any irritating substance, are very likely to be followed by tetanus, and tetanus is apt to lead to death in the way described above. The history of these men who were wounded on the occasion of the murder of Bishop Patteson, and, again, of some men belonging to the *Rosario*, was precisely similar. May we not, then, conclude with Dr. Messer that the unfortunate termination of these cases was due to ordinary and natural causes—in short, to traumatic tetanus,—and that there was no necessity for invoking the agency of poison to produce the fatal effect? Such a conclusion would be of inestimable service to those brought in contact with these savages; it would remove the dread of certain death which seems to have affected some of the wounded in the *Pearl* to an extent which would be ridiculous were it not painful to consider. A forecast of certain death is, as we all know well, only too apt to bring about the fulfilment of its own augury. Even if Dr. Messer has only established the probability of his position—and we think he has done much more—he has done good service to his country.

THE WEEK.

TOPICS OF THE DAY.

At the meeting of the Guardians of the West Derby Union (Liverpool), held last week, a report from the Medical Officer of the Hospital was read, in which he stated that from June 1 to November 9, 689 cases of small-pox had been treated in the Hospital. Of these, 429 were vaccinated patients, 123 were doubtful, and 67 had not been vaccinated. The number of deaths in vaccinated cases was 31, of doubtful cases 47, and of unvaccinated cases 24. This shows a percentage of deaths in vaccinated cases of 6·21, in doubtful cases of 38·21, and in unvaccinated cases of 35·82. Dr. Costine, a member of the Board, remarked that the return was a clear proof—were any needed—of the value of vaccination. At the meeting of the Liverpool Health Committee, held the next day, the Medical Officer of Health reported that the number of deaths from small-pox during the past week had been fifteen, being thirteen above the average of the past ten years. Everything was being done to stem the progress of the disease; but the Chairman remarked that they could do little unless they had the sympathy of the public with them. A system of house-to-house visitation was suggested, for the purpose of enforcing upon people the necessity and benefit of revaccination.

A representative meeting of the ministers and congregations of the various places of worship throughout the metropolis was held on the 13th inst., at the Mansion House, to make arrangements for the collection of the Hospital Sunday Fund next year. The Lord Mayor presided, and several of the most influential members of the Committee were present. The annual report (which we have already published), showing the distribution of last year's collection, was taken as read. The Rev. Canon Miller then moved the adoption of the laws of the constitution of the Fund as approved by the Council, pointing out that the most important of them were that awards to hospitals, etc., be primarily based on the average total expenditure of each institution for the last three years, after deducting a sum equal to the income derived from

endowments and realised property, the amount received in legacies exceeding £100 each, and the amount of expenses and management, always subject, in each case, to a consideration of the needs and merits of the charity; secondly, that no institution to the benefits of which admission could only be gained by election from the general body of subscribers be eligible for grants from the Fund: and, lastly and chiefly, that the Council be authorised to recommend, on the application of the contributing ministers and others, in-patients and out-patients to the several hospitals and dispensaries sharing in the Hospital Sunday collection; but their recommendations should be equal to half the number only of what might be claimed by annual subscribers whose contributions in the aggregate should represent a sum similar to the award made out of the Hospital Sunday Fund to the respective hospital or dispensary. The resolution was seconded, and carried unanimously. The members of the Council were then re-elected, and the vacancies duly filled. Upon the motion of Bishop Claughton, Sunday, June 17 next, was fixed for Hospital Sunday in 1877, and the cordial co-operation of all ministers of religion within the metropolitan area was again invited.

Last week at Hampton the summons was heard against the Local Board of Hampton Wick for allowing the sewage of the parish to flow into the Thames. Penalties were claimed amounting to £122,300. It was stated that since the summons was issued Mr. Nelson had written to the Thames Conservators, pointing out to them that Hampton Wick, which was really one of the smallest communities in the lower valley of the Thames, had been most active in endeavouring to remove the difficulties in solving the problem of sewage disposal, and upon their application a Government inquiry was shortly to be held with a view to form a united district for the disposal of sewage. Under these circumstances the Conservators asked that the summons might be adjourned for six months, as they had no wish to deal hardly with Hampton Wick, but they felt it necessary to put some pressure on them. There was, at the same time, a summons against Mr. Gibbs, a private resident at Staines, to recover upwards of £25,000 for polluting the Thames for 509 days by allowing sewage to discharge into it. It was stated that the defendant was very ill, and the case was adjourned for three months.

A correspondent of the *Times*, writing from Belgrade, says:—"Fifteen wounded men arrived at the English hospital in Belgrade on the 7th inst., all very bad cases. Although Dr. Attwood has not, as yet, received a penny to assist him in his good work, he will not turn away badly wounded men when he knows they cannot receive proper treatment anywhere else. Among the patients in the English hospital is a Russian soldier, whose entire lower jaw and chin have been carried away by fragment of shell. He partakes of nothing but liquid nourishment, but appears in capital spirits, and amuses all visitors to his ward by his grotesque antics. Dr. Attwood contemplates taking him to England and trying to construct an artificial jaw of silver, and afterwards covering it by a flap taken up from the chest."

A paper was recently read by Mr. R. C. Holmes, before the Meteorological Society, on the climate of Fiji, giving an interesting account of the results of a series of meteorological observations made on the north coast of the province of Bua, Fiji, during the five years ended December 31, 1875. After describing the various characteristics of the islands, their changes of seasons at various periods of the year, the conditions of the different months, the hurricanes and storms, earthquakes and waterspouts, to which they are subject, Mr. Holmes propounded the question, Is the climate of Fiji a healthy one? To this he gave an unhesitating reply in the affirmative. As a tropical country, Fiji is remarkably healthy; the fatal diseases so common in other countries situated in the same latitude, such as cholera, fevers of various kinds, liver complaints, etc., are almost unknown there. The geographical situation of the islands is extremely favourable; surrounded on all sides by an unusual expanse of water, and placed in the region of the trade winds, they enjoy almost perpetual breezes. The smallness of the islands enables the pure air to penetrate into the inmost recesses, and every portion of each islet is perfectly open to the winds from every quarter. Calms, the great bugbear of all tropical climes, are never known; and to this circumstance the healthy condition of the islands is mainly due.

It is satisfactory to be able, at length, to record a sensible proceeding on the part of the recalcitrant Keighley Guardians. At the meeting of the Board held last week the whole of the anti-vaccination section—nine in number—tendered their resignations. As these gentlemen were professedly elected to oppose the Vaccination Act, the election of their successors will give an opportunity of showing whether or not the district has become wiser, and will allow its unenviable anti-vaccination notoriety to become a thing of the past.

An inspector from the Local Government Board visited Chatham last week in connexion with the serious outbreak of small-pox which has recently occurred in the town. Fresh cases are being reported every day; there are about eighty patients under treatment for this malady, between twenty and thirty being accommodated in the Union Hospital. Nine or ten deaths have already been reported. Orders have also been issued to the troops in garrison, forbidding them to enter certain public-houses and beer-shops in which persons are reported to be suffering from the disease. The whole of the troops have been medically inspected, and those requiring it have been revaccinated. The wives and children of soldiers have also been revaccinated.

A meeting of commanding officers and surgeons of volunteer corps was held at the Royal United Service Institution, on the 14th inst., for the purpose of taking measures for organising the training of volunteers for the special duties of sick-bearers in the field, on the principle adopted in the Army Hospital Corps. The meeting having been addressed by Surgeon Saudford Moore, of the Army Medical Department, a long discussion ensued on the subject, and ultimately it was proposed by Colonel Routledge, and carried unanimously—"That it is the unanimous opinion of this meeting that the surgeons of the volunteer force are desirous of promoting the formation of a band of sick-bearers in connexion with the force, and that they are prepared to undergo training with that object if opportunities are given them." It was also proposed and carried—"That Colonel Gordon Ives should represent the feelings of the meeting to the Inspector-General of the Auxiliary Forces, and inquire what steps he would sanction, and also obtain the views of the Secretary of State for War on the subject."

It is announced that the Parliamentary grant of £2000 a year for scientific investigations into the "causes and processes" of disease is in future to be placed at the disposal of the Royal Society. Heretofore this endowment of research has been controlled by Mr. Simon, as Medical Officer of the Privy Council.

We are happy to be able to note that the words "not in practice," which were appended to the name of Dr. Bucknill when a candidate for the Fellowship of the Royal Medical and Chirurgical Society, are no longer applicable. Dr. Bucknill is fortunately now in such a state of health as to be able to carry on his work in that department of the profession of which he is an ornament, and one of its best representatives.

Dr. McIntosh, Medical Officer of Health, reported to the Rural Sanitary Authority, Chesterfield, on Saturday last, that

the infant mortality for the fortnight was 55 per cent. The most glaring cause he asserted to be "ignorant poisoning," through administering soothing medicines containing opium, the frequent use of which became fatal. The working-classes, he said, bought large quantities of these mixtures, and chemists made up poisonous prescriptions for the children to such an extent that many of the deaths registered as from "natural causes" were really from chronic poisoning.

THE LOCAL GOVERNMENT BOARD'S CIRCULAR ON SMALL-POX.

The Local Government Board have addressed a letter to the various boards of guardians in the metropolis, stating that the present outbreak of small-pox had, unfortunately, within the last few weeks increased to such an extent as to render the hospital accommodation at the disposal of the managers of the Metropolitan Asylums District inadequate to meet the wants of the metropolis. The Board considered it necessary to draw the special attention of the several boards of guardians to the subject. The managers were adopting all the means in their power to obtain the necessary accommodation. The efforts in that direction were aided by the Board, who placed at their disposal a building at Battersea, belonging to the Guardians of the Westminster Union, which, from its complete isolation and its proximity to certain parts of the metropolis which contributed a large proportion of the total number of patients, was especially suited to the purpose. The accommodation afforded by that building would have been available at the present date, and would possibly have been sufficient to meet the needs of the case until the completion of other buildings then in progress; but, unfortunately, the Guardians of the Westminster Union, although at first assenting to the arrangement, had since interposed obstacles which had placed the metropolis at large in a very serious difficulty. The Board thought it right to advert to the fact that, on the occasion of the small-pox epidemic of 1871, many of the boards of guardians in the metropolis rendered very valuable service in supplementing the efforts of the managers. It appeared to the Board that similar efforts might be made with great advantage on the present occasion; and they therefore deemed it desirable that the guardians should take the matter into serious consideration, with the view of deciding what provisions they could at once make for the treatment of their own cases in separate buildings, pending the completion of further arrangements by the managers.

PARTIAL RESECTION OF THE SACRUM ON ACCOUNT OF A CENTRAL TUMOUR.

We transcribe the following almost *verbatim* from the *Centralblatt für Chirurgie*, No. 46:—The above operation was performed by R. Volkmann on the wife of a gentleman of property, twenty-three years old, and in good health. The left edge of the sacrum was laid bare by a long incision from the sacro-iliac synchondrosis to the apex of the bone. This part of the wall of the sacrum had been distended into a scaly mass by the growth—a myeloid tumour. The chisel was introduced forcibly into the sacrum below the left sacro-iliac synchondrosis. The bone was divided by an incision curved towards the right, so that the tumour was completely surrounded by it. A strip of the right side of the sacrum about two centimetres broad remained, and the coccyx was not interfered with. After the bone had been chiselled through, the tumour was separated from the rectum with knife and scissors. The vessels were ligatured with catgut; the wound, which was about large enough to hold a man's fist, was filled with antiseptic gauze. The operation was performed under the spray, and the after-treatment was done antiseptically, with particular attention to drainage. Six weeks afterwards the patient was in a fit state for dismissal, with a superficial granulating sore, and scarcely any discharge. There were never any symptoms of inflammation of the cord or its membranes. The only evil consequence was that the patient could not retain her water so long as before the operation, and complained of long-continued pain in the rectum after defæcation; but these troubles had also, according to later accounts, almost disappeared at the end of the following four months. It is almost superfluous to point out the extreme interest of this case, not only because of the fact that the spinal canal was freely opened, and must have remained open for some time, without any mischief resulting to the cord or its membranes, but also because it indicates a fact which should form part of the creed of modern surgeons—viz., that operative surgery has not by any means reached its limit. Professor Volkmann has added one more region to those to which the surgeon's knife is admissible. Is it not almost certain that the surgery of the future will deal with other and more vital parts? And lastly, it may be wise to reflect that so severe an operation could hardly be undertaken by the boldest surgeon without a firm belief in the efficacy of the safeguards which modern improvements have introduced in the treament of wounds.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of December 16 (the President, Dr. Hyden, in the chair), Dr. J. W. Moore showed a myxomatous sacoma of large size, which his colleague Mr. Porter, Surgeon to the Queen, had removed from the left breast of a pliparous woman, aged thirty-five. The tumour was six years a growing. Mr. F. T. Porter exhibited a specimen of fibrous tumour of the uterus. Dr. H. Kennedy showed a heart which was undergoing fatty degeneration in a young man aged twenty-six, an inveterate drinker of porter. The liver also was enlarged and fatty. The President showed a case of perihepatic abscess with localised peritonitis, which in all the clinical phenomena had simulated typhoid fever. The patient was a man aged fifty. Dr. Hayden also laid on the table an example of intestinal ulceration in typhoid fever, the patient having been a woman aged twenty-five, who died on the third day after a severe intestinal hæmorrhage, and with a temperature of 106·6°. Dr. E. H. Bennett presented a series of fractures, cased in a tramway accident. The patient died in four or five hours after the injury. There was a comminuted and impacted fracture of one femur, a comminuted fracture of the humerus involving the epiphysary line, and an extensive fracture at the base of the skull. Mr. Tyrrell showed casts illustrating remarkable hypertrophy of the tibia and fibula from osteitis of the tibia. The affected limb became two inches longer than the sound one, and presented a very grotesque appearance. Dr. James Little showed the brain of a girl, aged fifteen, who died of subacute cerebro-spinal meningitis of two months' duration. Her temperature had risen at one time to 106°. The brain was very firm, the lobes were agglutinated, and the arachnoid was opaque. Mr. H. G. Croly exhibited an example of fracture of the seventh cervical vertebra with compression of the spinal cord, and death on the third day. The Society adjourned to January 13, 1877.

THE INCREASE OF SMALL-POX.

According to the return of the Registrar-General the deaths from small-pox in London, which had been 67 and 50 in the two preceding weeks, rose last week to 75—the highest weekly number since the commencement of the present epidemic; 34 were certified as unvaccinated, 25 as vaccinated, and in the remaining 16 cases the medical certificates did not furnish any information on this point. Of the 75 fatal cases, 34, or 45 per cent. of the number, occurred in private dwellings. Two of these cases had been admitted to the metropolitan hospitals from districts outside "Registration London"; 4 belonged to the West, 25 to the North, 3 to the Central, 10 to the East, and 31 to the South groups of districts;

the largest increase of deaths having occurred in South London. The Homerton Fever Hospital is now principally given up to the treatment of small-pox cases, and the Metropolitan Asylum Hospitals contained 696 small-pox patients on Saturday last, against numbers steadily increasing from 185 to 586 in the seven preceding weeks. Small-pox is also spreading in various provincial cities and towns, as in Chatham, Liverpool, and elsewhere, and on Thursday it was reported that a case of the disease had occurred at Aldershot, and that orders had been given for the prompt vaccination of all the troops stationed there.

HOSPITAL FOR INFECTIOUS FEVERS FOR MARGATE AND RAMSGATE.

LAST week a deputation, representing Margate, Ramsgate, and St. Lawrence, waited upon the President of the Local Government Board to ask that the Board would grant a provisional order sanctioning the erection of a hospital on a piece of ground purchased by the three unions, for the reception of patients suffering from small-pox. The ground selected stands equidistant between each of the three unions, and the object of building the hospital there was to save the expense of erecting three separate establishments. The great difficulty, however, was to determine to whom the land should be conveyed, how the money was to be obtained for erecting the building, and how to apportion the costs between the unions. Mr. Slater-Booth observed that it was a pity, as they had agreed upon so much, that there should be any differences about the details. He would, however, do all he could to frame a measure to meet the requirements of the case.

THE HEALTH OF MARYLEBONE DURING NOVEMBER LAST.

THE report of Dr. John Whitmore, Medical Officer of Health for the parish of St. Marylebone, shows that during the month of November last the death-rate of the parish was equivalent to an annual death-rate of 22·6 per 1000 of the population, showing an increase of 6·35 over the death-rate of the previous month. This increase was almost entirely due to a class of diseases which a low temperature invariably renders prevalent and fatal. Dr. Whitmore remarks that small-pox is slowly creeping on—pretty much as it did at the commencement of the outbreak in 1871, when, in this parish alone, 132 persons fell victims to it; to which must be added a large number who were removed from the parish and died in the Asylum Hospitals. Whether it will reach the same gigantic proportions, or become as destructive to life as in that year, depends very much upon the disposition of the people to take care of themselves, and the promptitude with which local authorities put in force the various precautionary measures legally entrusted to them. He also states that he has frequently visited the vaccination stations of the parish, and is glad to be able to report that the number of primary vaccinations are gradually increasing, and have been invariably successful. The attendance of adults for revaccination is, however, exceedingly small; and, as it has been proved by an overwhelming mass of statistics that the protective power of primary vaccination in infancy may, and often does, wear out in ten or twelve years, it is most important for the ultimate subjection of small-pox that revaccination should be encouraged in every way. The number of deaths registered in the parish from small-pox during the month of November was three; two stated to have been unvaccinated, and the third doubtful. Four patients suffering from the disease were removed to the Small-pox Hospital at Homerton. In every case appropriate disinfectants were, as far as practicable, employed.

THE ADMISSION OF WOMEN TO THE PROFESSION.

THE King and Queen's College of Physicians in Ireland have recently approved the credentials of two lady-candidates for the Licence in Medicine of the College, but as yet neither candidate has presented herself for examination. Miss Edith Peachy is certified as having complied with the conditions required for admission to the First Professional Examination; while Miss [or Mrs.] Eliza Louisa Walker Dunbar is expected to offer herself as a candidate for the full Licence in Medicine next February. She is a Doctor of Medicine of the University of Zürich, and as such is exempt from the First Professional Examination, in accordance with a by-law of the College. We understand that the Fellows were divided in opinion as to her admission for examination, and it was only after a very close division, on December 1, that the question was decided in the affirmative.

PORT SANITARY COMMITTEE OF LONDON.

THE last meeting of the Port Sanitary Committee of the Corporation of London for this year was held last week. The Medical Officer of Health, in presenting his usual report, commented upon the commencement of another outbreak of epidemics on board the *Cornwall* school-ship off Purfleet. The captain, acting under the advice of the Port Sanitary Authority, removed seventeen boys to hospital at Greenwich. The comparatively frequent occurrence of epidemics on board these school-ships shows the absolute necessity of insisting that every ship of this class shall be provided with proper hospital accommodation, without, but near to, the ship itself. The best means of providing this accommodation are set forth in detail in the various half-yearly reports that have been presented by the Port Sanitary Committee to the Corporation of London. The school-ship *Worcester* is about to be vacated by the cadets, and if the school-ships united for hospital purposes, and obtained the loan of this vessel from the Admiralty for the accommodation of their sick, a grave difficulty in school-ship administration on the Thames would be partially and practically solved.

THE CLINICAL SOCIETY.

AT the last meeting of the Clinical Society, the President, Sir William Jenner, announced that the Council had—on the recommendation of the President himself, we believe—decided to appoint two special committees: one to inquire into the incubation period of scarlet fever, diphtheria, erysipelas, and typhoid fever; the other to ascertain what deleterious effects follow the prolonged and continuous use of chloral in ordinary doses. On the first committee Sir W. Jenner, Dr. Murchison, Dr. Cayley, Dr. Shirley Murphy, Dr. Broadbent, and Dr. Buchanan have been requested to serve; and on the second, Sir W. Jenner, Dr. John Harley, Dr. Ringer, Dr. Barlow, Dr. Andrew Clark, and Dr. Buzzard. The subjects are of unquestionable importance, and the committees have been most happily selected.

SUCCESSFUL OPERATION FOR EXTRA-UTERINE PREGNANCY.—In the *American Practitioner* for September, Dr. E. T. Easley reports a case in which the removal of an extra-uterine fœtus was followed by recovery. The patient was thirty-four years of age, and the mother of three living children. The duration of pregnancy was twenty-four months. On examination before operating, the child was found to be lying directly across the front of the abdomen, the head in the right iliac fossa, back to symphysis pubis. An incision was made in the line of the linea alba, extending from an inch above the umbilicus to within an inch of the pubes. The cyst—dense, fibrous, and tough—was not adherent in front, but had contracted extensive adhesions below. The child, of good size and well preserved, was adherent intimately at *all* points to the cyst. Liquor amnii absorbed; placenta nearly atrophied; the cord a mere string. The child was broken up, and extracted piece by piece, and the cyst cavity sponged out and cleansed with a chlorinated wash. The edges of the cyst were stitched to the abdominal wound by a fine uninterrupted suture, and the whole closed by deep interrupted sutures. Free drainage was kept up from the lower end of the wound, and the cyst-cavity constantly cleansed with antiseptic solutions until it became gradually obliterated by suppuration and granulation.

FROM ABROAD.

Gonorrhœal Endocarditis.

Dr. Marty, of the Val-de-Grâce, has a paper on this subject in the *Archives Générales de Médecine* for December. It is based on a case under the care of Professor Poncet, but there is a pretty full *résumé* of a number of cases previously recorded.

D., aged twenty-two, was admitted to the Val-de-Grâce under M. Poncet, August 17, 1876. There were no rheumatic or cardiac antecedents in his family, and he had never suffered from any articular symptom. When five years old he stated that he had been subject to palpitations, but for several years he had been in the habit of lifting heavy weights without any trouble. His gonorrhœa began on August 15, after eight days' incubation. The attack was of moderate severity; rather sharp pain, and abundant discharge; a little local inflammation; no general phenomena. In a few days he had some gastric catarrh, but not the least joint-pain. From August 17 to September 22 the gonorrhœa followed its usual course. On September 22 he had repeated rigors and intense headache. His gonorrhœa diminished without being completely suppressed. On the 26th the first sound at the base was altered, and on the 28th there was a systolic murmur, heard best at the junction of the third left costal cartilage with the sternum, and conducted along the aorta. His temperature was 101·4° in the morning, and 103·2° in the evening. It had been so within a few points for four days, but the patient did not show much distress. His tongue was moist, his pulse full and strong. He was treated with a blister over the cardiac region, and digitalis. On August 4 there was some vomiting and a little intermittence of pulse. On the 5th there was some presternal pain; the pulse was full, but intermittent. The murmur was traced along the vessels of the neck. The discharge was almost *nil*. On the 6th the evening temperature again rose to 102·9°, and there was palpitation for the first time. There was abundant sweating; constipation; tongue moist. On the 8th there were some râles heard in the lungs, believed to be due to œdema. After the 13th the patient gradually improved. On the 23rd there was nothing to note except that he was feeble, that he still sweated, that the murmur was scarcely altered, and that the urethral discharge had quite disappeared. On the 26th his general improvement was still maintained, but the gonorrhœa reappeared. Dr. Marty believed that the murmur was due to the occurrence of proliferating endocarditis at the level of or on one of the aortic valves.

We have only space to summarise Dr. Marty's general conclusions, which are as follows:—Gonorrhœa may be complicated with inflammation of all the serous membranes, and may act in a direct way on each of them. Rheumatism is by no means a necessary middle term between the specific lesion and the lesion of the serous membrane, although the cases of coexistence of the two complications are most frequent. The cardiac complications are rare. Of the several orifices the aortic one is most commonly attacked. Endocarditis appears to have occurred as frequently as pericarditis, if not more so.

Leucocytosis.

Dr. Henri Bonne has just written a book on the "Variation in the Number of White Corpuscles in the Blood in Various Diseases." Hayem's method has given much greater accuracy to these observations than the necessarily vague statements previously made. Amongst the causes leading to variation in the number of leucocytes, Dr. Bonne draws special attention to the formation of pus in the economy. The author finds that there exists a constant relation between the production of pus and the presence of an excess of white corpuscles in the blood. Thus an abscess forms. During the period of its evolution there is an excess of leucocytes in the blood. On the contrary, as soon as the pus escapes this exaggerated number disappears. In like manner, when there exists a suppurating wound, one finds the white corpuscles in excess. In all febrile diseases the period of leucocytosis does not seem to correspond to the increase of temperature, but to the formation of pus in the organism. In pneumonia it only occurs in the period of hepatisation. The author has established a relation between the eruption of a group of herpes vesicles and the quantity of white corpuscles, these diminishing when the eruption is produced. The lochial discharges which follow labour and leucorrhœas cause diminution of leucocytes.

Hammond on Incontinence of Urine.

In a paper "On Nocturnal Incontinence of Urine" communicated to the *Ohio Medical and Surgical Journal*, Prof. Hammond, of the University of New York, says that, from whatever cause induced, nocturnal incontinence of urine consists in an excessively irritable condition of the sphincter of the bladder. The usual relation existing between the two spinal functions—the one contracting the sphincter, the other relaxing it—is disturbed, and the latter preponderates. There is accordingly an excessive degree of excitability in the direction of relaxation, and the immediate seat of the cause is doubtless to be found in that part of the spinal cord in nervous relation with the part in question. It is to the spinal cord, therefore, that our therapeutical measures should be directed, and these should consist in the employment of those means which are known to lessen the excitability of this nervecentre. He has found the subjoined plan of treatment so efficacious that he has followed it exclusively for several years past:—1. Supposing the patient, as is generally the case, to be a child, the bladder should be emptied on going to bed, and then two or three times afterwards the patient should be taken up, and again made to urinate. 2. Sleeping on the back should be prevented. The prone position is one which, of all others, increases the amount of blood in the cord, and hence augments its irritability. 3. The following should be given for several months—three or four at least; if stopped sooner the affection is liable to return:—Zinci bromidi ℥ss. Dissolve in four ounces of fluid extract of ergot, and let the patient take ten drops of the solution three times a day; the dose to be increased five drops every month. It is best administered after meals, being then less apt to excite nausea or vomiting. Should either of these symptoms prove troublesome, the ensuing two or three doses may be somewhat smaller. Children from four to twelve years can take the above-mentioned doses without disturbance of the general health. For adults the same dose may be given to begin with, and be augmented by five drops every two weeks instead of every month. It will, says the author, almost invariably be found that by these means the incontinence of urine is cured, and the general health of the patient much improved, but occasionally the bromide of zinc is not well tolerated; it proves irritating to the stomach, and induces a peculiar cachexia, characterised by emaciation, paleness of the complexion, a dull expression of the face, dryness and roughness of the skin, obstinate constipation, etc. In such instances the bromide of iron may be substituted for the zinc. It should be given in the form of a syrup (ferri bromidi ℥j., syr. simpl. ℥vj), in doses beginning with five grains three times a day, gradually increased to fifteen or twenty. As each teaspoonful of the syrup made according to the above formula contains about ten grains of the bromide of iron, the dose at first would be half a teaspoonful, increasing gradually to two teaspoonfuls. Whilst the iron is being taken, the fluid extract of ergot should be given separately, and, like it, should be gradually increased from ten drops three times a day to a drachm. In adults the principles of treatment should be similar, but, instead of the bromide of zinc, the bromide of either potassium, sodium, or calcium should be employed, and it is not necessary to give the remedy in augmenting doses. In extreme cases, blisters to the skin are valuable adjuncts, and in several instances the actual cautery has been employed with great success. As in children the bladder must be emptied late at night, the prone position must be scrupulously avoided, and the medicines continued for several months. The above remarks on treatment do not apply to incontinence of urine arising from paralysis of the sphincter, so frequent a phenomenon in organic diseases of the spinal cord. Hysterical incontinence, though not properly embraced in the above category, yields readily to the bromide and ergot treatment.

The Grocers' Company have given £500 towards the building fund of the Metropolitan Free Hospital.

Good Service Pension.—Her Majesty's Government, on the recommendation of the Government of India, has granted a good service pension of £144 per annum to Surgeon-General Edward Green Balfour, late chief of the Medical Service of the Madras Army.

REVIEWS.

The Physicians and Surgeons' Visiting List. London: J. Smith and Co., 52, Long-acre.

We have received from Messrs. Smith and Co. copies of their Visiting Lists and Diaries for the year 1877. To a large number of our readers these useful annual publications are so well known, and the value recognised, that it is unnecessary to do more than announce their appearance; but to those who have not yet adopted the "Visiting List" we would say—Do so at once; and we can promise that it will be found an invaluable aid to punctuality and order in the working of a practice.

On certain Endemic Skin and other Diseases of India and Hot Climates generally. By Tilbury Fox, M.D., F.R.C.P., etc., and T. Farquhar, M.D. Including Notes on Pellagra, Clou de Biskra, Caneotica, and Aleppo Boil (with five plates), by H. Vandyke Carter, M.D. Lond. Published under the sanction of the Secretary of State for India in Council. London: J. and A. Churchill. 1876. 8vo, pp. 360.

This work consists of the answers furnished by various medical men to questions drawn up by Dr. T. Fox and Dr. Farquhar, and embodied in a "Scheme for obtaining a Better Knowledge of the Endemic Skin Diseases of India and of other Foreign Countries," which was circulated by order of the Duke of Argyll, when in office in 1872. The diseases about which information was sought were the following:—Morphœa, sclerodema, frambœsia or yaws, Delhi sore and its allies (Aleppo boil, biskra bouton, etc.), keloid fibroma, ainhum, bucnemia tropica, fungus foot, leprosy, leucoderma, Burmese ringworm, Malabar itch, pityriasis versicolor, lichen tropicus, and pellagra; and a good deal of useful matter has been collected with reference to them. Thus, Malabar itch turns out to be scabies, and not ringworm as was formerly supposed; Tokelau ringworm is a true ringworm, the fungus of which has been detected by Dr. T. Fox; and morphœa (Addison's keloid) is proved to have no connexion whatever with leprosy. We wish that the real nature of Aleppo boil and Delhi sore, if they really are something *sui generis*, had been made out. Dr. Geber's paper, to which Dr. Fox refers, though he evidently has never read it, proves conclusively that people have been content to keep a number of diseases together under a single name, and regard them as identical just because the natives did so. But Dr. Geber does not, as Dr. Fox asserts, deny that there is any disease which might be called Aleppo boil; he only restricts the title to inflammations of the skin arising from mechanical injuries which are especially remarkable for their long duration. Such inflammations form a small residuum out of a large number of cases of so-called Aleppo boil, the vast majority of which are due to syphilis, lupus, scrofula, eczema, and other common skin diseases.—(Cf. *Medical Times and Gazette*, September 18, 1875, page 341.) A paper by Dr. Schlimmer, of Teheran, which we have before us ("Die Aleppo-Beule," *Wiener Medizinische Wochenschrift*, No. 52, 1875), essentially confirms Dr. Geber's view, that the so-called boil is a thing which exists more from the prejudice of the natives than from anything else. They allow any scratch or sore to fester and remain untreated, because they regard it as a "*noli me tangere*," which protects them from internal disorders, just as our English poor think you may "drive in" an eruption if you cure it. Dr. Schlimmer states that if you destroy the sore at its commencement with caustic, it gets well there and then, and scarcely leaves a trace of scar; and Dr. Geber found that cleanliness alone cured it in a few weeks. We doubt whether this question, and many others connected with foreign skin diseases, will be settled effectually and in a scientific manner until the Government elects to send out a Special Commissioner trained for the purpose in British and Continental schools, and thoroughly acquainted with the diagnosis of diseases of the skin, to investigate Asiatic skin diseases in India and elsewhere. It is evident, from the answers received in reply to the questions of the scheme, that some of the medical men at foreign stations are not *au fait* at the diagnosis of skin diseases, nor, from the absence of microscopes and other apparatus, in a position to investigate them properly. The value of this report, it seems to us, exists rather in the future—if we may so express it—than in the present. The generation of medical officers which from now on goes out to various stations under the British flag will know from it how much remains to be done to clear up our knowledge of tropical and other foreign akin diseases; and by duly preparing themselves by some special study in England, by acquiring skill in the use of the microscope, and in the methods of mounting specimens for it, they will be able to throw valuable light on the subject before us. The framers of the scheme have executed their work well; and though we may not entirely agree with all their conclusions, we may offer them our congratulations on accomplishing as much as they have done.

The Rivers Pollution Prevention Act, 1876, with Introduction, Notes, and Index. By Alex. Glen, M.A., LL.B. Cantab. London: Knight and Co., 90, Fleet-street, E.C. 1876.

The object of this little work is to recapitulate in a brief form the chief provisions of the law connected with the subject of the pollution of rivers; but as the principal object has been to explain the new powers which have been given by the Act of last session to sanitary authorities and private persons who are interested in the improvement or preservation of the purity of the water in running streams, the references to other enactments have been made as concise as possible. These references deal principally with the Public Health Act of 1875, and a number of decisions of the courts have been inserted in the most appropriate places. It is, in fact, one of these handy books for ascertaining the law of the land upon certain points of legislation, which will render it particularly useful to such as are interested in, or compelled to deal with, this subject.

GENERAL CORRESPONDENCE.

GOA POWDER IN SKIN DISEASES.

Letter from Sir Joseph Fayrer.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the *Medical Times and Gazette* of October 24, 1874, I gave an account of a remedy valuable in the treatment of certain cutaneous disorders, and well known in India as Goa powder. This elicited some important information on the subject from Dr. J. F. Da Silva Lima, of Bahia, Brazil, which appeared in the same journal on March 6, 1875; and subsequently from Professor Attfield, in the *Pharmaceutical Journal* of March 13, 1875; and again from Mr. E. H. Holmes, in the same journal of April 10, 1875.

These papers clearly show that the drug in question is the product—the pilli, or heart-wood—of a leguminous tree growing in the Brazils, where it and others are known as the "araroba," or "aririba," or "red wood"; and that it consists largely of chrysophanic acid—as much, indeed, as 85 per cent. Mr. Holmes thinks that it may be the product of a species of Cæsalpinia; and he says that Dr. Bimfriu, Professor of Botany in Bahia, states that the term of "araroba," or "araribа," is applied to a number of trees by the natives, and that those to which Martius has given that name do not yield the drug. He believes that the tree which does yield it is as yet undescribed by botanists.

My old friend and teacher, Professor Balfour, of Edinburgh, tells me that he has now growing in the Botanic Gardens of Edinburgh a plant that is believed to be the one from which Goa powder is derived. We therefore have a prospect of obtaining some reliable information on a point not yet cleared up.

There are two forms of this powder used in India—the Goa and the Bahia powders—probably identical; or chrysarobine, as they are called; and they are justly considered as potent and efficacious remedies in the treatment of cutaneous diseases. I am glad to see that the subject has attracted the attention of the profession in England, and that Dr. B. Squire has drawn attention to it in a paper in the *Pharmaceutical Journal* of the 16th inst., in which he recommends that the active principle should be used in an ointment made of the chrysophanic acid, prepared by dissolving it with lard in hot benzol, the result being a perfect ointment, free from any roughness, grittiness, or precipitate.

Dr. Squire thinks that in this form it will be more efficacious than the Goa powder applied in the usual way—*i.e.*, by mixing it with water, vinegar, or lemon-juice; and it may prove to be so. But I must say I have never observed the inconvenience he alludes to, of the remedy separating from the skin in the form of a powder when the application dries.

I have found that more than two or three applications were rarely required, and that it produced the most satisfactory results. It is just possible, too, that if the ointment be better than the watery or acid preparation of the powder, the powder itself, as prepared by nature, may be more efficacious as an ointment than the chrysophanic acid derived from it; and it can be made into an ointment if desired. But, be that as it may, I repeat that I am glad to hear that this valuable remedy is likely to find favour in this country; and I hope Dr. Squire and others will continue their investigations as to its real value.

December 19. I am, &c., J. Fayrer.

PERIODIC NEURALGIA NOT DEPENDENT ON STRUCTURAL LESION.

Letter from Surgeon-General Francis.

[To the Editor of the Medical Times and Gazette.]

Sir,—In discussing the treatment of refractory chronic cases of neuralgia not dependent on organic disease or injury, where the return of pain has become periodic, one frequently hears, both from patient and physician, that everything has been unavailingly tried; and that the sufferer, tired out at last, has decided on going abroad in view of seeing the effect of travelling and change of scene.

The practitioner who has been accustomed to deal with such cases in tropical climates naturally inquires to what extent the anti-periodic remedies—notably quinine and arsenic—have been pushed. The answer will probably indicate doses considerably less than those which he has been in the habit of prescribing, with—in cases where the drugs were not contra-indicated—almost unvarying success; and it is to encourage those who have not had this experience, to try the effect of similar doses, that I ask you to kindly insert these lines in your journal. During a residence extending over several years in India I have frequently given, in suitable cases, from ten to twenty, and even thirty grains of quinine; and, where this has been ineffectual, from twenty to thirty minims of Fowler's solution of arsenic have succeeded in staving off the attack. The habit once broken through, smaller and gradually diminished quantities of either drug (whichever suits the particular case) will be sufficient; but the remedy must be continued for a few days. In some instances quinine and arsenic together (from six to ten grains of quinine, and ten to fifteen minims of Fowler's solution) will produce the desired effect, which neither would have produced singly. It is important to remember that when quinine is given by the mouth the administration should be preceded by a suitable purgative (unless, indeed, this be clearly contraindicated). Hypodermic injection with the neutral sulphate of quinine(a) is, however, the better mode (especially where the stomach is irritable), as a fourth only of the quantity need be used, and the result would be secured more speedily. I have adopted the same treatment in cases of neuralgic gout where the attacks have shown a decided tendency to become periodic.

I shall be most happy to give further information to anyone who may ask for it. I am, &c.,

C. R. Francis, M.B. Lond., Surgeon-General.

THE PREVALENCE AND FATALITY OF NERVOUS DISEASES.

Letter from Dr. Julius Althaus.

[To the Editor of the Medical Times and Gazette.]

Sir,—Since the publication of the first portions of my paper on the above subject in your columns, Dr. William Farr has drawn my attention to some statements I have made in it on certain apparent discrepancies I had discovered in the Annual Reports of the Registrar-General, and which I had attributed to arithmetical errors or misprints on the part of his office. The only object of my researches having been to elicit the truth, if possible, unalloyed by any error, I have now great pleasure in stating that Dr. Farr has proved to my satisfaction that the discrepancies which I have pointed out are all accounted for in his volumes, either in footnotes or in changes of classification, or in the causes of death in London having in the earlier Reports been taken from the fifty-two or fifty-three weekly tables, and not from the registers of the calendar year of 365 days, with the view of economising labour.

In vindication of myself I have only to remark that I had not the slightest wish, in commencing the researches which I have undertaken, to find fault with, or to discover errors in, the Registrar-General's Reports. On the contrary, I approached these volumes with an absolute belief in their accuracy, and was much disappointed in meeting with certain discrepancies and omissions which I could not account for, and which, at the time, appeared to me to impair the usefulness of these volumes, but which now have been satisfactorily explained.

The practical lesson to be learnt from this incident, and which will no doubt be of value to future students of national pathology, is that, in making extracts from these Reports, it is not sufficient, as in other works of reference, to look simply to those matters which appear to be of importance for a special object, but that one must be prepared to go through the entire work from beginning to end, and from the first to the last page. I much regret that I did not communicate with Dr. Farr in the first instance about these matters. Had I known the courtesy of his disposition and the charm of his manner, as I know them now, I should most certainly have done so; but previous experience of officialism discouraged me from taking such a step, of which I thought that no notice would be taken.

With regard to my work itself, the facts to which I have drawn the attention of the profession will now stand out with even greater precision than before, since certain apparent sources of error, which might have been thought to invalidate my conclusions to a certain extent, have been removed; and the laws which regulate the occurrence of disease will only appear to be all the more clearly and accurately defined. It is my intention to republish my paper in a separate form, in which all the circumstances to which Dr. Farr has drawn my attention shall be utilised. I am, &c.,

Julius Althaus, M.D.

18, Bryanston-street, December 13.

(a) One grain of quinine to twelve minims of water. The chance of boils is thus greatly diminished.

We see by the *Times* of the 19th inst. that the prisoner Rogers, who some time since victimised so many medical men in and about London, was on Monday last sentenced at the Middlesex Sessions to four months' hard labour.

Pathological Society.—The meeting of this Society on Tuesday, January 16, will be set apart for the exhibition of specimens illustrating the pathology of visceral syphilis. We understand that the Council are desirous that the specimens brought forward should illustrate something new or unusual in the histology of the disease, although specimens of interest in other respects will be welcome. Gentlemen intending to exhibit are requested to send in their names with the subject of their intended communication at once to the Medical Secretary.

Prickly Pear as Fodder for Cattle.—Anyone who has been in India must have noticed the prodigious growths of that hideous vegetable the prickly pear, with its misshapen masses of vegetable tissue, which can only be compared in shape and size to large hams, and covered with a most dangerous apparatus of prickles. Not only is it used as a most effective fence for villages, but if any piece of land goes out of cultivation, it soon becomes the seat of luxuriant growths of this intractable vegetable. It is most difficult to root up; its flesh is so succulent that it will neither become dry nor burn; and the usual mode of dealing with it has been to bury it, in the hope that it may rot underground. Meanwhile, it affords a harbour for abundance of snakes and other noxious vermin. Luckily, Messrs. Harvey and Savapathy, of Bellaree, stimulated by the scarcity of fodder for cattle, have tried the experiment of feeding their bullocks upon it, and with a good result. They have devised a kind of forceps or tongs for seizing the leaf, some shears for getting rid of the thorns, and a brush for cleansing away any fragments of thorns that may adhere to the pulp. Then they find that, with a little coaxing at first, cattle eat it readily enough. Thus by making use of it there is every hope that large quantities of this noxious vegetable may be destroyed, and that the lives of many cattle may be saved; for we need not say that, in such a famine as now rages in Southern India, the animals are as badly off as their masters, or worse. Many a poor ryot sees his bullocks die of hunger, or else has to sell them at a ruinously low price, because he cannot get food for them.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, DECEMBER 5.

Mr. JOHN WHITAKER HULKE, F.R.S., Vice-President, in the Chair.

CHOLESTERINE-CONCRETION OF THE VERMIFORM APPENDIX.

THE report of the Chemical Committee on Dr. Thorowgood's specimen of concretion from the vermiform appendix (*Medical Times and Gazette*, December 9, page 663) was read. The mass consisted almost entirely of cholesterine, and its biliary origin was beyond doubt.

ANEURISM OF THORACIC AORTA.

Dr. LEDIARD exhibited two specimens of aortic aneurism. The first was from a man of thirty-two, who died suddenly of hæmorrhage from the mouth, after suffering for four months from cough, pain in the back, and occasional laryngeal spasm. Post-mortem an aneurism involving the posterior half of the arch of the aorta, and presenting an anterior and posterior portion, was found in the chest. It contained a large clot; had eroded the upper dorsal vertebræ; and communicated with the œsophagus by means of an opening as large as a sixpence. The heart was hypertrophied. There was no history of syphilis in this patient. In the second case the rupture took place into the trachea, and occurred in a female of fifty-four, who had for years laboured under palpitation, dyspnœa, and cough. In hospital she suffered from pain in the left arm, and congestion and œdema of the neck; the left radial artery was imperceptible; the physical signs were not peculiar. Death was due to gradual exhaustion, with small hæmoptyses. Post-mortem the body was loaded with fat: the sternum was eroded near its articulation with the left clavicle. The arch of the aorta was occupied by a large aneurism; the left subclavian artery was obliterated; the left carotid followed a circuitous route; and the descending thoracic aorta as far as the seventh dorsal vertebra was dilated. A cribriform opening led from the sac into the trachea to the left of the bifurcation. The heart was hypertrophied. There was no history of syphilis in this patient; but she had been a hard drinker.

Dr. C. THEODORE WILLIAMS asked whether the state of the pupils had been peculiar. In one-third of all cases that he had seen the pupils had been unequal. Sphygmographic tracings of the radials would also have been interesting.

Dr. LEDIARD replied that the pupils were equal in both the cases. No sphygmographic tracings had been taken.

Mr. LENNOX BROWNE stated that in such cases of thoracic aneurism the diagnosis might be made by the laryngoscope, from the appearance of the cords and their movements, when, from the noisy respiration or other cause, the stethoscope failed.

The CHAIRMAN remarked that when an aneurism burst into a mucous cavity the opening was generally small, and death slower; but when into a serous cavity, the opening was large, and death sudden.

UNOBLITERATED DUCTUS ARTERIOSUS.

Mr. WALSHAM showed this specimen, in which the ductus arteriosus was half an inch long; opened into the aorta half an inch lower than normal; and was a quarter of an inch in diameter at the aortic extremity, while its end in the pulmonary artery was the size of a crowquill. The foramen ovale was closed, and the other parts were normal. The specimen was found in the dissecting-room, in the body of a man of forty-seven, who was believed to have died of pericarditis. Such a condition was rare at an advanced age without other circulatory abnormality. It had, further, begun to close from below upwards.

Dr. COUPLAND referred to a case of Dr. Greenhow's (recorded in the last volume of the *Clinical Transactions*) which had been accompanied by an anomalous murmur at the base of the heart.

FRACTURE OF SESAMOID BONES IN A HORSE.

Mr. DORAN showed the forefeet of a horse which presented fracture of both the sesamoid bones. A funeral horse was taken out of a field, and ridden unshod over a hard road, when he suddenly stopped, fell, and rolled over on his side. It was found that the above-named accident had happened. This was due to ligamentous strain; and the exhibitor argued that in fracture of the patella the bone might give way similarly—not directly in consequence of muscular strain, but by being forcibly pressed by the forces acting upon it against the lower end of the femur.

STRICTURE OF THE ŒSOPHAGUS.

Mr. HOLMES exhibited this specimen, from a female of thirty-five, the history of whose case was peculiar. Eight years before her death a fatty tumour had been removed from the axilla, and for several days after the operation she had suffered from dysphagia. After years of health the dysphagia returned, and it was believed to be hysterical. There were no physical signs of stricture, and no local tenderness. However, a few weeks later, it was found that a bougie could not be passed beyond a certain point; though the examination caused neither pain nor hæmorrhage. Some time after, dyspnœa supervened, and with it pain. A cancerous growth was seen with the aid of the laryngoscope, but the patient died asphyxiated before tracheotomy could be performed for her relief. Post-mortem the œsophagus was occupied with a warty growth—evidently epitheliomatous—extending an inch downwards from the level of the cricoid cartilage; and the growth had ulcerated into the trachea. It was remarkable in this case that, up to two days before her death, the patient had been able to swallow solid food, though with difficulty; and that it had never regurgitated. The ulceration between the œsophagus and trachea must have occurred rapidly. Further, there was the question of the relation of the dysphagia seven years previously to the fatal illness. The President had mentioned the case of Dr. Marshall Hall at the last meeting (see page 663); there also there had been dysphagia, which passed off, and recurred after many years in his fatal illness.

Mr. WAOSTAFFE asked whether the growth in the œsophagus was such as might have caused an actual stricture, or a solidification of the walls only.

Mr. HOLMES believed that the condition was one of solidification preventing the action of the muscular coat, rather than a regular stricture, for swallowing went on till the last day of life.

Mr. BUTLIN pointed out that this description would support the view that the growth was scirrhus, which infiltrates, and not epithelioma, which ulcerates more.

Dr. GREENFIELD could not quite agree with the opinion just expressed. He had lately seen a case of epithelioma infiltrating the pharyngeal and œsophageal walls, and extending forwards to the tonsils and tongue. He would not restrict the term "stricture" to a condition of complete obstruction.

Mr. LENNOX BROWNE said he agreed with Dr. Greenfield. He also spoke on the question of the possibility of diagnosing morbid growths in that region with the laryngoscope.

Mr. HOWSE reminded the Society of two cases exhibited there by Dr. Fagge of dilatation of the œsophagus. In one there was simple stricture as well as dilatation; in the other epithelioma; and in the second case the morbid growth appeared secondary, as if due to irritation. Might not the history of Mr. Holmes's case have been the same?

Mr. HOLMES repeated certain of the features of the case, and believed it unlikely that the long-previous dysphagia could have been due to organic disease.

CONOENITAL (?) FATTY TUMOUR IN A CHILD.

Mr. BUTLIN showed a large fatty tumour removed by operation from the leg of a girl of seven. The leg had been observed to be large from the age of twelve months, and had gradually increased in size;—during the last months rapidly. The diagnosis was difficult. The disease was found to be a mass of fat and fibrous tissue, which extended between the tibia and fibula, and pressed the bones apart. It was reached by incision through the gastrocnemius and soleus, and was found quite circumscribed. Besides the above elements, the tumour contained striated muscular fibres, which, when not otherwise accounted for, were rare, except in congenital tumours. Some large yellow cells of various shapes were doubtfully young muscular fibres. On the other hand, the muscular fibres were fully formed, and could be traced from the septa into the capsule. If not congenital the tumour was of interest as occurring at so early an age.

Mr. HOLMES referred to a similar case of the President's, which originated about the third year of age.

Mr. NUNN referred to Dr. Creighton's description of striped muscular fibre in the mammary gland, and spoke of its possible occurrence in new growths in this way.

The Chairman said that the occurrence of striated muscular fibres was rare in tumours, but he believed that he had found them in tumours of the testicle.

Dr. Coupland said that the occurrence of muscular fibres in a tumour was strongly in favour of its being congenital. Dr. Gowers had exhibited last year a myo-lipoma of the dura mater, and Cohnheim had recorded a case of myo-sarcoma of the kidney in Virchow's *Archiv*, vol. lxv.

Mr. Wagstaffe referred to Mr. Mac Cormac's case of connective-tissue tumour with scattered muscular fibres, exhibited two years ago. It contracted under the knife after removal.

Mr. Butlin replied that muscular fibres were rare in fatty tumours, whether by growth or involvement.

Ossification of Artery after Injury.

Mr. Howse showed a specimen of a rare condition of the wall of an artery, namely, true ossification. A man of thirty-nine was admitted into Guy's Hospital after having been pitched from his cart, dragged some distance, and finally run over by a cab. The wheel had gone across the shoulder; and a purple tumour, as large as an orange, was found in the axilla, immediately after admission. It was non-pulsating; but no pulse could be felt below the axillary artery, and the hand was cold. Two of the fingers were crushed, but none of the bones otherwise were broken. The treatment was expectant. The patient made excellent progress for some days; warmth returned slowly in the hand, but for a time no sensibility. On the tenth day there was sensibility in the region corresponding to the ulnar nerve. For fourteen days the temperature continued nearly normal; thereafter it rose sharply, and the two crushed fingers were amputated. But on the sixteenth day pyrexia returned, with squint and anomalous brain-symptoms and basic pneumonia. The state was supposed to be one of septicæmia; and, the brain symptoms increasing, the patient died on the eighteenth day. Post-mortem, no septicæmic appearances were found in the lungs—only slight consolidation at one base. The axillary artery, if not torn across, had been greatly contracted in its third portion, and in the external(?) coat true bone was found. The exhibitor said that well-marked cases of ossification of the coats of arteries were very rare, most being mere calcification; although ossification had been described in the walls of aneurisms. Callus, too, had been found on the walls of vessels, probably by transplantation of periosteum; but no such explanation could be offered here, as the bones were found entire and covered by continuous periosteum. (The specimen was referred to the Morbid Growths Committee.)

Sarcoma of the Thigh.

Mr. Gould exhibited this specimen, which had been removed along with the limb from a male patient by Mr. Heath. Two years before, the symptoms began with pain in the thigh. For twelve months there had been swelling. On admission the man presented a large tumour implicating the upper part of the thigh; the glands were not enlarged; the patient was thin and anæmic. Amputation was performed at the hip-joint, but the patient died in twenty-four hours. Post-mortem it was found that the tumour had grown from the region of the adductor muscles, not from the bone. Its peripheral part was grey and firm; the central and greater part was yellowish from fatty degeneration. Microscopically, the former was composed of spindle-shaped cells; the latter of the same, full of fat granules. The lower lobe of the left lung contained three small nodules of the same structure. The iliac glands of the same side were enlarged and pigmented only. Mr. Gould considered that this case illustrated the infection of sarcoma by bloodvessels instead of by lymphatics; the lung containing sarcoma, but the glands presenting evidence of irritation only. The duration of the case was remarkable.

Dr. Green referred to a similar case of his own, in which the lungs and brain contained sarcomatous masses secondary to disease in the lower limb.

Mr. Butlin said that, though cases did occur of true infection of glands by the sarcomata, he had himself looked long in vain for an example.

Dr. Coupland said that the sequel of a case of myxo-sarcoma of the sciatic nerve brought forward by him last session was that the patient had died with enormous sarcomatous growth in the mediastinal glands.

Fibroma.

Mr. Gould also exhibited a tumour of the buttock, removed by operation from a woman of twenty-seven, who had fallen downstairs and struck the left buttock, two years before. Pain had continued since. Since January a swelling had been noticed, and had gradually increased. On examination a hard tumour was discovered under the adductor muscles near the pelvis, and extending round the limb, with doubtful connexion with the innominate bone. On operation the tumour was found attached to the ischium, from the periosteum of which it probably sprang. The patient's progress was good. The tumour was simply fibrous, and included about an inch of the sciatic nerve.

In reply to Mr. Nunn, Mr. Gould added that there was loss of motor power below the knee, and of sensibility at the back of the leg; but, under electrical treatment, the nutrition of the limb continued good.

Brain of Microcephalic Infant.

Dr. Barlow showed this specimen from an infant of six weeks, which died of asthenia accompanied by jaundice. The head was exceedingly small, almost like a doll's, pyramidal in shape, and with the fontanelles closed. There were no obvious nervous symptoms beyond marked retraction of the head backwards. The child could suck, cry, and smile at times. Post-mortem no clue was found to the jaundice. The dura mater was normal; the pia mater contained some calcareous matter. The convexity of the hemispheres presented no regular convolutions, but rather crumplings; and near the longitudinal fissure there was scarcely a trace of them. The ventricles were dilated; the corpus callosum and septum lucidum were absent. Calcification of the vessels connected with the ventricles, and under the ependyma, was also found. Dr. Barlow believed that the order of events in this case of hydrocephalus in a microcephalic child had been—meningitis, atrophy of the brain, closure of the bones, ventricular effusion. The weight of the brain was one ounce and one drachm.

Dr. Fletcher Beach mentioned two somewhat similar cases in children, in which the brain weighed seven ounces and four ounces respectively.

During the evening the following gentlemen were elected members of the Society:—Dr. D. W. Finlay, Dr. Monro, Mr. Ottley, and Dr. Sharkey.

CLINICAL SOCIETY OF LONDON.

Friday, December 8.

Sir W. Jenner, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

Adjourned Debate on the Treatment of Leucocythæmia and Lymphadenoma by Phosphorus.

Dr. Greenhow thought the cases cited at the previous meeting had pretty well exploded the idea that phosphorus was of use in leucocythæmia; and looking upon that point as settled, he proceeded to dwell upon certain facts in the clinical history of the disease, notably the pigmentation of the skin, and the pyrexial attacks which occurred in the course of many cases. He quoted one of several cases attended by him in illustration of the above points.

Dr. Broadbent would give the whole of his experience of this class of diseases since he had first used phosphorus. The first case was that already reported in the *Practitioner*, in which recovery took place, and the patient remained apparently well for some time; but, when last heard of, was suffering from an acute attack of an illness supposed to be pneumonia, and from which he believed the boy had died. A second case went out of hospital within a week, alarmed by the attention given to his case. In the third case, there were, combined with enlargement of spleen and liver, a history of intermittent hæmaturia and the appearances characteristic of essential anæmia. Phosphorus apparently caused inflammation of the spleen, pain in the stomach, and diarrhœa; and the man refused to remain in the hospital, being worse on going out than on admission. In his case, rest in bed, etc., were tried for a fortnight, and then phosphorus was given for about ten days before his departure. These were the only cases of splenic leucocythæmia which had been under the speaker's care since 1874. Dr. Broadbent had also tried phosphorus in lymphadenoma. In one case, symmetrical enlargement of the glands of the neck, with anæmia, shortness of breadth, continued to increase for some months, in spite of the usual remedies, with change of air. The glands in the axilla had also begun to enlarge. Under phosphorus, complete recovery took place, for the glands entirely disappeared, and the patient thoroughly regained her strength.

In a second case, the phosphorus was given, but without any expectation of good results, as the patient was reduced to a skeleton, and all her glands were enormously enlarged. She died in the hospital. In a third case, few would have questioned the diagnosis of lymphadenema. There was enlargement of the glands in the neck, axilla, and groins. Dr. Broadbent had hoped to exhibit the patient, but unfortunately she did not appear. The case being a chronic one, the woman was treated with phosphorus as an out-patient. The effect on the disease itself was remarkable; and the improvement in the general health was equally good. Unfortunately, she carried the treatment too far; for, in spite of some sharp attacks of sickness and diarrhœa, she still went on with the remedy. She was thereby weakened and made ill; still, the glands diminished in a great degree. This case Dr. Broadbent still hoped at some future day to bring before the Society. The only other case of the kind which he had seen was one in which a large mass of glands was wedged in behind the sternum, entered the spinal canal, and pressed the cord. Dr. Broadbent had met with one other case of anæmia since the publication in the *Practitioner* of his report upon such cases treated with phosphorus. In that case the morning temperature was 103°, whilst the evening temperature was 104°. The case seemed at first sight to be one of typhoid fever as well, but the appearance of the stools at once showed that no enteric fever was present; and the patient died, after being in hospital for a week, of pernicious anæmia only. Phosphorus was not given in this case. He would be inclined to class with these cases those of intermittent hæmaturia. He had treated a case of this kind with phosphorus, but without more improvement than might be expected from the change to the hospital ward and the freedom from cold. These were the only cases he had treated with phosphorus; but he would class with these cases the cases of Addison's disease, the symptoms of which were remarkably similar. There were the same exacerbations of temperature, vomitings, and excessive debility. Then, not only in Addison's disease and splenic leucocythæmia, but also in essential anæmia, the pigmentation of the skin was often excessive; especially was it marked upon the brow and back of the neck in one of his cases of essential anæmia. The accumulation of the white corpuscles in the spleen and the marrow of the bones did not constitute the essence of the disease; there was an anterior cause, which Dr. Broadbent had hypothetically considered might be some mutual failure of the essential relationship existing between the blood and the tissues or the blood and the glands. On these grounds he had first used phosphorus for the treatment of these diseases. He thought one of the most remarkable facts in experimental pathology was the immense granular degeneration of all structures in the body produced by phosphorus. Its ally, arsenic, had the same effect on the glands and muscles, in which it caused the same rapid degeneration. It was, however, as everyone knew, a remedy capable, when properly applied in appropriate cases, of an immense amount of good. There was the same pathological and therapeutical analogy between these two drugs. In many cases of skin disease, phosphorus beats arsenic. In a case of a child suffering from inveterate psoriasis, and treated for six months elsewhere, an immense improvement after the administration of phosphorus for a week was already discernible. He had never said phosphorus was a specific, but he believed in many cases of leucocythæmia splenica, lymphadenoma, and essential anæmia it unquestionably had done much good. Nor were the unfavourable instances recorded sufficient to destroy his confidence in the remedy. Arsenic also was found to benefit some of these cases. But, these three forms of disease being so very fatal, one might ask for a further trial of phosphorus in their treatment. The remedy, however, must be used cautiously, as being capable of doing great harm if carelessly employed. As to the form in which to administer the remedy, he trusted nothing but the capsules. He had had all kinds of phosphorus pills sent to him for trial, and had usually found that they emerged from the rectum unaltered. Phosphorus underwent such extremely rapid oxidation that, unless it had a chance of being absorbed from the stomach at once as phosphorus (unoxidised), it could do no good.

Dr. Wilson Fox, being responsible, secondarily to Dr. Broadbent, for the treatment of leucocythæmia by phosphorus, would make some remarks upon the subject, but would confine himself to facts. In the case which he had published in the *Lancet*, supporting Dr. Broadbent's case, he regretted to say the subsequent progress had not been favourable. The man came to the hospital in November, 1874, and left in May, 1875, cured; during the remainder of that year he seemed to be well. His spleen, however, was then enlarged, though less so than formerly. In the spring of the year he had been again admitted into the hospital under another physician, suffering from acute rheumatism, and had since died in Devonshire with a "bursting of the spleen," as it had been reported by the man's relatives to Dr. Fox two days only before that meeting. Now, one of two things must have happened in the early stage of that patient's illness. He (Dr. Fox) must have made a great mistake in diagnosis in stating it to be a case of leukæmia—which could hardly be the fact, seeing that the man's blood exhibited twenty or thirty white corpuscles in the field of a Hartnack microscope magnifying about four hundred diameters;(a) an observation which was not his alone, but had been made by two other gentlemen acting quite independently of one another, and of himself. Then, again, the man had lost nearly thirty pounds of his original weight; he had pyrexial attacks; his spleen was enlarged, and the splenic notch could be easily felt; and he was clearly going down hill; in fact, he was scarcely expected to live long when phosphorus was begun. Under this treatment he regained strength, colour, appetite, and the normal condition of his blood. Either, therefore, the case was one of mistaken diagnosis, which was scarcely possible, or it was one of spontaneous cure of the disease just when the phosphorus, which as a remedy was either useful, useless, or injurious, was given on Dr. Broadbent's recommendation. Evidently the cure was only temporary, but it was none the less distinct whilst it lasted. Was it, then, worth while making any further trial of phosphorus in leukæmia? or must they fall back on the old *armamentarium*, and relegate leukæmia to the class of incurable maladies? They must remember in Virchow's work there was one case mentioned in which recovery had ensued, the treatment not being stated. There were also four cases related in Mosler's work in which there was a good recovery. Two at least were malarial. In relation to the result which had happened in Dr. Gowers' case, he (Dr. Fox) had had a patient, a man, who suffered with enlarged spleen, multiple increase of the lymphatic glands, albuminuria with lardaceous kidney, and in his lungs some evidence of tuberculosis or leukæmic growth,—Dr. Fox felt uncertain which. There were now, at any rate, sufficient cases of the kind on record, and of other cases of other forms of disease which had been treated with phosphorus, to enable one to reject the fear that phosphorus medicinally administered in moderate doses frequently caused fatty kidneys. And other gentlemen who might have seen more cases of the kind than himself would probably be of his opinion. There seemed to be much confusion about the characters and distinctions of these diseases. It was almost a truism to observe that Virchow first recognised two kinds of leukæmia, lymphatic and splenic. Lately, statements had been made to the effect that Hodgkin's disease was occasionally associated with increase of white corpuscles. Dr. Fox thought that this disease of enlarged lymphatics without such alteration formed a distinct clinical group, and that the distinction between it and leukæmia, as based upon the condition of the blood, had better be maintained.

Mr. Callender said it was now some years since his colleague Dr. Andrew had drawn his attention to a paper in which the treatment of leucocythæmia by transfusion was recommended. A child, a patient in St. Bartholomew's Hospital, being then under observation, transfusion was twice performed upon it with apparently great benefit. The blood which was used was first defibrinated. The former objections to transfusion would probably for the future be overcome by Dr. Roussel's very ingenious method of performing transfusion. He thought other members might have had more experience than himself of this method of treatment.

Dr. Moxon having learned, in reply to a question addressed to Dr. Wilson Fox, that the microscopic power used on the occasion, when twenty or thirty white corpuscles were counted in the field, was about one-quarter inch objective, said that, this being so, the mere statement of the fact was quite sufficient to array authorities against Dr. Fox in his diagnosis of leukæmia. Dr. Moxon was under the impression that, Trousseau had said that twenty or thirty corpuscles in such a field did not constitute leukæmia; at any rate, it was even generally held that one white to twenty red corpuscles were the

(a) Dr. Wilson Fox wishes the exact statement to be given as originally published by him in the *Lancet* for July 10, 1875. It runs thus:—"The corpuscles were nearly twenty times their usual number, from thirty to forty-five being seen in the field."

proportions required to constitute leukæmia. A well-characterised case would have two thousand rather than twenty in the field. In cases of cancer of the abdomen it was customary to find a large increase of white corpuscles. Dr. Moxon had seen one to twenty red in such a case; and he had recently used this fact as a means of diagnosis in a case where it seemed at first doubtful whether he was dealing with idiopathic anæmia or gastric cancer. There being no increase of white corpuscles in the case, the diagnosis was of anæmia; and this was confirmed when the patient died, as he did in a manner quite in point for the present discussion, sinking abruptly under the use of phosphorus, although the drug at first was followed by apparent improvement. In so dying, this patient was not any exception to the rule of invariable ill success which had marked the use of phosphorus in those cases (about thirty in all) in which Dr. Moxon had tried it. He would say that with only twenty or thirty white corpuscles in a quarter-inch field, one would not be dealing with a case of leukæmia; and as Dr. Fox's case, which thus seemed very doubtful, and which ended miserably in a burst spleen at last, was the only one distinctly benefited by the phosphorus, the evidence adduced for that remedy was certainly feeble. As to Dr. Broadbent's cases of leukæmia treated by phosphorus, they formed a very sad catalogue, quite a satire on his hopeful advocacy of the drug; so much so, that Dr. Broadbent had fallen back upon a rather less dismal list of cases of lymphadenoma, which was an entirely distinct disease. In some of these cases, temporary diminution of the tumours had followed the use of phosphorus. As to this, however, Dr. Moxon wished to draw attention to the curious variation in size, which he believed to be a very frequent clinical feature of lymphadenoma. He related a case wherein Mr. Cock had brought him a large mass of glands which had been removed after death from the neck of a boy; Mr. Cock remarking that thrice the boy's neck had swollen up and the swelling subsided, twice raising delusive expectations of cure. Such hopes were at the present time buoying up the patient in a case now under Dr. Moxon's care, in which the variations in size in the cervical tumour had been very remarkable, and had occurred under the use of several different drugs. He had seen another case of lymphadenoma four years ago, under Dr. Rees, in Addison ward, Guy's, in which the glands, from the mediastinum upwards, had enlarged and compressed the trachea, so that choking was imminently threatened; yet the patient, after taking bromide of potassium, left the hospital nearly free from the swellings. Therefore, he did not think very highly of the evidence for phosphorus in lymphadenoma. He had, in the early part of this year, brought forward two cases of true splenic leukæmia treated unsuccessfully with phosphorus, and he endeavoured in that paper to show that there was no reason to suppose that any such thing as lymphatic leukæmia existed. He had searched through the records of cases as far as he could find them; but as the results were embodied in a paper in the Society's *Transactions*, he would not now repeat them, but only ask the Society to suspend its judgment and seeks facts before sanctioning the continuance of the myth lymphatic leukæmia. In reply to Sir William Jenner, Dr. Moxon said that he had not intended to say that all his cases treated by phosphorus had died suddenly, but that they were not benefited by it.

Dr. Bastian remarked that the precise relationship of splenic leukæmia to glandular and lymphatic disorders was questionable. He did not think there was a good means of distinguishing the two classes of cases. In cases in which the spleen was enlarged, leucocythæmia was more frequently observed. In Dr. Wilson Fox's case the leucocythæmic element was not very marked. He thought Dr. Broadbent's view was the correct one—the leucocythæmia was not a disease *per se*, but a something superadded in the course of other diseases, especially of the spleen more than of the other glands. He related the case of a man with enlarged glands in the neck and groin, but without leucocythæmia, who improved immensely under iodide of potassium.

Dr. A. S. Donkin thought this the most puzzling discussion to which he had ever listened. We had a lot of different terms used to describe the same condition, whilst leucocythæmia was used to describe the condition of the blood in this affection. We had not yet directed sufficient attention to the diseases which were anterior to the disease of the blood. We apparently might prescribe phosphorus or any other remedy, but we could do very little good. During the last twenty-five years we had had our attention directed to anatomical conditions, and had left out of consideration altogether the forces which had brought them about. We ought to investigate general states, and not confine ourselves to the local conditions.

Sir W. Jenner said that he was in hopes more members would have been able to contribute facts to the discussion. As regarded the observations made by Dr. Broadbent concerning the value of phosphorus in psoriasis, they were of importance as proving that the drug had a real and important action on nutrition. After some further remarks on the value of the facts brought forward by Dr. Gowers, Dr. Broadbent, and Dr. Wilson Fox, he called on Dr. Gowers for a reply.

Dr. Gowers had received a note from Dr. Dyce Duckworth (who was unable to be present), in which that gentleman said that he had prescribed phosphorus for leukæmia and chronic nervous diseases without meeting with albuminuria, and in leukæmia without benefit. He (Dr. Gowers) had suggested the question, whether the phosphorus had any effect in producing the fatty degeneration of the kidney, etc., in his case. Albuminuria was usually present in non-fatal cases of acute phosphorus-poisoning; and one case was on record in which phosphorus, prescribed by the late Dr. Anstie in medicinal doses, produced albuminuria. A gentleman took one-thirtieth part of a grain thrice daily; and, after a week, blood and albumen appeared in the urine, and disappeared directly upon the remedy being discontinued. If the phosphorus caused the degeneration of the kidney, then surely the degeneration in the new growth in glands and liver should be ascribed, at least in part, to the influence of the drug. The effect on the blood was most marked: the proportion of white to red corpuscles was, at first, as one to four; it steadily decreased, and became, before death, as one to twenty. The observations in Dr. Fox's case were, he believed, made with the same microscope and lens as in his own case; if so, one to twelve would have been the proportion of the white to the red corpuscles in Dr. Fox's case, whilst any permanent proportion of white to red greater than one to twenty was usually regarded as conclusive of leucocythæmia. He had remarked that in his own case there was reason to believe that the glands were the chief source of the excess of white corpuscles; and the leucocythæmia, therefore, lymphatic. He thought some of the cases of lymphatic leucocythæmia on record established the occasional occurrence of such a condition. The phosphorus in his case was given in combination with common resin, the compound being powdered and made into pills with tragacanth. Might not Dr. Goodhart's interesting case, brought forward at the previous meeting, in which the proportion of white corpuscles varied considerably on different days, be explained upon the ground of an intermitting supply, rather than upon that of an intermittent formation of those corpuscles? They might be kept back in the spleen by intermitting pressure of enlarged lymphatic glands upon the splenic vein, at one time; and, at another, diminution of the pressure might allow them to pass in greater quantity into the blood.

Dr. A. S. Donkin wished to know if there was any relationship between leucocythæmia and disease of the kidneys?

Sir W. Jenner thought, from what he had heard during the discussion, that phosphorus might be of use in lymphadenoma, although it was apparently useless in splenic leucocythæmia.

Composition and Quality of the Metropolitan Waters in November.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen as Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale).	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction .	20·31	0·048	0·120	0·000	0·007	14·3	4·2
West Middlesex .	19·84	0·048	0·165	0·001	0·006	14·3	3·3
Southwark and Vauxhall . .	20·42	0·058	0·120	0·001	0·008	14·8	3·7
Chelsea . .	20·80	0·039	0·168	0·000	0·006	14·3	2·8
Lambeth . .	21·60	0·038	0·180	0·001	0·005	14·8	4·2
Other Companies.							
Kent . . .	26·12	0·014	0·300	0·000	0·002	18·3	5·1
New River . .	19·31	0·014	0·165	0·001	0·004	14·8	2·0
East London .	22·01	0·034	0·120	0·000	0·004	15·9	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

NEW INVENTIONS AND IMPROVEMENTS.

SELECTED MADEIRA.

(From H. Watson and Co., 16, Clements-lane, E.C.)

The Messrs. Watson deserve the thanks of both physician and patient for enabling them to resume the use of that almost forgotten nectar, Madeira wine. The sample before us is of deep colour, rich though not luscious, comforting to the stomach without undue heat, of low alcoholic strength, and of a very agreeable flavour that reminds us of some of the wine of old times. It is, without question, one of the wines of which (as with sherry) the fermentation has been checked, and the richness preserved by an addition of alcohol before fermentation was quite complete; but there is nothing of a fiery character about it, and the total alcohol is said not to exceed 30 or 31 per cent. For medical purposes the uses of such a wine are well defined. It is not a beverage to be drunk out of a tumbler like a light Bordeaux, but may be sipped in moderate quantity (say two to four ounces) as a nutrient and stimulant. Any of the patients to whom milk and cod-liver oil are given, for failure of nutrition, and any of the young overgrown children who come home from school with cold, clammy hands and feet garnished with chilblains—any persons, in fact, who can relish and digest saccharine aliment—will find a glass of this wine, intermediately between luncheon and dinner, a grateful and effective cordial. The same is true more emphatically with regard to the aged; for, as we have before said, when treating of wine, old people often seem to recover "the sweet tooth" with some of the other properties of childhood, and delight in a glass of sweet wine as an extra form of nourishment.

Madeira is an island that has undergone strange reverses of fortune. To the ancients it was almost a *myth*—an earthly Paradise to which the souls of the blessed were sent after their earthly troubles. Horace, tired of civil war, says:—

> ". . . . . Arva, beata
> Petamus arva, divites et insulas!,
> Reddit ubi Cererem tellus inarata quotannis
> Et imputata floret usque vinea."

If we may use Mr. Creech's translation—

> "Let's go and seek the happy Isles
> Where fields untill'd a Yearly Harvest bear,
> And Vines undressed bloom all the Year;
> Where Olives ne'er the Farmer's hopes do mock,
> And ripe Figs grace their proper Stock;
> There Honey flows from Oaks; from lofty Hills,
> With murmuring pace, the Fountain trills;
> There Goats uncalled return from fruitful Vales,
> And bring stretched Duggs to fill the Pails.
> * * * * * *
> No Rot here reigns, no Star here taints the Meads."
> *Hor.*, Epod. xvi.

How terribly this poetical myth is at variance with prosaic reality we are reminded by Messrs. Watson's circular, in which they give an abridged account of the depredations of the vine disease in our time. The vines in the island were destroyed, and no wine made from 1852 to 1861. At last, however, the growers took courage; the residue of the *oïdium* was combated by a liberal application of sulphur, new vines were planted, and by the present year the production of wine had reached 10,000 pipes—or about a third of what it was in the old prosperous days. Let us add a few words on a kindred topic. As there are people old enough to remember the old Madeira wine, so there are many of us who are still short of second childhood, and who remember the time when people resorted to Madeira as a refuge from the winter of England, when threatened with phthisis or any other form of debility. Fashion clings to the robe of the doctor as tightly as she does to the skirts of Phryne, and fashion now condemns Madeira as too damp. For all that, there are plenty of people now living who owe their lives to a Madeira winter, and perchance some physician may be found bold enough to revive the faith in its salubrious climate, even as the Messrs. Watson have done with its fragrant wine.

Death caused by a Lizard.—A native was admitted into the Madras General Hospital, a small lizard having having crawled into his nose; he died in consequence. The urine of these animals is very irritating, and blisters any part of the skin it touches.

OBITUARY.

JOHN GAIRDNER, M.D., F.R.C.S. Edin.

On the 12th inst. died Dr. John Gairdner, of Edinburgh, at the advanced age of eighty-six. Although but little known to the present generation of medical men, he having for several years past retired from active life, Dr. Gairdner formerly occupied a high and very influential position in professional circles in Edinburgh. He was the eldest son of Captain Robert Gairdner, of the East India Company's Service, who died from the effects of an accident in 1795, five years after the subject of the present notice was born. The widow having removed from the family seat near Ayr to Edinburgh, with a view to the education of her family, the son John matriculated at the University, and, after the usual period of study, took the degree of Doctor of Medicine in 1811. The same year he was admitted a Licentiate of the Royal College of Surgeons of Edinburgh; and after spending a winter in London, he returned to Edinburgh, and commenced practice in partnership with Dr. Farquharson, at that time one of the most eminent medical men in that city. In 1813 he was elected a Fellow of the College of Surgeons, and in 1817 he became an examiner in that College. He took a very active part in the affairs of the College for several years, serving on the Council and discharging the duties of Treasurer. In recognition of his services, he was in 1830, when only forty years of age, elected to the presidential chair. During his term of office, which expired in 1832, the new Surgeons' Hall in Nicholson-street was opened. To the influential efforts of Dr. Gairdner was in a great measure due the throwing open of the extra-academical school of medicine to the students of the University. Formerly, students desirous of obtaining medical degrees were obliged to take the whole of their tuition in the University. Ultimately it was arranged that students might be permitted to take one-fourth of their curriculum in the extra-academical school. This change was expected by the professors to have an injurious effect on the University, but it has since been acknowledged that the result of the experiment has been advantageous.

Dr. Gairdner contributed several papers to the medical journals, and published two lectures read by him at *conversaziones* of the Royal College of Surgeons; one being an historical account of the College, and the other a sketch of the early history of the medical profession in Edinburgh. He was highly accomplished, of great decision of character, yet withal courteous. In every undertaking, whether of a professional or public character, he aimed at success, and uniformly achieved it. He leaves three sons, the eldest of whom is Professor of Medicine in the University of Glasgow.

WILLIAM HARVEY, F.R.C.S. Eng.

We regret to have to record the death of Mr. William Harvey (formerly of Soho-square), the last of the old school of aural surgeons, which took place at his new residence, 3, George-street, Hanover-square, on the 5th inst. At the time of his death—which was from exhaustion, the result of a tumour in the right thigh, from which he had suffered for some months—Mr. Harvey was seventy years of age, having been born in the year 1806.

Mr. Harvey received his professional education at Guy's Hospital, and in 1830 he qualified by taking the Licence of the Apothecaries' Society, and the Membership of the Royal College of Surgeons. After having been engaged in general practice for a few years he devoted his attention to aural surgery, and having obtained the appointment of aural surgeon to the Royal Dispensary for Diseases of the Ear, he soon made for himself a name in this specialty, dividing with Toynbee and Yearsley the honours in this branch of surgical practice. In 1847 he published "A Practical Synopsis of the Diseases of the Ear"; and a few years later, a treatise on "Excision of the Enlarged Tonsil and its Consequences in Cases of Deafness and other Diseases of the Throat," and "The Ear in Health and Disease." Besides these published works, he contributed several papers to the medical journals. The publication of these various works did much towards the establishment of his reputation; but as the author of the "Banting System" for the treatment of corpulence his name became much more widely known than it would have been only through his connexion with aural surgery.

By his death, the posts of Surgeon to the Royal Dispensary for Diseases of the Ear, and Aural Surgeon to the Great Northern Hospital, become vacant—the former of which offices he held for thirty years, and the latter ever since the foundation of the Hospital.

He was a most genial and kind-hearted man, singularly benevolent, and his personal qualities generally endeared him to all who had the happiness of his intimate acquaintance.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following candidate recently passed the examination in subjects relating to Public Health :—

Parsons, Hy. Franklin, M.D. (gold medal), St. Mary's Hospital.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations of the College, held on Tuesday, Wednesday, and Thursday, December 12, 13, and 14, the following candidates were successful :—

For the Licence to practise Medicine—

Ahern, James.
Brennan, James Henry.
Bridgford, Charles Trussell.
Carruthers, Charles Ulic.
Cox, Thomas.
Hallowes, William Bourne.
Lyle, Allen Andrew.
M'Munn, James.
Murphy, Edmund.
O'Connell, Timothy.
O'Leary, Edward Hyacinth.
Thornhill, William Henry.
Willis, Francis Taylor.

For the Licence to practise Midwifery—

Ahern, James.
Brennan, James Henry.
Bridgford, Charles Trussell.
Carruthers, Charles Ulic.
Cox, Thomas.
Hallowes, William Bourne.
M'Munn, James.
O'Connell, Timothy.
O'Leary, Edward Hyacinth.
Pim, William Joseph.
Thornhill, William Henry.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the examinations held on December 4 and following days, the undernamed gentlemen, having passed the required examination for the diploma, and having made and subscribed the declaration, were admitted licentiates of the College, viz. :—

Allen, Edmund Henry.
Baxter, Richard Henry.
Blunden, William.
Castles, Joseph William.
Cole, C. Dillon Croker.
Dimond, John.
Dodd, Henry Francis.
Duigenan, John Joseph.
Dunne, Alexander.
Fetherston, Charles.
Flood, H. John Wellesley.
Jenkins, Stewart.
Kennedy, William.
Kinane, Michael Kiely.
Kirkpatrick, Henry Ivers.
Lyndon, George.
Malone, Jonathan Hill.
Nixon, George Eccles G.
O'Connor, Maurice John.
O'Neill, Laurence Joseph.
Penny, Charles Hall.
Penny, Henry James.
Phibbs, William Harloe.
Reynolds, George Gerald.
Walsh, William Butler.

APOTHECARIES' HALL.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 14 :—

Blamey, James, Penryn.
Grimbly, Richd. Henry, Banbury.
Nickoll, John Sayer, Milton, Gravesend.

The following gentlemen also on the same day passed their primary professional examinations :—

Giles, Bernard Farady, Guy's Hospital.
Harvey, Geo. Henry, London Hospital.
Pain, Alfred, Guy's Hospital.
Pearce, Henry, St. Mary's Hospital.
Warrillow, Edwd. Sadler, General Hospital, Birmingham.
Wheler, John Mordaunt, General Hospital, Birmingham.
Young, Alex. Stewart Ward, Bristol Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

PARKER, ROBT. WM., M.R.C.S. Eng.—Reappointed Surgical Registrar, London Hospital.

VENN, ALBERT, M.D., M.R.C.P.—Obstetric Physician to the Metropolitan Free Hospital.

WAGNER, FRANCIS, M.D. Lond.—Medical Registrar, London Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR-OFFICE.—Surgeon Edward Cleaver Maxwell retires upon temporary half-pay. Surgeon Henry Arthur Martin, M.D., half-pay, late Medical Department, has been permitted to commute his retired allowance.

BIRTHS.

CHETWOOD.—On December 17, at 10, King-street, Finsbury-square, the wife of William Chetwood, M.R.C.S. Eng., of a daughter.

DRAPER.—On December 12, at 25, Petergate, York, the wife of William Draper, M.R.C.S. Eng., of a son.

FEAR.—On December 9, at Brenchley, Kent, the wife of William Fear, M.R.C.S. Eng., of a son.

GRAY.—On November 16, at Cumamara, Jorehaut, Assam, the wife of Edward Gray, M.B., C.M., of a son.

KILIAN.—On December 17, at 49, Harscampstrasse, Aix-la-Chapelle, the wife of Saul Kilian, M.D., of a son.

LOGIE.—On December 16, at 47, Queensborough-terrace, Kensington-gardens, W., the wife of Surgeon-Major Logie, M.D., of a son.

PARSONS.—On December 17, at 78, Kensington-park-road, Kensington-park-gardens, W., the wife of Sidney Parsons, M.R.C.S. Eng., of a daughter.

MARRIAGES.

LACY—PATERSON.—At St. Stephen's Church, South Kensington, Charles de Lacy Lacy, M.A., M.B. Oxon., to Augusta Matilda, second daughter of the late Capt. George Dacres Paterson.

MUNRO—KNOX.—On December 12, at St. George's, Hanover-square, Æneas Munro, M.D., of Park-lane, London, to Victoria Gordon, youngest daughter of the late William Alexander, W.S., Edinburgh, and widow of the late Lieut. James Dunlop Knox, 16th Regiment.

ORR—JOHNSON.—On December 14, at St. Stephen's Church, Norwich, Robert H. Orr, of Belfast, solicitor, to Cassandra Marchaise, daughter of James Johnson, M.D., of The Chantry, Norwich.

OWEN—WALKER.—On December 9, at the Cathedral, Bombay, Owen Owen, M.R.C.S. Eng., Surgeon-Major Army Medical Department, to Alice Augusta, third daughter of the late J. Scoles Walker, Esq., J.P., of Limefield, Bury, Lancashire.

SMITH—VEITCH.—On December 15, at St. Thomas's, Portman-square Henry Smith, F.R.C.S. Eng., of 82, Wimpole-street, to Zepherina, elder daughter of the Rev. W. Douglas Veitch, of Elieck, Dumfriesshire, and Horsell, Surrey.

DEATHS.

CRESSWELL, ALFRED, M.D., F.R.C.S.E., at South Norwood, very suddenly, on December 18, aged 39.

FARR, MARY ELIZABETH, wife of William Farr, M.D., at Beckley, on December 18, in her 59th year.

GAIRDNER, JOHN, M.D., F.R.C.S.E., at 45, Northumberland-street, Edinburgh, on December 12, aged 86.

GARDINER, CAROLINE GRANT, wife of James Gardiner, and elder daughter of John Robert Miller, M.D., Deputy Surgeon-General, Bombay, at 30, East Claremont-street, Edinburgh, on December 9, in the 29th year of her age.

HEWBY, WILLIAM COOKE, M.R.C.P., M.R.C.S., L.S.A., at Melbourne, Australia, on October 1, aged 34.

WEBB, MATTHEW, M.R.C.S., at The Orchard, Iron Bridge, Salop, on December 15, aged 63.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOURNEMOUTH GENERAL DISPENSARY AND COTTAGE HOSPITAL.—Resident Surgeon. Candidates must be registered, unmarried, and possess a qualification in medicine and surgery. Testimonials, diplomas, etc., to the President of the Bournemouth Dispensary, care of A. A. Johnston, Esq., Hon. Sec., on or before December 30.

SUSSEX COUNTY HOSPITAL.—Surgeon and Assistant-Surgeon. Candidates must be Fellows or Members of the College of Surgeons of England, Dublin, or Edinburgh. Testimonials to the Secretary on or before January 3.

THE GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, LONDON, N.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons. Applications, with copies of testimonials, to the Secretary on or before December 30.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Honorary Physician. Candidates must be graduates of medicine of a university, and be Fellows or Members of the Royal College of Physicians of London, or Fellows of the King and Queen's College of Physicians of Ireland, or Fellows of the Royal College of Physicians, Edinburgh. Applications, with testimonials and certificates of registration, to the Secretary on or before December 30.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Resident Physician. Candidates must be registered practitioners. Testimonials and applications to the Secretary on or before December 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Depwade Union.—Dr. Drury has resigned the Fourth District; area 8582; population 2523; salary £40 per annum.

Lincoln Union.—Mr. Samuel Farrow has resigned the Eighth District; area 20,563; population 2872; salary £35 per annum.

Newent Union.—Mr. J. H. Scott has resigned the Dymock District; area 13,624; population 2964; salary £55 per annum.

Wimborne and Cranborne Union.—Mr. S. F. Underhay has resigned the Fourth District; area 18,993; population 2912; salary £80 per annum.

APPOINTMENTS.

Bath Union.—John Parrett, M.R.C.S. Eng., L.S.A., to the Sixth District.

St. Neot's Union.—Samuel E. Walker, M.R.C.S. Eng., L.S.A., to the Third District.

Peterborough Union.—Richd. A. Morrish, M.R.C.S. Eng., L.S.A., to the Castor District.

VACCINATION.—An important notice has just been sent to all the metropolitan and provincial hospitals by the Royal College of Surgeons of England, stating that the attention of the Council having been drawn by the General Medical Council to the defective character of the certificates of proficiency in vaccination received by some of the licensing bodies, have resolved that in future the certificate of proficiency in vaccination to be received by the College shall be such as will entitle the holders to contract as public vaccinators under the regulations at the time in force of the Local Government Board. This regulation will take effect in the case of all candidates presenting themselves for the final examination, whether for the membership or fellowship of the College, on and after May 1 next. All who have had anything to do with vaccination will admit that this is a wise and just measure.

COLLEGIATE EXAMINERS.—The following are the members of the Court of Examiners, viz. :—Messrs. *John Birkett, Vice-President of the College, and *J. Cooper Forster, of Guy's Hospital; *F. Le Gros Clark, F.R.S., of St. Thomas's Hospital; *Luther Holden and W. Scovell Savory, F.R.S., of St. Bartholomew's Hospital; *T. Blizard Curling, F.R.S., of the London Hospital; H. Spencer Smith, of St. Mary's Hospital; *John Marshall, F.R.S., and *John E. Erichsen, F.R.S., of University College Hospital; and Timothy Holmes, of St. George's Hospital. (Those gentlemen with an asterisk before their names are also members of the Council of the College.) The following are the members of the Board of Examiners in Anatomy and Physiology of the Royal College of Surgeons who were elected and re-elected last week, viz. :—Messrs. W. Scovell Savory, F.R.S. (chairman), and Henry Power, of St. Bartholomew's Hospital; John Birkett, Vice-President of the College, and Arthur E. Durham, of Guy's Hospital; Timothy Holmes and Thomas P. Pick, of St. George's Hospital; John Wood, F.R.S., of King's College Hospital; Christopher Heath, of University College Hospital; and J. Whitaker Hulke, F.R.S., of the Middlesex Hospital. It will be seen that Mr. Birkett is the only member of the Council on the Board. Mr. Durham, one of the new members of the Board, passed his examination for membership of the College on May 14, 1858; and for fellowship on May 31, 1860. Mr. Pick's diploma of membership is dated July 29, 1862; of fellowship, December 13, 1866. All are Fellows by examination, excepting Mr. Birkett.

UNIVERSITY OF EDINBURGH.—The matriculation for the session 1876-77 shows a large increase over that of past years, and now has reached the highest number that has been registered on the books of the University at any time since its foundation. The important changes in the administration of the University effected by the ordinances of the Scottish Universities Commission in 1858-61 were speedily followed by encouraging results, especially in the number of matriculating students, which has been continued in an increasing ratio up to the present time. In the session 1861-62 the matriculated students in the several faculties numbered 1509, in 1866-67 there were 1525, in 1871-72 they increased to 1854, and in 1876-77—the present year—there are 2069 already registered, while the average number of late entries and entries for the summer session (judging from past years) amounts to from 200 to 250, which will together bring up the aggregate number of matriculated students to about 2300 for the present academic year. Not only has the number of students increased, but the greater facilities of intercommunication and of travel of late years have largely widened the range of supply, and have given quite a marked and special character to the University, well-nigh all our colonies, together with many foreign countries, being represented on its books. An analysis of the register shows that of the 2069 already matriculated for the current session, 1434 come from different parts of Scotland, 370 from England and Wales, 30 from Ireland, 71 from India, 127 from different colonies, and 37 from foreign countries. This is more marked in the medical faculty than in the other faculties. Of the 828 students already registered in this faculty, 353 are from Scotland, 291 from England and Wales, 21 from India, 95 from the colonies, and 20 from foreign countries.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

N.—The paper shall be published very early in the ensuing year.

A Retired Member.—The "Confessions of a Dissecting-room Porter" (Jasper Buddle), which appeared in the early volumes of the *Medical Times*, under the signature of "Rocket," were written by Albert Smith. It is not generally known that this journal was the first to recognise and engage this facetious writer. The "Pencillings" by "Probe" were written by the late Dr. Jordan R. Lynch.

Mr. Davenport.—The preliminary examination in Arts, etc., for the diplomas of Membership and Fellowship of the College of Surgeons will take place in March next. Why not write to the Secretary of the College? This applies also to "*A Teacher*"; the *primary* on the 12th, and the *pass* examination on the 19th prox.

G. J. F.—Moxa was recommended by Van Roonhuyse as a remedy for the gout in 1662.

J. W.—The next meeting of the British Medical Association will be held in Manchester in August next.

M.R.C.S. Eng.—No person of the name of C. Cripps, of Sheffield, appears in the Calendar of the College of Surgeons, the Medical Register, or the "Directory." Send his circular to the Secretary of the College.

H. H.—Are the following lines of Shakespeare applicable?—

"Thus we debase
The nature of our seats, and make the rabble
Call our cares fears; which will in time break ope
The lock o' the senate, and bring in the crows
To peck the eagles."

Country Surgeon.—The plaster-of-Paris jacket has been largely used in America for the treatment of both lateral curvature and Pott's disease of the spine, and it is said with excellent results. Professor Sayre has paid great attention to this mode of treatment, and has introduced several improvements in its application. One of these is the use of the air-bed, upon which the patients are laid immediately after the application of the dressing for the plaster to "set." He also places compresses over the crests of the ilia while the bandage is being put on, and removes them after the plaster has "set"; and occasionally he puts a compress over the abdomen, so as to allow room for distension of the stomach with food.

A Matron.—The origin of hospitals is, no doubt, to be attributed to the influence of Christianity. As early as the year 370 after Christ we read of a large hospital being established in Cæsarea, in Cappadocia, by Bishop Basil, who at that time governed the church in that city. Similar institutions afterwards arose in Constantinople and other cities of the Roman empire, and obtained imperial notice, as shown in the "Institutes of Justinian," in the year 529.

Vaccination.—The fees for vaccinators, provided by the poor-rate of the metropolis, during the five years ending Lady Day, 1875, amounted to nearly £50,000.

A. Gaulton.—Maximilien P. E. Littré began the study of medicine, and pursued it with some distinction. He did not, however, take the degree of doctor nor enter on practice, but gave himself up to researches in philology and journalism. His "Médecine et Médecins" was published in 1872.

Scurvy.—In his "Outline of the Chief Camp Diseases of the United States Army, as observed during the War, 1866," Dr. Joseph J. Woodward, Assistant-Surgeon, United States Army, remarks on scurvy—"Fresh vegetables are, as is now generally admitted, the requisites for its cure, and not fresh meat—cases of it, indeed, having occurred amongst troops on fresh meat rations." As to the pathology of the malady, he expresses his opinion that it has yet to be discovered, and that the potash theory (the view that a deficiency of this alkali in the blood is its cause) is not tenable, nor the cure of the disease practicable by the administration merely of alkaline salts.

Sanitary Science.—Dr. Mapother's is, perhaps, as good a definition as any. In the first of his "Lectures on Public Health," he describes this science as "an application of the laws of physiology and general pathology to the maintenance of the health and life of communities, by means of those agencies which are in common and constant use."

W. W. P.—Sir James Young Simpson graduated as Doctor in Medicine in the University of Edinburgh in 1832. A baronetcy was conferred on him in 1866.

MEDICAL DEFENCE ASSOCIATION FOR SOUTH WALES AND MONMOUTHSHIRE.—Mr. Hancocke Wathen, of Fishguard, wishes to remind the members of the profession resident within the above district that it has been proposed to form a branch of the Medical Defence Association for South Wales and Monmouthshire. He says, in a letter to us on the subject:—"I have had many promises of co-operation with the movement, and propose calling a meeting early next month for the purpose of framing rules, electing officers, etc. In the meantime let me urge those gentlemen who approve of the objects of the Defence Association to communicate with me, if they have not already done so."

A Ready Method of Testing Urine for Albumen.

BY W. HENRY KESTEVEN.

Take a piece of thin glass, such as is ordinarily used for microscopical covers; about one inch square is the best size. On the surface of this, slightly to one side of the centre, place about two drops of the urine to be tested; on the other side of the centre place one drop of nitric acid. By gently melining the glass the two fluids will mix, and any precipitate that is formed will be readily seen when the acid-fumes have passed off. The precipitate may be rendered more apparent by covering the reverse side of the glass with Brunswick black or some other such pigment. Another method of using the thin glass cover is one which will be found particularly handy for use at the bedside. The urine should be placed on the cover as above, and then, with an ordinary pair of dresser's forceps, the slip of glass should be held over the flame of a candle. By so doing the albumen, if present, will be precipitated, and rendered plainly visible by the blackening of the glass with the smoke of the candle. This last method should be practised with care, as, if the glass is held too close to the flame, violent ebullition of the urine takes place, with rapid evaporation. The value of the use of these thin glass covers for this purpose consists mainly in the ready way in which the urine can be tested by means of them. It is very easy to carry a few of them in the pocket-case for use by those who prefer the warm method of testing; whilst for those who prefer to test the urine cold with the acid, a box could easily be contrived which would carry one or two blackened covers and some nitric acid.

COMMUNICATIONS have been received from—

Messrs. Cassell, Petter, and Galpin, London; Mr. J. W. Hulke, London; Messrs. Cadbury Bros., Birmingham; Mr. E. Nettleship, London; Dr. A. E. Longhurst, London; Dr. C. M. Tidy, London; Dr. J. Althaus, London; Dr. Gairdner, Glasgow; Dr. Silver, Ben Rhydding; Mr. Henry Kesteven, London; Dr. H. Greenhow, London; Dr. Bauce, London; Mr. Washington Friend, London; Dr. Thursfield, Shrewsbury; Dr. Sparks, Mentone; Dr. Thomas Smith, Reigate; Dr. Balfour, Edinburgh; Mr. Laskin, Southwark; Mr. Leslie Bates, London; Sir Joseph Fayrer, London; Dr. M. Duncan, Edinburgh; Dr. J. W. Moore, Dublin; Mr. George Brown, London; Dr. C. B. Taylor, Nottingham; Mr. Hancocke Wathen, Fishguard; Dr. R. Lawson, Wakefield; The Secretary of the Hospital for Diseases of the Throat, Golden-square; Mr. R. J. Godlee, Lewes; Mr. W. Johnson Smith, Greenwich; Dr. F. Churchill, London; Mr. Charles Higgens, London; Dr. J. Hughlings-Jackson, London; Mr. Henry Morris, London; Dr. Edis, London; Dr. Gray, Oxford; Mr. T. M. Stone, London; Dr. Barlow, London.

BOOKS AND PAMPHLETS RECEIVED—

How to Choose a Microscope, by a Demonstrator—Dr. L. J. Teissier, Du Diabète Phosphatique—Report of the Board of Health of the City and Port of Philadelphia to the Mayer for the Year 1875—J. Matthews Duncan, M.D., LL.D., The Father of Medicine: the Opening Address of the 139th Session, 1876-77, of the Royal Medical Society—Walter Cook Spens, The Sanitary System of Scotland: its Defects and Proposed Remedies.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Naturc—Philadelphia Medical Times—Iron—The Colonies—Yorick—Students' Journal—Hand and Heart—The Scotsman—Medical Enquirer—The Porcupine—New York Medical Journal—Morningside Mirror—Boston Journal of Chemistry.

APPOINTMENTS FOR THE WEEK.

December 23. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

25. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

27. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

28. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

29. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 16, 1876.

BIRTHS.

Births of Boys, 1295; Girls, 1251; Total, 2546.
Average of 10 corresponding years 1866-75, 2225·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	750	693	1443
Average of the ten years 1866-75	855·0	818·8	1673·8
Average corrected to increased population ...	...	...	1791
Deaths of people aged 80 and upwards ...	...	...	55

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	3	10	3	5	1	2	1	5
North	751729	43	6	5	1	8	1	8	1	1
Central ...	334369	1	1	2	1	2	...	2	...	2
East	639111	5	10	16	...	2	...	2	1	4
South	967692	23	11	21	1	6	1	7	1	7
Total	3254260	75	31	54	6	23	3	21	4	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·730 in.
Mean temperature	42·5°
Highest point of thermometer	46·6°
Lowest point of thermometer	35·0°
Mean dew-point temperature	39·2°
General direction of wind	...S.W. & S.E.
Whole amount of rain in the week...	0·24 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 16, 1876, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1876.*	Persons to an Acre. (1876.)	Births Registered during the week ending Dec. 16.	Deaths Registered during the week ending Dec. 16.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3489428	46·3	2543	1443	46·8	35·0	42·5	5·84	0·24	0·61
Brighton	100632	42·7	66	22	49·0	35·7	44·1	6·73	0·64	1·63
Portsmouth ...	124867	27·8	75	46	49·6	36·5	45·4	7·44	0·28	0·71
Norwich	83430	11·2	68	29	48·0	34·0	42·8	6·00	0·37	0·94
Plymouth	72230	51·8	45	27	54·0	35·0	47·2	8·44	0·76	1·93
Bristol	199539	44·8	149	74	51·2	31·9	43·9	6·61	0·52	1·32
Wolverhampton ...	72549	21·4	55	37	49·0	35·2	42·8	6·00	0·42	1·07
Birmingham ...	371839	44·3	309	121	51·3	33·8	42·9	6·06	0·22	0·56
Leicester	113581	35·5	69	51	47·2	33·2	42·6	5·90	0·57	1·45
Nottingham ...	93627	46·9	59	52	47·7	30·7	41·7	5·39	0·31	0·79
Liverpool	521544	100·1	422	257	50·0	35·9	43·1	6·17	0·80	2·03
Manchester ...	357917	83·4	281	174	52·0	28·0	41·8	5·45	0·47	1·19
Salford	138425	26·8	123	82	49·9	30·9	43·2	6·22	0·64	1·63
Oldham	88609	19·0	78	47	...	...	...	...	...	...
Bradford	173723	24·1	99	79	49·6	34·0	42·9	6·06	0·22	0·56
Leeds	291580	13·5	245	133	51·0	32·0	42·7	5·95	0·32	0·81
Sheffield	274914	14·0	215	98	49·5	31·0	42·4	5·78	0·63	1·60
Hull	136933	37·7	92	67	48·0	31·0	41·4	5·22	0·43	1·09
Sunderland ...	108343	32·8	104	63	47·0	34·0	41·5	5·28	0·08	0·20
Newcastle-on-Tyne	139929	26·1	117	58	...	...	...	...	...	...
Edinburgh	215146	51·3	141	95	...	...	...	...	0·01	0·03
Glasgow	545144	90·4	356	230	48·4	38·7	43·3	6·28	1·01	2·57
Dublin	314686	31·3	192	139	53·8	27·3	44·6	7·01	1·04	2·64
Total of 23 Towns in United Kingdm	8028595	37·7	5308	3124	54·0	27·3	43·1	6·17	0·47	1·19

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·73 in. The highest reading was 30·03 in. on Sunday, and the lowest 29·44 in. on Tuesday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1876 by the addition of five years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

SELECT LECTURES ON MEDICAL JURISPRUDENCE.

By FRANCIS OGSTON, M.D.,
Professor of Medical Logic and Medical Jurisprudence in the University of Aberdeen.

Lecture XIII.

SUFFOCATION.

"When the *breathing* is impeded by any cause, which operates *independently of internal pressure on the trachea*, the person is said to perish by suffocation."—(Taylor, "Medical Jurisprudence," vol. i. page 195.) This definition distinguishes death by suffocation from death by hanging and strangulation. Properly speaking, it does not exclude death by drowning, which is but a form of suffocation—a subject already disposed of, as deserving, from its importance, a special and independent consideration. The definition also takes in *smothering* as a variety of *suffocation—i.e.*, the exclusion of air from the lungs resulting from "the mere covering of the mouth and nostrils."—(*Id.*, "Principles and Practice of Medical Jurisprudence," vol. ii. page 92.)

Inclusive, then, of *smothering*, but excluding death by *drowning*, suffocation, as thus understood, may be either the consequence (1) of natural disease, (2) of accident, (3) of neglect in infants, or (4) of unintentional or intentional violence.

1. The *diseased states* which may terminate life in this way are—*tumours about the throat or fauces; the bursting of abscesses of the tonsils; effusion of lymph on the trachea or about the rima glottidis; the accumulation of the bronchial secretion* in the bronchitis of infants; *acute pleuritic effusion*, where both pleuræ are affected; simultaneous *œdema of both lungs; the bursting of an aneurism of the aorta into the bronchi; hæmoptysis*, when very copious and sudden; and the so-called *pulmonary apoplexy*. In practice I have on inspection been led on several occasions to notice the fact of the immediate cause of death in infants in bronchitis from the great and rapid accumulation of mucus in the air-passages. Pulmonary œdema has been recognised amongst pathologists as the immediate precursor of death in both acute and chronic diseases of the heart and lungs, obstructing the flow of blood or the respiration through large portions of the latter. In 1866 I took occasion to direct attention to the frequency of pulmonary apoplexy as an immediate and direct cause of sudden death in various diseased states of the body in persons advanced in life.—(*Brit. and For. Med.-Chir. Rev.*, vol. xxxvii. page 459.)

2. This form of sudden death may be purely the result of *accident*, such as pressure on the chest, sufficiently powerful to prevent the expansion of the lungs; or the inhalation of those of the gases which, though not positively deleterious to the system, deprive the lungs of oxygen. *Intoxicated persons* not unfrequently perish by suffocation, either from getting into such a position as to obstruct the free entrance of air into the lungs, or from vomited matters entering the larynx and trachea in sufficient quantity suddenly to interrupt their breathing. I have had opportunities of examining cases of sudden death in both of these ways, in which suspicions of foul play had been entertained. One of these was the woman Paton, previously noticed under "Death" (Lecture VI.) as a case of cadaveric spasm. Instances of accidental suffocation not unfrequently present themselves, from large morsels of solid food getting impacted in the upper part of the œsophagus, and compressing the larynx from behind, or from articles of food either closing the rima glottidis or getting into the larynx or trachea in the act of being swallowed or of being rejected by vomiting. Drunkards occasionally perish in this way by smothering in their own vomit. Surgeons are aware of the necessity for administering chloroform on an empty stomach, from the risk to their patients, under anæsthesia, of the contents of the stomach getting thus into the trachea.

In cases of escape from drowning, from the quantity of water which enters the air-passages, and penetrates to the air-cells of the lungs, persons removed in time from the water, and recovering consciousness and breathing, sometimes die from suffocation subsequently, at from one or two hours to two or three days, in the failure of the water being absorbed. Of this I have met with two instances in practice—the one the wife of a clergyman, the other a policeman.

We frequently hear in the newspapers of persons suffocated in pits, graves, sandbanks, and drains, from the sudden falling in or over them of the soil. I have met with several such cases. A gravedigger at Kintore lost his life in this way at the bottom of a grave there a few years ago.

3. Cases of suffocation, as already noticed under "Infanticide," are attributed in infants to carelessness or neglect on the part of the mothers or attendants, in allowing the children at birth to remain under the bedclothes where there is no access to air, or from the leaving a pillow, a bolster, or bedclothes over the child's face. *This form of suffocation* is what, with one or two others afterwards to be noticed, ought properly to be considered as *death by smothering*—using the term in its restricted sense as a sub-species of suffocation. As stated, however, formerly under "Infanticide," it is doubtful at least if a vigorous child could perish in this way, without putting forth instinctive efforts to change its position, and thus obtain access to atmospheric air.

4. *Suffocation by violence, unintentional or intentional*, cannot always in practice be readily distinguished from instances of suffocation from accident or misadventure. Thus overwrapping, whereby an infant has perished, may have been owing to negligence on the side of its attendant or to design on her part. Again, a mother or nurse, during a heavy or disturbed sleep, may destroy the child by literally overlaying it, and thus compressing its chest, when it may be found to be difficult or impossible to distinguish betwixt the effects of accident and intentional violence.

Of violent, though accidental and unintentional, suffocation we have instances in adults from overcrowding in public places, as in theatres, or from sudden alarms of fire in buildings. In this way no fewer than twenty-three persons lost their lives in Paris in 1837, death being occasioned by pressure on the chest. The parties—eleven men and twelve women—died standing, or while being borne along in a crowd.—(*Annales d'Hygiène*, vol. xviii. page 485.) A similar but much more widespread calamity occurred in Paris in 1866, the history of which has been given us by Tardieu. The number of victims on this occasion amounted to about forty. In the bodies of those who were inspected, though, as in the previous case, various injuries were detected, the immediate cause of death was traced to suffocation, either at the moment of the pressure of a crowd at the Champ de Mars, or shortly after.—(*Ibid.*, vol. xxv. page 338.) Intentional violent or homicidal suffocation is usually encountered in infants and children. In the majority of cases of infanticide, indeed, suffocation is believed to be the means resorted to for destroying the infant. Tardieu has stated that of 132 judicial inspections of new-born infants which he has been called to undertake, he has satisfied himself that seventy-two had been destroyed by suffocation.

While it is evident that nothing is more easy than to suffocate *an infant*, to effect this in the case of *an adult*, it must be equally evident, would, *under ordinary circumstances*, be a matter of great difficulty. A moderate degree of resistance would suffice to baffle the assailant, unless he had the assistance of others. This, at least, has been the case in two instances of this sort which have come under my notice. An adult, however, *in a state of stupefaction* from drink or narcotics might readily be murdered in this way. The victims of the notorious Burke were destroyed in a state of intoxication. The evidence adduced in these cases was to the effect that the mouth and nostrils of the parties were closed by one hand of the assailant, the lower jaw fixed by the other, and the expansion of the chest prevented by the weight of his body lying on it. The mode of death, however, was not completely elicited on the trial; and doubts have arisen on this point which we have not the means of clearing up satisfactorily.

An interesting case was tried at Lincoln in 1843, in which a housebreaker, to enable him to rob a house, tied the hands and feet of its inmates—two old women about seventy,—and left them in bed, with the bedclothes tucked up over their heads. Next day one of the women was found suffocated, and the other in an exhausted state, but still alive.—(Beck's "Medical Jurisprudence," vol. ii. page 234.)

Suffocation, in rare instances, has been resorted to as a mode of committing *suicide*. Though the possibility of it has been doubted, more than one author has stated that the negroes in the West Indies and in Brazil have been known to choke themselves by doubling back the tongue and swallowing it down into the fauces.—(*Ibid.*, page 255.) Dr. Wagner has stated that a criminal in Austria was found dead in his dungeon, having

thrust a shawl into the back part of his mouth and throat.—(*Ibid.*, pages 235-6.) But perhaps the most unique case of suicidal suffocation, or rather smothering, is one which appeared in Henke's *Zeitschrift*. A servant-girl had shut herself up in her trunk during the night, and was found dead in the morning, having been suffocated for want of fresh air.—(Vol. ii. 1851.)

The morbid appearances in this mode of death may or may not be very obvious or characteristic. As a rule, as these cases resolve themselves into death by asphyxia, the indications of this form of sudden death as formerly laid down (Lecture IV.) may be looked for in the general case, though these are not so invariable in their occurrence, nor so well marked or obvious in every instance, as might have been expected. Thus, congestions of the lungs, right heart, and brain have been wanting, or but slightly marked, in undoubted cases of suffocation; while Caspar has found the kidneys more strongly congested than the liver, spleen, and other organs.—(Taylor, "Practice of Medicine," vol. ii. page 87.)

The previous existence of such *diseases* as would account for death in this form of asphyxia could scarcely be overlooked by a careful observer, who, with this view, would attentively examine the state of the throat, larynx, trachea, bronchi, and lungs. Equally obvious would be the presence of *foreign bodies* lodged in the nostrils, mouth, throat, or gullet, or vomited matters in the trachea or bronchi.

In the case of children sunk alive in dunghills, or amongst ashes, bran, or feathers, the foreign substance in which they had been immersed has been found occasionally in the nostrils, mouth, throat, or air-passages, and even in the stomach. Devergie has published a case, in which the face and head of *an adult* were forcibly held down into a corn-heap till life was extinct, and in which the grain was found in the back of the mouth, the pharynx, the trachea, œsophagus, stomach, and duodenum.—(*Annales d'Hygiène*, October 1855, pages 383-95.)

Some years ago the life of a boy of eight years was only saved here by immediate recourse being had to tracheotomy to obviate threatened suffocation. A mason's labourer had seized the boy and held his face down in a heap of unslaked lime, which had been drawn into the air-passages.

At the inspection of five adults who perished in the smoke of a building lined with wood, at Footdee, in December, 1840, and in a subsequent case of the same sort in an old woman, I found the trachea and bronchi lined with a coating of soot.

When death has been caused by *mediate occlusion of the mouth and nostrils*, unnatural flattening of the nose or lips, or both, will be occasionally found sufficiently well marked. When the throat has been grasped by the assailant's hands to compress the *windpipe*, scratches, abrasions, or even ecchymoses may be encountered on the front or sides of the neck. Where, again, suffocation has been brought on by those means which act *by compressing the chest and hindering its expansion*, marks of such pressure are scarcely to be expected in children, or even in adults, unless where unnecessary violence has been used. None such have been found in *animals* purposely destroyed in this way.

Certain appearances which the blood presents after suffocation from breathing carbonic acid and oxide will be noticed in detail afterwards under these gases. The most striking of these is the bright-red hue of the blood in cases of poisoning with the carbonic oxide, which persists in the blood kept for a considerable length of time. In one instance of this sort here last year (1875) the characteristic hue of this fluid was found to be retained without change three months after the inspection. In cases of death in this way, congestion and minute ecchymoses on the conjunctivæ and on the front of the face and neck, as also reddening of the interior of the trachea, mucus tinged with blood in the air-passages, and rupture of air-vesicles on the surface of the lungs, are insisted on by Tardieu as characteristic appearances, though none of these are constant or even very frequent.

But a still higher value is claimed by this authority for the so-called punctiform or capillary ecchymoses met with most abundantly on the surfaces of the lungs and thymus gland, less frequently on the inner face of the scalp and interior of the pericranium, and occasionally, but still more rarely, on other surfaces. The number of these ecchymoses is found to vary, and they are either few and scattered, or numerous and in clusters; they have a distinctly rounded form and well-defined margin; their size, which is nearly uniform in the same subject, rarely, if ever, exceeds the breadth of a large pinhead;—characters which will usually serve to distinguish the punctiform ecchymoses from the petechiæ met with on the heart and lungs after purpura (*vide* "Drowning"), eruptive and low fevers, and cholera. They also serve to differentiate them from the effusions of blood encountered under the scalp and pericranium in the new-born infant after tedious and difficult labours; the effusions in these cases not having the same uniformity of size and shape, and varying in breadth, in the same case, from the diameter of a pea to that of a boy's marble, while they are usually accompanied by redness of the cranial bones, and congestion within the head.

Of the frequency and marked character of the punctiform ecchymoses in death by suffocation *in infants*, as far as the thoracic organs are concerned, there is no room for doubt. They had not escaped the notice of Berndt so early as 1827; they were specially insisted on by Hecker in 1853 (*Brit. and For. Med.-Chir. Rev.*, vol. xxxiii. page 338); Caspar in his "Gerichtliche Leichen Oefnungen" and in his "Forensic Medicine" has adduced twelve illustrative cases, and Simon in Caspar's *Vierteljahrschrift* (vol. xix. page 77) six others; while Mashka and Bohr have largely supplemented Tardieu's cases. I have met with them in all in eighty-two inspections; twenty-two of which were in infants at birth, and forty-five in children of from five days to sixteen months. The results of fifty-nine of these inspections were tabulated in 1868 in the *British Medical Journal* of that year (vol. ii. page 332).

Simon, Mashka, and Bohr, however, deny *the exclusive applicability* of this test to instances of pure smothering. Simon, in especial, has constantly contended that these punctiform ecchymoses, though *almost invariably to be met with in this form of infantile asphyxia*, have also been encountered in rare instances in other forms of death by apnœa; such as hanging and drowning, of which he has brought forward examples (Caspar's *Vierteljahrschrift*, vol. xix.). This is borne out by Skrzecka, in 1867, who tells us that while he found these appearances in the chest in children at birth or under one year, he met with them also in seven adults who had died from other forms of asphyxia—*i.e.*, in the ratios respectively of 76·6 per cent. of the children to 21·3 per cent. of the adults.—(Horn's *Vierteljahrschrift*, vol. vii. page 227.)

With this my own experience agrees. Prior to September, 1868, I had encountered these ecchymoses in two cases of drowning, one of hanging, one of scarlatina, one of heart disease, one of apoplexy, four of pneumonia, one of pulmonary apoplexy, and two of pulmonary œdema (*Brit. Med. Jour., ut supra*).

Admitting the force of these statements, therefore, we cannot follow the dictum of Tardieu—that the presence of these ecchymoses is an undoubted proof of this form of asphyxia exclusively. Nor can we limit ourselves to the conclusion argued for by this author—that when found they necessarily imply that the smothering must have occurred in the new-born infant *subsequent* to its birth.

Various researches on this subject have sufficed to settle beyond doubt that these ecchymoses are encountered in the bodies of *stillborn infants*, and even in *unborn fœtuses*, where the mothers had perished before the commencement of labour. Instances of such appearances in *stillborn infants* were met with by Caspar, Schwartz, Elsässer, Mashka, Hecker, and Roogewey; while Caspar refers to two instances of this in *the unborn fœtus*—one in the uterus of a woman who hanged herself in the eighth month of her pregnancy, the other in the uterus of a woman who perished by apoplexy when seven months pregnant. The ecchymoses were found by me in the lungs of a stillborn child; in the lungs of an infant whose chest was felt to expand in utero during an attempt to turn it when delivery could not otherwise be effected, on account of obstruction of the pelvis by a tumour; and in the fœtus in utero of a woman, last November (1856), who died from the bursting of an aneurism of the ascending aorta.

It is to be borne in mind, however, that in instances of this sort, the mode of death, where there is no indication of *drowning*, resolves itself into *suffocation*. In the unborn fœtus, as already explained under "Drowning," the arrest of the fœtal circulation has been shown to induce attempts at inspiration, and the subsequent death of the infant by asphyxia, either by drowning where the liquor amnii is drawn into the lungs, or by suffocation (properly so called) where the waters had been previously discharged, or where the membranes have been interposed between them and the child's mouth. This circumstance, however, as observed by Caspar, "necessitates the greatest care being exercised in determining doubtful cases of death by suffocation in new-born infants,"

though he is of opinion "that a careful examination of the body will always afford data sufficient to prevent a case of *post-partem suffocation* being confounded with one of suffocation in utero.—("For. Med.," vol. ii. page 127.)

In justice to Tardieu, I think it further but fair to state that, as far as my own experience goes, a distinction may be drawn betwixt the ecchymoses met with in infants in these cases, and those in adults perishing in other forms of asphyxia. In the first place, in these last the ecchymoses were only encountered in one instance in the thymus gland; while in the former class of cases they are usually encountered in greatest abundance in this gland. Secondly, in the cases in which the persons had obviously perished from drowning, hanging, disease, or violence, the ecchymoses were single and scattered, not in numbers and clustered as in those children whose bodies presented no obvious traces of disease or injury to account otherwise for the cause of death than the presumption of suffocation, or rather smothering. Thirdly, while in only one of these last infants were the ecchymoses in a marked form wanting in the lungs, in the twenty-two other cases in which they were found in this organ the spots were few in number and discrete, not in clusters as in the children's cases.

From all this, I am disposed to give a higher value than most of my contemporaries to the punctiform ecchymoses as an indication which, when present and well-marked, if not an infallible one, may be looked on with some confidence, as a strong indication in children of death by smothering where no other cause of death is obvious or presumable.

ORIGINAL COMMUNICATIONS.

THREE CASES OF EPILEPSY.

By JOHN CROSSMAN, M.R.C.S.E., L.S.A.L.

The following three cases of epilepsy, though possessing the classical symptoms common to the disease, were accompanied with a remarkable development of petechiæ—a condition previously recognised in the graver forms of epilepsy, but probably rarely observed of such extent and wide distribution:—

The first case is that of a female, aged about twenty, who has been subject to epileptic attacks of a more or less severe nature for many years. Most of the "fits" occur in the night, and the patient generally is quite unconscious of an attack having taken place. Her expression of features and condition are pathognomonic of the disease. Various kinds of treatment have been employed, but have proved comparatively inefficacious. One morning the patient was brought to me by her father, and I was requested to notice the peculiar appearance of her complexion. He said, in reply to my inquiries, that she had suffered an unusually severe attack of epilepsy that morning, and that the "eruption" that had happened soon after had quite alarmed him, though he stated that his daughter had presented some discoloration of skin in previous "seizures." On careful observation, I saw that the face, as well as the neck of the patient, especially in the direction of the sterno-mastoids, was covered with innumerable specks of sanguineous congestion, which caused the complexion to assume quite a coppery tint, or, to use her parents' forcible language, "she looked like a Red Indian." The eyelids were also particularly speckled; and on raising the lids, the ocular conjunctivæ were marked in a similar manner. This extravasation faded away gradually, and in a few days the skin assumed its ordinary colour. No particular symptoms were observable by the patient in addition to those experienced at any other time in the course of the disease. The ecchymoses described were evidently effused blood immediately beneath the epidermis, and probably dependent on great vascular strain, of which the paroxysm was either the cause or result.

The second case was that of a gentleman, aged twenty-two years, to whom I was summoned one evening in haste. I found him just recovering from an epileptic attack. On inquiry, it was ascertained that there had been no previous attack; that his health up to this time had been comparatively good; that there was a history of one attack of epilepsy on the father's side; that the patient had been engaged in his usual occupation that day, and felt quite well. Before complete recovery from the state in which I found him, a second attack occurred, of shorter duration; and a third followed in about half an hour, severer in kind and longer in duration than the others. Afterwards the patient fell into a sound sleep. There was no further attack, nor has any occurred since. On the following morning the patient's eyelids, especially the inferior, were found covered with minute spots of ecchymosis, and the ocular conjunctivæ were also similarly speckled. The left pupil was more dilated than the right, and on this side the extravasation was more apparent. The spots began to fade the same day, and in about three days had completely disappeared.

The third case was to me a singularly interesting one, because of the obscurity of the symptoms and the difficulty of arriving at a diagnosis. It was that of a female child of five years of age, who was described by its parents as suffering from a "feverish attack" which, on the morning of my arrival, they had observed come on. The parents expressed great surprise at their child's serious illness, saying that she had slept by them during the night, and, so far as they knew, had not suffered disturbed rest, but had slept more soundly than usual. My first impression on looking at the little patient was that it was suffering from some cerebro-spinal irritation, and I at once asked the mother if the child had had a "fit" during the night. Both parents assured me that the above meagre information was all they could give me relative to the case. The patient presented the following symptoms:—She was quite sensible and able to speak, but was very cross; complained of much pain in the head; there was intense somnolence; the whole aspect of the patient was torpid to the last degree; the tongue was not bitten; the decubitis was dorsal, and all efforts to get the child to lie on either side were useless; the head was strongly flexed on the shoulders, and the muscles of the back were affected, though in a less degree. In fact, there existed a condition closely allied to opisthotonos, and this persisted more or less for fourteen or fifteen days, beginning to yield slightly after about the first week, and then gradual relaxation occurring as the patient progressed towards recovery. The eyes were dull and listless, and the pupils dilated, but quite sensible to light. On examination I was struck with the condition of the ocular conjunctivæ, which were covered with petechiæ, mostly of a dull brown colour, irregular in shape, and varied in size from an eighth of an inch to the merest speck. No petechiæ were observed in any other parts. These ecchymoses continued visible for several days, and suffered a very gradual but complete absorption. After an illness of about five weeks the child was convalescent, and no similar attack has occurred up to the present time. I may add that the pulse and temperature continued high for some days (120 to 130, and 102° to 103° respectively); that there was troublesome constipation; that for several days the urine was scanty, at times quite suppressed, and strongly ammoniacal; and that two ascarides lumbricoides passed—one per anum, and the other down the nares. The occurrence of the petechiæ, associated and compared with those observed in the undoubted cases of epilepsy, afforded me a valuable aid to diagnosis in a doubtful case, where detection was difficult, the attack being unwitnessed, and the patient unable to supply any recollection or knowledge of the event.

Redruth.

A Heavy Fine.—A butcher named Evans, of Wolverhampton, has been amerced in a penalty of £55 and costs for having unwholesome meat in his possession in the public market for sale.

Memorial to the late Dr. Thomas E. Beatty, of Dublin.—On Friday, December 22, Sir George B. Owens, M.D., Lord Mayor of Dublin, entrusted to the safe keeping of the Dean of Saint Patrick's Cathedral a memorial tablet to the late Dr. Beatty, which has been placed on the north wall of the nave of the Cathedral by the members of the medical profession. The Presidents of the Colleges of Physicians and Surgeons and a large gathering of the profession were present at the ceremonial. The tablet is of black polished marble, with a white scroll in the centre, the whole being surmounted by the crest of the deceased in white marble, with the motto *Non vi, sed arte*. On the scroll is the following inscription:—"This tablet is erected by his professional friends to the memory of Thomas Edward Beatty, M.D., President of the Royal College of Surgeons in Ireland, 1850, and President of the King and Queen's College of Physicians, 1864, who died on the 3rd of May, 1872, in the seventy-third year of his age. Of noble nature, generous, kind, and just, he lived and died beloved of all who knew him."

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

SEAMEN'S HOSPITAL, GREENWICH.

LARGE PENETRATING WOUND OF ANTERIOR WALL OF ABDOMEN, WITH PROTRUSION OF INTESTINE—RECOVERY.

(Under the care of Mr. W. JOHNSON SMITH.)

[For the notes of these cases we are indebted to Mr. Makins, House-Surgeon.]

Johann W., aged thirty-four, a tall and muscular Swedish seaman, was admitted on September 10, 1876, with a large granulating wound of the anterior abdominal wall.

On August 28 (thirteen days before the date of his admission), the patient, on a passage from Sydney to London, whilst painting the mizenmast of his ship, slipped and fell from the board on which he was suspended. He then clasped the mast with both arms, and glided rapidly downwards towards the deck, but in his fall came across some fixed belaying pins, which penetrated his abdominal wall and produced a large transverse gaping wound. According to the reports of the ship's captain and of the patient himself, a large mass of naked intestine protruded through this wound, and extended for some distance beyond its edges. The patient having been lifted from the belaying pins and laid on deck, the captain replaced the coils of intestine, brought together the edges of the wound by sutures of thick black thread, covered the front of the abdomen with thick layers of dry lint and flannel, and finally compressed the body with a broad sheet. The patient was not removed to the forecastle, but was allowed to remain on deck close by the place of the accident. He was placed on a soft bed and protected by a small tent made up of an old sail and some light spars. He was fed on milk, sago, beef-tea, and sopped bread; occasionally a small quantity of brandy was administered. The patient remained under these conditions until the afternoon of September 10, when just as his ship had reached the entrance to the West India Docks, he was carefully placed in a boat and taken to Greenwich. The captain reported that no bad symptoms had been observed at any time after the accident. There had been no sickness, and no complaint of pain in the abdomen. The man had not been feverish, and had no loss of appetite; he had complained frequently of the insufficiency and the light quality of his diet. The bowels had been relieved but once since the accident (September 2).

At the time of his admission the patient seemed to be strong and in good condition; the face was ruddy and without any expression of pain or anxiety; the tongue was clean, pulse 96, temperature (axillary) 99°. Extending across the front of the abdomen, from the centre of the right inguinal region to the lower portion of the left lumbar region, was a long granulating surface measuring fifteen inches from side to side, and at its widest part, which was just above the pubic symphysis, three inches from above downwards. The width of this wound varied much at different parts, as if there had been more gaping at some points than at others. The surface of the wound, which was covered over its whole extent by very healthy granulations, presented many large and irregular undulations evidently formed by subjacent coils of intestine. On the right side of the wound were two small orifices, through each of which an ordinary probe could be passed into the abdominal cavity, and from which there was a profuse discharge of thick, yellow, and very fetid pus.

The patient was kept in bed, and ordered to lie constantly on his back. The wound was covered by boracic lint and thick sheets of wadding. From the framework which protected the body from the weight of the bed-linen were suspended two chip-boxes with perforated lids, in which iodine was contained. The diet consisted mainly of fish and milk.

The large wound contracted speedily, and without any indication of local inflammatory action or constitutional affection beyond a small abscess attended with some febrile reaction, which appeared on September 19, just above the right extremity of the wound. This was incised on September 21, and about a teaspoonful of thick pus was let out. On October 16 the wound had closed at every part, and the patient was allowed to get up and to walk about the ward; a firm bandage being applied around the lower part of the abdomen. On November 9 he was fitted with a strong abdominal belt, and at the end of the month was in a perfectly healthy condition, save in the tendency, when he was erect and the abdominal wall was not supported by belt or bandage, to yielding of the cicatrix along its whole extent, and to abnormal prominence of intestine.

ARTERIO-VENOUS ANEURISM OF FEMORAL VESSELS.

(Under the care of Mr. W. JOHNSON SMITH.)

Adolf I., aged thirty-two, a Swede, was admitted into the Seamen's Hospital on August 4, 1876.

The patient, five weeks before admission, was accidentally wounded in the upper part of the left thigh by a ball from a pistol, which passed through the soft parts of the limb in front of the bone from the outer to the inner surface. Very soon after the accident there was profuse bleeding from the inner wound (that of exit). This bleeding was after a time arrested by firm pressure of a pad and bandage, but not until the patient had lost more blood through constant saturation of the dressings. Five days after the accident the patient noticed for the first time pulsation near the seat of injury. He remained in bed for a week. As soon as he began to move about, after this period of rest, he found that the pulsation increased, and complained of acute pain in the ham, the calf, and the foot, which rendered him very lame.

At the time of admission there was slight fulness over the lower half of Scarpa's triangle, and the skin over the upper third of the front of the thigh was marked by a fading ecchymotic tint. On the outer surface of the thigh, seven inches below the anterior superior spine of the ilium, was a small level circular cicatrix surrounded by a broad zone of pigmentary deposit (aperture of entrance). On the inner surface of the limb, five inches below the fold of the groin, was a small depressed ulcer covered by a dry scab (aperture of exit). The slight tumour in the upper part of the thigh pulsated visibly, and on digital examination very well marked pulsation and a rustling could be made out. This rustling thrill could be followed upwards to the fold of the groin, and downwards as far as the lower third of the thigh. Along the course of the femoral vessels, from the groin to the lower part of the thigh, but much more distinctly over the swelling in the upper third, could be heard through a stethoscope a continuous, loudly roaring noise, with regular and rhythmical swell. The left common femoral artery seemed to be much larger than that on the right side, and its pulsations were much more distinct. The pulsation and roaring sound in the thigh could be readily arrested by pressure on the artery in the groin. There was no enlargement of the veins of the leg, and the skin of the limb, save over Scarpa's triangle, was pale and free from œdema and congestion. No difference could be made out in the temperature of the feet. The patient had been rendered lame and helpless through severe pain in the injured limb which came on whenever he attempted to walk.

After several unsuccessful attempts had been made to bring about a radical cure through compression of the common femoral by Carte's instrument, weights, and a bag of shot, the patient was supplied with a strong elastic stocking, extending from the toes to the groin. With this support he was able to walk with but a slight limp, and without suffering. Though anxious to work again as a seaman, and not altogether satisfied with the elastic stocking, which, though it afforded him much relief, did not remove the pulsation, he was unwilling to submit to any operative treatment attended with risk, and left the hospital, at his own request, on September 19.

Dr. James E. Pollock, of 52, Upper Brook-street, Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, has been unanimously re-elected by the Committee of Management on completing his term of office.

The Household of the Lord Lieutenant of Ireland.—The following appointments have been made in the household of his Grace the Duke of Marlborough, K.G., Lord Lieutenant-General and General Governor of Ireland:—*Physician in Ordinary:* G. W. Hatchell, M.D., F.R.C.S. Ire.; *Surgeon in Ordinary:* Philip Crampton Smyly, M.D., F.R.C.S. Ire.; *Surgeon to the Household:* James Stannus Hughes, M.D., F.R.C.S. Ire.; *Surgeon-Dentist in Ordinary:* Robert Henry Moore, F.R.C.S. Ire.

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Medical Times and Gazette.

SATURDAY, DECEMBER 30, 1876.

ANNUS MEDICUS 1876.

The Prime Minister of her Majesty's Government is still the statesman who, not very long ago, publicly declared that "the first consideration of a Minister should be the health of the people," yet the history of the year 1876 has certainly not been impressed by any marked advance in sanitary legislation, only one directly sanitary Act—a somewhat feeble Rivers' Pollution Bill—having been added to the Book of Statutes. But in Medical Histories the year will be strongly marked as that in which a Bill was passed for the Prevention of Cruelty to Animals, which was aimed solely against a class of men whose characters and objects are essentially humane, and which, while placing serious and vexatious impediments in the way of physiologists and other men of science who desire to make experiments on animals, and making it highly penal to even take blood from the tail of a newt with the object of learning aught that may benefit mankind or the lower animals, without a Government licence, made no additional effort to restrain or lessen innumerable kinds of cruelty to animals that stain our civilisation, and are incited by fashion, sport, brutality, thoughtlessness, or any other object or motive power but the pursuit of science: as a year in which also the Medical-Woman question was advanced by the passing of an Act enabling any medical licensing body to admit to examination "persons without distinction of sex"; and in which the formation of a Conjoint Examining Board for England made a great stride towards actual and practical completion. The year will, moreover, be noted for the commencement of a new epidemic outbreak of small-pox in London.

The Houses of Parliament met for business on April 8, and the session was opened by her Most Gracious Majesty in person; but the most remarkable and noteworthy feature, from our point of view, of the Royal Speech, was the utter absence of any allusion whatever to sanitary legislation (unless, indeed, the Merchant Shipping Bill be classed among sanitary measures); or to any Bill directly affecting the medical profession; though some measure for the improvement of the position of the Army Medical Officers had long been looked for, and promised, and, indeed, had become imperatively and urgently necessary through the fatal dearth of candidates for the service. The debate on the Address, however, drew from her Majesty's Ministers an assurance that they intended to introduce "other important measures" besides those mentioned in the Speech from the Throne, and that these other measures would include a Bill to prevent the pernicious pollution of rivers. This promise was fulfilled, a Rivers' Pollution Bill having been introduced early in the session, and successfully passed. Very soon, also, the Secretary of War stated to the House of Commons the details of a new Army Medical Warrant, intended to make the Army Medical Service once more a contented and popular one. And during the first few days of the session, notice was given of the reintroduction of the Contagious Diseases Act Repeal Bill, and of Mr. Cowper-Temple's Bill to amend the Medical Acts in favour of Women who had taken Foreign Degrees in Medicine. Of these, and some other measures, we shall speak more fully presently; but the session will be best known in medical records as having been that in which the Legislature passed the Act commonly spoken of as the Vivisection, or the Cruelty to Animals Bill. Last year, in consequence of the popular feeling that had been excited on the subject of vivisection, a Royal Commission was appointed "to inquire into the practice of subjecting live animals to experiments for scientific purposes, and to consider and report what measures, if any, it may be desirable to take in respect of any such practices." The profession, while entirely repudiating the gross and utterly unfounded charges brought against them, felt that the Commission might do good service in answering these charges, and in allaying popular excitement; and that as the Commissioners selected were such well-known men as Lords Cardwell and Winmarleigh, Mr. W. E. Forster, Sir John Karslake, Professor Huxley, Mr. Erichsen, and Mr. Hutton, the Secretary of the Royal Society for the Prevention of Cruelty to Animals, no one would be able to gainsay their impartiality and judgment. We awaited their report, therefore, with sure confidence that it would fully and perfectly vindicate the practice of vivisection, so far at least as it is carried on in our own country; though about a month before the report appeared an attempt was made, in anything but good taste, by Mr. Auberon Herbert and Lady Burdett-Coutts, to again arouse public feeling on the matter. At the assembling of Parliament the Report of the Commission was ready, and was laid on the table of the House of Commons; and early in March it was issued, together with the whole of the voluminous mass of evidence that had been taken. The more carefully it was examined, the more certain it was that the Commissioners had fulfilled the trust committed to them with such patience, minute and careful labour, judgment, and impartiality, as were beyond praise or question, and that the result was the full and absolute vindication of the physiologists, physicians, and medical students of our country from the imputations that had been so freely and recklessly cast upon them. The Commissioners assured her Majesty that the "infliction upon animals of any unnecessary pain is justly abhorrent to the moral sense" of her subjects generally, and "not least so of any of the most distinguished physiologists, and the most eminent surgeons and physicians, and that the support of these eminent persons, as well as of the general public, may be confidently expected for any reasonable measures intended to prevent abuse." The Commissioners had been ready and desirous to receive evidence from all quarters, and it had been taken from representatives of the various societies that had been formed for the protection of animals, and for the abolition or restriction of experiments upon them, as well as from physiologists, physicians, and

surgeons; but no proof was adduced that the practice of vivisection for scientific purposes had in a single instance been abused. It was fully proved that the extent to which vivisection had been made use of in our medical schools had been grossly exaggerated; that unnecessary pain had not been inflicted, anæsthetics always being employed when practicable; and that instead of there being any truth in the charge that these experiments fostered callousness in medical students, these are ever quick to resent the infliction of any avoidable pain. And, having shown all this, the Commission drew from all the evidence placed before them the following among other conclusions:—"That it is impossible altogether to prevent the practice of making experiments upon living animals for the attainment of knowledge applicable to the mitigation of human suffering or the prolongation of human life; that absolute prevention, even if it were possible, would not be reasonable; that the greatest mitigations of human suffering have been in the past derived from such experiments; and that by the use of anæsthetics in humane and skilful hands, the pain which would otherwise be inflicted may, in the majority of cases, be altogether prevented, and in the remaining cases greatly mitigated."

The Commissioners pointed out very fully, and at great length, the immense benefits that have been gained by experiments on living animals, classing these under three principal heads:—Operations performed for the purpose of examining, either for original research, or for demonstration to students, the processes of life; the administration of poisonous or dangerous drugs, for the purpose of exhibiting the effects, or of discovering the cure for them, or of assisting legal investigation; and the production of disease, for the purpose of observing its progress, and discovering the means of preventing, mitigating, or curing the effects of the same or similar diseases in men or animals. They stated that "it would require a voluminous treatise to exhibit, in a consecutive statement, the benefits that medicine and surgery have derived" even from the first class of experiments only; they referred, in illustration of the benefits thus derived, to three great discoveries—the discovery of the circulation of the blood; the discovery of the lacteal and lymphatic system of vessels; and Sir Charles Bell's discovery of the compound functions of the spinal nerves—selecting these because "they lie at the very foundation of our present physiological knowledge"; and they pointed out that the practice of operating on the living animal appears to have been coëval with the commencement of the pursuit of medicine. They also dwelt upon, and aptly and forcibly illustrated, the great benefits to be gained by experiments of the second and of the third class, and showed in the clearest manner that not only is mankind benefited by such researches, but that the condition of the lower animals is also being constantly improved by means of them.

Having thus amply and most forcibly vindicated the value and use of vivisection, and the practice of experimentation on living animals, as carried on in this country, it might have been supposed that they would have come to the conclusion that no legal measures were necessary in respect of such practice. But, in deference, probably, to what they regarded as public opinion, and with the hope of calming the apprehension, and putting an end to the misrepresentations that had been so rife on the subject of vivisection, they suggested that all experiments should in future be carried on "under the reasonable superintendence of constituted authority." With this object they recommended the enactment of a law vesting in the Secretary of State the power of granting licences to persons desirous of performing experiments on living animals, the licences to bear such conditions as would insure that in no avoidable case should suffering be inflicted; and that, where unavoidable, it should be reduced as much as possible. The responsible Minister to be guided by the opinion of advisers of competent knowledge and experience, whose names should be published. An inspector, or inspectors, to be appointed, of knowledge and position such as to command the confidence of the public, no less than that of men of science. Places where experiments were to be performed were to be registered; and the Secretary of State to have a power of obtaining records and returns of all experiments made, and a power of inspection. And licences were to be revocable on proof of abuse; but, as a safeguard against misuse of this power, an appeal was to be allowed to a judge of the Supreme Court, with three competent assessors. These regulations really would not have demanded more care or humanity than experimenters in this country had already shown, and could not but cause some additional expense, trouble, and vexation to those engaged in the pursuit of science, even if the law were administered with wisdom and moderation. Still, they might not have very seriously impeded research; and, as a matter of policy, an Act embodying them might have been accepted without much opposition or remonstrance. But, to the great surprise and indignation of the profession, the Earl of Carnarvon, on the part of the Government, introduced into the House of Lords in May a Bill, the very title of which —viz., "An Act to Prevent Cruel Experiments on Animals," or "The Cruelty to Animals Act,"—was an offence, as the entire Act was directed against the members of a proverbially humane profession, and a class of men whom the Royal Commission on experimentation had distinctly acquitted of cruelty; and the provisions of which Bill, going far beyond the recommendations of the Commission, would have placed experimenters in physiology and therapeutics under police supervision, and have hindered, if not totally prevented, physiological observation in this country.

The Bill was read a second time in the House of Lords, on May 22, after very little comment or criticism, its provisions having been till then but little known, and the profession not having been ready or willing to believe that the Government would so far exceed the recommendations of the Commissioners. But then the attention of the profession was directed to the subject. The General Medical Council, who met on May 24, at once appointed a Committee to consider and report upon the Bill; and the Parliamentary Bills Committee of the British Medical Association also, with great promptness, summoned a meeting to consider its provisions, and to confer with physiologists and teachers on the subject. A deputation from this Committee had an interview with the Home Secretary on the subject of amendments to the Bill; and Sir James Paget, President of the Royal College of Surgeons; Dr. Risdon Bennett, President of the Royal College of Physicians; Dr. Hooker, President of the Royal Society; and Professor Allman, President of the Linnæan Society, had an interview with the Duke of Richmond, who had charge of the Bill in the absence of Lord Carnarvon, to urge their objections to it. Eventually the progress of the Bill, which was to have been passed through Committee without delay, was postponed till after Whitsuntide, in order that the Government might fully consider the statements that had been made to them respecting it.

The organisation of the British Medical Association enabled that body to act promptly, and with great force, in opposing the Bill, and they rendered excellent service to the profession in the matter. The report of their Parliamentary Bills Committee upon the Bill, which was very early prepared and adopted, set forth clearly, and as concisely as possible, the main objections to the measure, together with the reasons upon which those objections were grounded, and the amendments that it was felt especially necessary to be obtained. And this paper the Association issued, by means of their journal, to all their members, along with copies of a short petition to Parliament, embodying the desired amendments, —thus giving valuable aid in making the character of the Bill

known to the profession at large. The alterations enumerated in the prayer of the petition above mentioned were so nearly the same as those asked for in all the representations made to Government on the subject, that they may be very conveniently taken as an example of the changes sought for. They were to the effect—

1st. Of amending the title of it so that it should not seem to impute to physiologists and to teachers in medical schools a disposition to cruelty. 2nd. Of widening the limits of research by experiment, so as to include all subjects of research which can conduce to new knowledge of facts or laws of life, or additions to medical and physiological knowledge. 3rd. Of permitting the practice of experiments of research in non-registered places by licensed persons under special certificates; and, 4th, of omitting the limitation which the Bill imposed on the animals which may be the subjects of experiment, and removing the exemption of dogs and cats, proposed in Clause 5, because the domestic flesh-eating animals are most necessary for many subjects of important inquiry.

The report of the General Medical Council on the Bill is a very able document; the result of a great expenditure of labour and thought, and exhaustive discussions in committee and in council. It includes amendments similar to those suggested by the British Medical Association, with the exception of that respecting the title of the Bill; and adds a suggestion that the word "animal" should be defined, the Council holding that unless the word is "suitably" defined, "not only will physiological studies be embarrassed in a degree which the Council believe is not intended, but also the Secretary of State will be charged with responsibilities, which he must find it difficult to meet, with regard to the various lower forms and lower states of animal life." The report also objects to the clause in the Bill prohibiting the use of *urari*, or *curare*, as an anæsthetic, and suggested that, instead thereof, it should be enacted that "Neither urari nor any other substance shall be deemed to be an anæsthetic for the purposes of this Act until it has been proved to be so"; recommends some alterations rendering the provisions respecting registration of places, licensing, etc., less vexatious and oppressive; the removal of the word "constable" from Clause 13; and the addition of various dignitaries and professors, and of professors or lecturers in any "medical school recognised by any of the bodies named in Schedule (A) to the Medical Act" to the list of those who may sign the certificates required by the Bill. This report was forwarded to her Majesty's Government, as a memorial from the General Medical Council on the subject of Lord Carnarvon's Bill; and the Council also sent copies of it, with copies of the Bill and the proposed amendments, to the members of both Houses of Parliament.

The next step taken in opposing the Bill was that a very numerous and influential deputation waited on Lord Carnarvon on behalf of the British Medical Association, and represented to his Lordship, very ably and clearly, the views held by the profession regarding the Bill; and the deputation were assured that the Government had not the slightest wish or intention to enact anything derogatory to the dignity or the interests of the medical profession, and that their statements and the proposed amendments of the Bill should receive the most careful consideration; but at the same time Lord Carnarvon observed that very strong views with regard to vivisection were held by a large mass of people, and that the Government felt obliged to take some steps to satisfy the public mind. By the end of June the Bill had passed through its various stages in the House of Lords, and a few amendments had been made in it. The title of it was changed from "An Act to prevent Cruel Experiments on Animals," to "An Act to amend the Law relating to Cruelty to Animals"—an amendment so slight and feeble that it was difficult to call it an amendment, or, except as a matter of policy, to express any degree of gratitude for it. In Clause 3 of the Bill, restricting experiments to such a line as would promise immediate benefit to mankind, an amendment was also made, and a very important one, allowing experiments to be made "for the advancement of physiological or medical knowledge"; permission was given to the Home Secretary to grant, when he shall see fit, special licences for experiments on dogs, cats horses, mules, and asses; the common informer and the police were excluded from registered places of experiment; and a few additions were made to the list of those who may sign certificates. These amendments being considered, however, far from sufficient, a very numerous and weighty deputation from the British Medical Association and the profession at large attended on the Home Secretary, and again urged upon him in the strongest manner the objections entertained to the provisions of the Bill. The chief speakers on the side of the deputation were Mr. Simon, Sir William Jenner, Dr. Wilks, and Mr. Ceely of Aylesbury; and higher ground was taken against the Bill than that taken by the deputation to Lord Carnarvon, Sir William Jenner pointing out that the performance of experiments for the advancement of science was the only thing prohibited by it; and Dr. Wilks maintaining that such restrictions as it proposed must react unfavourably on the general advance of moral and mental science. The deputation presented to Mr. Cross an able memorial, which had been signed in the course of two or three days by nearly 2000 members of the profession, stating the grounds on which exception was taken to the Bill, and the amendments which the profession thought necessary; but, unfortunately, from a desire to save Mr. Cross time, the memorial was read to him, and he took advantage of this courteous consideration to refuse to reply to anything but the tone of the speeches made. It is difficult to suppose that he could have really been ignorant of the general views of the profession regarding the Bill, but he assumed such ignorance, and the gist of his answer was a warning that, should the profession persist in its opposition, and cause the Bill to be thrown out this year, it might be introduced in a still more objectionable shape next session.

The profession had, however, by this time been thoroughly aroused, and, through its representative bodies, by its representative men, and by petitions and private appeals, vindicated itself and its methods of research from the aspersion made against it, and produced such an impression on the press and the public that the fate of the obnoxious Bill trembled in the balance. It became certain that if the Government meant to pass it at all, concessions must be made; and accordingly, in moving the second reading in the House of Commons, Mr. Cross adopted such a conciliatory tone, and promised such important amendments, that the Bill was allowed to go into committee without a division, though very able and powerful speeches were made by Mr. Lowe, Dr. Lyon Playfair, Dr. Ward, and Sir John Lubbock, against the character of the measure. Nearly all the amendments promised were made, and the Act, as it passed, was improved in the following respects:—Experiments are permitted to be performed with a view to the advancement of knowledge which will be useful for saving or prolonging life or alleviating suffering in animals as well as in man; a licensed person is not obliged to restrict the making of his experiments to a registered place, unless he is especially required to do so by the Secretary of State, or unless the experiments be made for the purpose of instruction; experiments may be performed no dogs and cats without a special licence, unless the experiments must be made without anæsthetics; increased facilities are given for obtaining licences and certificates; "licensed persons," as well as "registered places," are not to be subject to the action of the "common informer"; and it is provided that no prosecution under the Act shall be instituted against any licensed person, "except with the assent, in writing, of the Secretary of State." These alterations undoubtedly largely

remove the objections to the Bill; but one very important amendment promised, and moved, by Mr. Cross—namely, the limitation of its provisions to warm-blooded animals—was not carried. It was proposed by Mr. Forster to substitute the word "invertebrate" for "cold-blooded," and Mr. Cross, rather than imperil the Bill, accepted the alteration; and there was not time for any fresh remonstrances to be made. This is greatly to be regretted; still, the Act as it stands is such a greatly different measure from that originally proposed, and is so very much less obnoxious, that the profession may regard it without much dissatisfaction. It is true that it places some wholly uncalled-for impediments in the way of scientific experimenters, and requires to take some unnecessary trouble in obtaining certificates and licences; but these being obtained, it gives scientific inquirers the protection of the law; it protects animals from cruelties which might be inflicted by unscientific and unskilled persons; and it satisfies, to a great extent, a demand made by a hyper-sensitive and ignorant portion of the public. The history of the Act gives a useful and valuable lesson to the profession, by showing what great power and influence it possesses when united and in earnest, and to what a degree it can command the sympathy and support of the public, the press, and of Parliament in a worthy cause. It is a lesson which, we hope, the profession will not soon or easily forget.

A Rivers Pollution Bill was passed, which, if properly worked, will prevent some of the grosser pollutions that convert our rivers into so many open sewers and cesspools, spoiling the water for drinking and for domestic purposes, and killing the fish. But the Act is altogether a very unsatisfactory one. It deals very tenderly with "vested interests"; it is vague and of a very permissive character; and proceedings under it will be costly, and uncertain as to their issue.

Mr. Cowper-Temple again introduced a Bill to Amend the Medical Act, 1858, "so far as relates to the Registration of Women who have taken the degree of Doctor of Medicine in a Foreign University." But the measure, which was eminently partial and unjust, as proposing to grant to women a privilege not yet conceded to men, and which proposed also to make registrable degrees the respective value of which there is no certain means of ascertaining, was wisely withdrawn.

Mr. Russell Gurney introduced a Bill "To remove Restrictions on the granting of Qualifications for Registration under the Medical Act on the ground of Sex"; upon which the Lord President of the Privy Council requested the opinion of the General Medical Council for the information of the Government; and after consideration the Medical Council recommended that the Bill should be so amended as to make it quite clear that the exercise of the extended powers it was proposed to grant would be at the discretion of the bodies concerned, and not obligatory; and that the qualifications conferred under the Bill should not carry with them any right to take any part in the government, management, or proceedings of the universities or corporations mentioned in the Medical Act. These amendments, meeting the intentions of Mr. Russell Gurney, were introduced, and the Bill received the support of Government, was passed, and incorporated with the Medical Act.

A new Army Medical Warrant was issued at the end of April by order of the Secretary of State for War. A new Warrant had been long promised, and had become imperatively necessary, as the Service had become so unpopular that the last previous examination for entrance into it had been of necessity postponed on account of the absolute dearth of candidates. Mr. Hardy introduced his new scheme with a great flourish of trumpets, evidently sincerely expecting that it would cure all evils and make the Service again a popular and contented one; but it seems now almost certain, and was at the time generally predicted, that his hopes will be disappointed. The Warrant contains one or two good points. It secures promotion to the rank of surgeon-major at the end of twelve years' service, and it makes retirement compulsory for the administrative ranks at the age of sixty years. But it does away, once for all, with the regimental system, and makes the Service "unification pure and simple"; and this change is still considered by not a few to be, to say the least, a very doubtful and mixed good. The greatest change introduced by it, however, is one of a very radical character—namely, a short service system. In future all medical officers are to receive commissions for ten years only, at the end of which time they will, with the exception of six annually selected officers, retire into civil life with a bonus of £1000 each; and many of them may, on various grounds and for various reasons, fail to get the whole of that bonus. We have on several occasions so fully stated the objections to this part of the Warrant, and to some other parts affecting officers previously in the Service, that we need not repeat them here. But the Service is still a discontented one: at the last examination for commissions in it only thirty-four candidates, of whom thirty-three were successful, presented themselves for fifty vacancies, though the age at which applicants may enter themselves as candidates has been considerably extended; and it is said—with what amount of truth we do not know—that in character and acquirements they were below the standard of former years. Fifty vacancies are now again advertised, and it is believed in Whitehall, we understand, that candidates will flock in as the magnificent advantages of the new Warrant are more perfectly understood; but the general opinion outside is, we believe, that the scheme is deemed to be a failure.

A Royal Warrant was issued regulating the status and emoluments of the Militia Surgeons, the intention of which seems to be to gradually, and not slowly, starve them out by transferring all their work to the medical officers of the regular forces, and thereby to deprive them of the chief part of their pay. And this measure, of course, excites discontent in the Militia Medical Service, and makes it unpopular and undesirable.

Sir Harcourt Johnstone again brought in a Bill for the repeal of the Contagious Diseases Acts, but it was opposed so ably and warmly by Mr. Ward Hunt on the part of the Government that it was defeated by a very large majority.

A Royal Commission was appointed to inquire into the evil effects of noxious gases and fumes, with especial regard to health, and to ascertain in what way these evils, if any, can be abated; and the House of Commons passed a resolution declaring that further legislation is desirable with regard to the qualifications and appointment of coroners, and the mode of holding inquests.

The General Medical Council met, under the presidency of Dr. Acland, on May 24, and sat ten days—a rather longer time than usual; but, notwithstanding the increased duration of the session, the amount of business got through respecting subjects most properly belonging to the Council was less than usual, and matters of very great and urgent importance had, unhappily, to be postponed to another session. This was due to the large amount of time given to the consideration of Lord Carnarvon's Bill, and of some other Bills upon which her Majesty's Government had requested the opinion of the Council. It was impossible for them to refuse to examine and express their opinion upon these measures; and it is undoubtedly of great importance that the Ministry should have the advice of some competent medical authority upon all proposed Bills affecting the government or the interests of the profession or the public health; and as there is now no medical officer attached to the Privy Council, the Medical Council may not unnaturally seem the best and readiest source from which to seek aid and advice. But the advising the Ministry upon Bills before Parliament was certainly not the *raison d'être* of the General Council of Medical Education, and the time

that they can devote to their own special and proper business is already all too short, without any of it being taken up by such extra work. Besides which, it may be justly observed to her Majesty's Government, that the medical adviser to the Privy Council, whose office they have seen fit to suppress, was paid by the State, while the expense of the General Medical Council is borne entirely by the medical profession.

Many changes had taken place in the Council since they last met. Two of their most able and valuable members—Dr. Warburton Begbie and Dr. Parkes—had been lost to them, and to us and the public, by death; and two—Dr. Sharpey and Dr. Risdon Bennett—had resigned; but though their absence was deeply and generally regretted, the vacancies so created were happily and well filled up. The Royal College of Physicians of London sent as their representative, instead of Dr. Bennett, who had been elected President of the College, their esteemed and tried Registrar, Dr. Pitman; and her Majesty could not well have been advised to send to the Council three abler and more representative men than Mr. Lister, Mr. Simon, and Mr. T. Pridgin Teale. The first is one of the most eminent representatives and teachers of surgery in the northern division of the kingdom, and is a man of European reputation; Mr. Simon had for years rendered great service to the Crown and the country in other offices, and brought to the Council ripe official experience and a full knowledge of medical affairs, while his talent and capacities are known and valued everywhere; and the appointment of Mr. Teale, whose father was one of the first Crown nominees on the Council, was recognised to be a just appreciation of the claims of our provincial practitioners.

The session of the Council was opened, according to custom, by a speech from the Presidential chair; and the custom is a good and useful one, as it enables the President to inform the Council of any matters of interest to them—as the Council—that occurred during the recess, and to give a short and clear account of the business before them.

Committees of the Council were appointed, on the first day, to consider and report on Mr. Cowper-Temple's Bill, the purport of which we have already mentioned; on a Bill, introduced into the House of Commons by Mr. Gibson, for enabling "all legally qualified medical practitioners with qualifications in medicine and surgery registered under the Medical Act" to hold "all public medical or surgical appointments," and for amending the Medical Act so as to authorise the registration, as qualifications under that Act, of the degree of Bachelor in Surgery, and of a diploma in State Medicine; on various communications respecting the Midwifery licence of the Royal College of Surgeons of England; on a report on State Medicine qualifications from the British Medical Association; on a memorial from English practitioners possessing foreign university degrees; and on Lord Carnarvon's Bill. The consideration and discussion of these matters, in the respective committees, and in committee of the whole Council, occupied a very great amount of time—in fact, the more part of the session,—and very able reports on them were eventually agreed to. Of the report on Lord Carnarvon's Bill we have already fully spoken. It was discussed with great thoroughness and ability; and we will here only add to what we have said that Sir Dominic Corrigan finally refused his assent to it, partly because he held, and very justly, that the whole subject of cruelty to animals "should be treated in regard to its relation to society at large," and partly because the report did not go far enough, as he considered the Bill ought to be opposed *in toto*. He assured the Council that should it be passed, establishing a penal law, medical students would feel bound to resist it, and see experiments simply because forbidden to do so; that, he said, was a principle in human nature, and especially, he naïvely added, in Irish human nature, "and were the Bill passed it would enlist in a body against it the most active, the most intellectual, and the most determined body of young men in the United Kingdom."

Of Mr. Cowper-Temple's Bill, also, no more need be said here. The first part of Mr. Gibson's Bill was intended to meet certain special restrictions in force in Ireland, and to this the Council gave a qualified approval. They approved also, and decidedly, of the clause providing for the registration of the degree of Bachelor of Surgery; but with regard to the registration of degrees or diplomas in State Medicine, the Council were of opinion that such should not of themselves (that is, apart from any of the present qualifications) constitute any claim to be placed on the Medical Register; and they further expressed the opinion that the question of admitting such degrees or diplomas to registration as additional qualifications "does not at the present time admit of being brought to a satisfactory practical settlement." A reply to the same effect with respect to State Medicine qualifications was made to the communication from the British Medical Association. Mr. Gibson's Bill eventually became law, the part referring to degrees in State Medicine being omitted.

We have already mentioned, in our notice of medical measures in Parliament, the suggestions made by the Council on Mr. Russell Gurney's Bill. But we may add that since it became law the King and Queen's College of Physicians in Ireland have acceded to requests made by two ladies to be admitted to examination for the licence in Medicine of the College; neither of these admitted candidates has as yet, however, presented herself for examination. An application has also been made by a lady—Miss Edith Shove—to the Senate of the University of London, to be admitted to examination for a degree in Medicine; but we understand that the Senate have been advised by the law officers of the Crown that women cannot, notwithstanding the new Act, be admitted to examination for medical degrees, under the present regulations of the University, though the Senate may, if they think fit, with the approval of the Home Secretary, alter the regulations so as to permit women to come up for examination. The Senate has not, we believe, as yet come to any decision in the matter.

In 1858 the then President of the Council, Sir George Burrows, addressed a letter to the Home Secretary, calling attention to the fact that lunacy certificates granted in England had no force in Scotland and Ireland; and that, similarly, certificates of lunacy given in Scotland or Ireland were not of force in England; and urging the necessity of legislation to remedy such a state of things. Nothing has, however, been done, and the attention of the Council was again drawn to the matter this year by a letter from Dr. Stewart Lockie. The Council resolved—"That as the limitation of the validity of lunacy certificates to the division of the kingdom in which they are first given is still a pressing grievance," the President be requested to lay before the Home Secretary all the previous acts of the Council on the matter; and the President, later in the session, reported that he had had an interview on the subject with the chairman of the Lunacy Commissioners, the Earl of Shaftesbury, who said that there would probably be now no objection to consider the matter in connexion with other subjects proper for a Bill having relation to the Lunacy Acts, and that, should the other Commissioners agree with him, he hoped it would be possible "that an evil, the existence of which he fully felt, may be remedied next session, if a Lunacy Act can then be brought in."

No scheme for a Conjoint Examining Board for England Scotland, or Ireland was before the Council; but a long debate was excited by a resolution, moved by Sir William Gull, to the effect that the Council regretted that no such scheme had, "after so long delay," been yet put in operation, and expressing their desire "urgently to press this matter of conjoint examinations upon the bodies whose duties it is to

arrange and supervise the medical examinations in the several divisions of the kingdom"; and this was carried by fifteen votes to six, three members, including the President, declining to vote.

The Council adopted an able report of the Executive Committee on the best means of conducting visitations of examinations, one of the most important of the regulations of which is the first—viz., that "when the Council shall at any time decide to resume the visitation of examinations, arrangements shall be so made that the series shall be completed within a period of five years"; such arrangement is, however, not to interfere with any special visitations which the Council may see fit to direct to be made. The system of conducting the visitations "by members of the Council jointly with others not members of the Council" is to be continued.

Early in the session the Council had before them a table giving the results of professional examinations for degrees, diplomas, and licences granted in 1875 by the bodies in Schedule (A) of the Medical Act. It showed that the proportion of rejections is often very large. Thus, at the Royal College of Surgeons of England, one-third of the candidates for the membership were rejected at both the first and the final examinations; at the Royal College of Physicians of London, one-fifth of the candidates for the licence were rejected at the final examination; by some of the Scottish boards one-half of the candidates failed in the first, and one-third in the final examinations; and at the Queen's University in Ireland the proportion of rejections varied in examinations from nearly one-half to rather more than one-third. These results are certainly not satisfactory, and seem to point to the existence of serious defects in medical education, in the methods of examination, or in both; and the Council referred the table to a committee for consideration, "with reference to so large a number of rejections." Their report was received on the last day of the session, and stated "that in order to arrive at any conclusions on the causes of the rejection of so large a number of candidates in the examinations, it will be necessary to obtain information and opinions from the licensing bodies on the subject"; and the committee suggested, therefore, "that it be delegated to the Executive Committee to do this, and that it should report at the next meeting of the Council." The committee also noted the points upon which especially information should be asked. The report was adopted.

A committee had also been appointed to consider the "Observations of the Licensing Bodies on the Recommendations of the Council"; and instructed to pay special attention to the subject of the registration of medical students, and to the subject of the separation of pharmacy from therapeutics, which had been brought before the Council in communications from Professor Harvey, of Aberdeen, and from the Lecturers on Materia Medica in London. The report of this committee also was "received" on the last day of the session, and ordered to be considered "on an early day of the next session."

A very important report from the Committee on Visitations was received and entered on the minutes. In presenting it the chairman, Dr. Humphry, did not even ask that it should be then considered, there was not time for that; but he stated that the representations of the visitors, and the remarks of the licensing bodies on the reports of the visitors, were on the whole eminently satisfactory, and that "there was scarcely one of the licensing bodies which had not responded to the reports in such a way as to alter their examinations in conformity with the views of the visitors; and the alterations had, in some respects, been very important." He observed further that it behoved the Council to exercise the most scrupulous and cautious care as to the manner in which examinations are conducted; and he confessed to a feeling that "there was a tendency to attend rather too little to that which is, after all, the great object of education—namely, the strengthening of the mind to deal with the material before it. The danger lay in the direction of exacting too much *knowingness*, and too great an accumulation of facts, and of failing to require sufficient real *knowledge* of the facts, and capacity for dealing with them." The Council resolved—"That the report of the Committee on the Visitations of Examinations of June 25, 1875, and the report of the Committee of Visitations of June 5, 1876, be considered on the first day of the session of 1877."

Dr. Haldane proposed a motion with regard to the great ignorance in general education displayed by many of the candidates who present themselves for the professional examination; and it was not and cannot be denied that, notwithstanding the attention bestowed by the Council for many years on the subject, the preliminary education of students is still highly unsatisfactory. The real point was, how to deal with it,—the amount of general education to be required involving questions of the time and expense to be devoted to the preliminary education; and eventually the Council resolved simply to "direct the attention of the licensing bodies to the important fact that, from some of the reports of the visitations, it appears that many candidates still enter upon their professional studies who are very deficient in preliminary education."

It will be seen that plenty of work, of primary and urgent importance, is laid out for the next year; and it is to be earnestly hoped that the Council will not feel compelled or tempted to allow the consideration of such matters to be again postponed. The only other thing we feel called upon to note here is that the Council have lost the services of Dr. Hawkins, who had been their Registrar since 1858, when the Medical Act called the Council into existence. As soon as the Council met this year, Dr. Hawkins requested to be allowed to resign the Registrarship on the 25th of November—"the termination of the eighteenth year of his holding it." The Council could not do otherwise than accede to this, and the profession at large applauded the resolution, moved by Dr. Stokes, seconded by Sir William Gull, and carried by acclamation—"That the General Medical Council, whilst accepting Dr. Hawkins's resignation of the Registrarship, desire to express their deep sense of the courtesy and ability with which he has for eighteen years discharged his duties to the Council." A report defining the duties and emoluments of the Registrar was adopted, and the Executive Committee was empowered to elect a new Registrar in October. The vacancy was advertised; some five-and-twenty applications, we believe, were received, and the choice of the Committee fell on Mr. Millar, B.A. Lond., Vice-President of Huddersfield College. He is said to be an accomplished mathematician, skilled in the natural sciences, and a well-known writer on education; and his testimonials vouched for his being an excellent man of business, and a ready correspondent and speaker.

At the annual general meeting—a most unusually, if not quite unprecedentedly, large one—of the Fellows of the Royal College of Physicians, Sir George Burrows finally retired from the Presidency of the College, after having held that high and honourable office for five years. The College passed a special resolution, to be entered on the minutes of their proceedings, recording their high sense of the admirable manner in which Sir George had upheld the dignity of the office of President, and of the unfailing diligence, ability, and courtesy with which he had discharged its numerous, exacting, and important duties and trusts. It had been known for some time that Sir George would decline to again accept the office, and much interest was felt as to who would succeed him, as rumour pointed to several Fellows who, by seniority in, and good service to the College, or by eminence in the profession, might be supposed to have prominent claims to that honour, while any Fellow skilled in the science and practice of medicine, and of ten years' standing, is eligible to it. No proposal or nomination of anyone for the President-

ship is permitted, nor any discussion of claims or merits, and the election is made by ballot; and the choice on this occasion fell finally on Dr. Risdon Bennett. The new President is, we need not say, well known among the distinguished hospital physicians of London, and he has for years been an active officer of the College. He has been Croonian and Lumleian Lecturer; has filled the office of Crown Councillor and Examiner in Medicine; and has ably represented the College in the General Medical Council; and he has now the distinction not only of being the first Edinburgh graduate who has been elected President of the College, but of being the first President who, if he held any British degree in medicine, was not a graduate of either Oxford or Cambridge.

Complaints having been not infrequently made that the officials of the College did not, in addressing documents to licentiates not possessing a degree in medicine, give them the title of "Dr.," though some of them used it, and were commonly addressed by it, a committee was appointed by the College, "to consider the question of the use of the title of 'Doctor' by non-graduates, and the by-laws and regulations relating thereto"; and in their report the committee suggested that it should be enacted that no non-graduate, Fellow, Member, or Licentiate should append to his name the initial letters "M.D.," or any letters indicating that he is a graduate in medicine of a university, unless he has obtained a degree in medicine from a university legally qualified to confer such a degree; but at the same time proposed that in all official documents issued from the College, Fellows and Members might be addressed by the courtesy-title of "Doctor." When this report was considered by the College, however, this last proposition was strongly, and with very few exceptions, opposed. It was felt, and very justly, that whatever might be said in favour of following the common usage in giving a courtesy-title, it would be a grave mistake to sanction its use in official documents. This part of the report was, therefore, rejected, and the result of the discussions on the subject was that—first, the old by-laws which forbade any Fellow, Member, or Licentiate to assume the title of Doctor of Medicine, or any designation or distinction implying that he was a graduate in medicine, unless he were one, was rescinded, the College possessing no legal power to enforce it. Then the College passed in its stead the following:—"That no Fellow, Member, Extra-Licentiate, or Licentiate of the College is authorised or entitled, by virtue of any diploma or licence of the College, to assume the title of Doctor of Medicine, or to append to his name the title of Doctor of Medicine, or the initial letters 'M.D.,' or any other letters indicating that he is a graduate in medicine of a university, unless he has obtained a degree in medicine from a university recognised by the College, and legally entitled to confer such a degree." And the following regulation was also passed:—"That in all official communications between the College and its Fellows, Members, Extra-Licentiates, and Licentiates, the titles employed shall be in accordance with the registered qualifications of the person addressed."

The College enacted during the year that "every candidate for the College licence be required to produce a certificate of having acquired proficiency in vaccination, signed by a teacher of vaccination appointed or recognised by the Local Government Board; they resolved that in the list of their examiners "two examiners in chemistry and two examiners in materia medica and pharmacy" shall in future be appointed, instead of only two in all these subjects; and a regulation was enacted permitting students wishing to qualify for the examination for the membership or licence of the College to "substitute, if they so desire, a three-months' course of clinical instruction in the wards of a lunatic asylum for the same period of attendance in the medical wards of a general hospital."

At a meeting of the College in May, the Amended Scheme for a Conjoint Examining Board for England, of which we speak more fully elsewhere, was taken into consideration, and was "approved" of, but with an important qualification—namely, "Provided that the original principle of each body abstaining from the exercise of its independent privilege of giving admission to the Medical Register be adhered to." This proviso was added to the acceptance of the Scheme, because the first clause of it, after naming the co-operating bodies, had been so amended as to run thus—"each of them will, *so far as allowed by law*, have the exercise of its independent privilege of giving admission to the Medical Register,"—the words we have italicised having been inserted in order to meet the difficulty in which the Royal College of Surgeons was placed with regard to its Midwifery licence. In order to obtain its enabling Act, in 1875, that College had been obliged to introduce into it a clause reserving to women any rights given to them by any of its charters, and the College had been advised that under that clause women might still, though the Conjoint Board be formed, demand to be admitted to examination for its qualification in Midwifery, which admits to the Medical Register. In October the Scheme was again before the College of Physicians for their consideration of some alterations suggested by the Senate of the University of London: these were to the effect—first, of altering the constitution of the Committee of Reference in such a way as to give the preponderance of votes in it to the universities instead of to the corporations; and, secondly, of vesting the *appointment* of examiners, from the list *nominated* by the Committee of Reference, entirely in the three corporations whose diplomas or licences will be obtained by the candidates who pass the conjoint examinations. The College approved of both suggestions, without having given, we suspect, much thought to the first of the two. The letter also requested the opinion of the College on the question of admitting women to the conjoint examinations; but the Fellows decided that "it would be time to consider this question when the Conjoint Examining Board was framed, and the occasion arose."

The Lumleian Lectures, delivered by Dr. S. O. Habershon, were on the Pathology of the Pneumogastric Nerve; and the Croonian Lecturer of the year, Dr. W. H. Dickinson, chose for his subject the Pathology and Relations of Albuminuria. These gentlemen are well known to have made a special study of the subjects they respectively chose, and their lectures were worthy of their reputation as scientific and clinical physicians. It would not be easy to give them higher praise. The Gulstonian Lectures were on the Natural History of Pulmonary Consumption, and were given by Dr. A. B. Shepherd, who, as Physician to the Victoria-park Hospital for Diseases of the Chest, had had special opportunities of studying his subject.

Three very remarkable Special Lectures were also delivered at the College by Dr. Brown-Séquard, on the Physiological Pathology of the Brain.

With the Royal College of Surgeons the year has been a very eventful one. Some ladies having demanded to be allowed to present themselves for examination for the College certificate of qualification in Midwifery, the Council inquired of their legal advisers whether the College has the right, and, if so, can be compelled to admit women to examination for all or any of its diplomas or licences. The reply was, we believe, that all the charters of the College referring to Members or Fellows use words applicable to the male sex only; that the Council have no power to make any by-laws or regulations contrary or foreign to the constitution of the College; and that the College is a corporate and politic body, and, according to legal authority, no woman is capable of becoming a member of such a body. But with respect to the qualification in Midwifery, the answer was that the College has, under its supplemental charter of 15 Vict., the power to admit women to examination for it, and can be compelled by law to exercise that power;

and an opinion was also expressed that if the regulations of the College regarding candidates for that qualification or licence were such as to prevent women from being admitted to the examination, the Council might be compelled so to alter the regulations as to make the candidature of women possible. It is not possible for women, at present, to comply with the regulations, for they cannot obtain the full professional education required. The three ladies who were knocking at the College doors had, however, obtained in Edinburgh and London such an amount of professional education that, were they men, they would have been admissible as candidates for the diploma of the Royal College of Surgeons of Edinburgh, which body has no power to admit women to examination. The English College has the power to admit to examination for its midwifery licence any "person" presenting proofs of having complied with certain specified regulations; and the diploma or licence of the Edinburgh College would be accepted in place of the greatest part of those proofs. Considering these circumstances, with the tenor of the advice given by the law officers of the College, and moved also, it may be supposed, by feelings of generous liberality, charity, and sympathy with the ladies in their difficulties, the Council came to a decision to admit the three suppliant candidates to examination, though they had not fulfilled the requirements of the College regulations. This decision, however, excited most decided and determined opposition and remonstrance from the profession. It was generally felt that as the College licence in Midwifery admits the holder of it to the Medical Register, it ought not to be granted to anyone who either possesses no other medical qualifications, or who has not passed a full and complete examination in medicine and surgery, which the examination for the midwifery licence is not. The Obstetrical Society of London and the Metropolitan Counties Branch of the British Medical Association passed, and sent to the Council of the College, strongly-worded resolutions against their decision; and Dr. Barnes, one of the College Board of Examiners for the Midwifery Licence, resigned his seat on the Board rather than be a party to carrying out that decision. The remonstrances addressed to the Council, and the course taken by Dr. Barnes, were based, be it remarked, not on the fact that the candidates immediately concerned were women, but on the grounds that the midwifery certificate alone will not be a proof that they possess "that full degree of knowledge and skill in medicine and surgery which is held to be essential for the safe practice of the healing art," and that it would be "injurious to the interests of the public and the profession to admit to the Medical Register persons so imperfectly qualified for medical practice." The two other special examiners in midwifery at the College next resigned their posts, on the same grounds; and no other eminent obstetricians being willing to accept the vacant appointments, the Council were compelled to inform the lady-applicants that "the members of the Board of Examiners in Midwifery having resigned their offices, the College were obliged to postpone the holding of examinations for certificates of qualification in midwifery." Having arrived at this state of "dead-lock," the Council deputed their President and Vice-Presidents to wait on the Lord President of the Privy Council for the purpose of representing to him "the difficulty which the Council find in fulfilling the duty imposed on them by the 17th clause of the 15th Victoria." The deputation was of course very courteously received by his Grace the Lord President, who entered very fully into the matter, and expressed much sympathy with the Council in their difficulty, but no solution of it was arrived at, and the "difficulty" still exists.

In October last year the then President of the Royal College of Surgeons, Sir James Paget, addressed to the universities and the medical corporations engaged in the formation of "a Scheme for an Examining Board for England" a letter proposing a conference on the subject and suggesting that each of the bodies concerned should send two representatives. The proposal was accepted, and before the year closed the Conference had held two sittings; but it was not till the close of March this year that an "Amended Scheme for a Conjoint Examining Board for England" was finally adopted and submitted to the consideration of the medical authorities.

The parties concerned in the Scheme are all the medical authorities in England—that is to say, the three medical corporations, and the Universities of Oxford, Cambridge, Durham, and London,—and its essential recommendations were the following:—That the Board be constituted of examiners, *nominated* by the Committee of Reference, and *appointed* by the co-operating medical authorities. That the examiners should be fifty-two in number, of whom twelve should be appointed by each of the medical corporations, namely, the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries; and sixteen by the four universities. That the Committee of Reference should be constituted of twenty members, namely, eight to be appointed by the Universities, four to represent medicine, and four surgery; and four by each of the corporations. That one-fourth of the Committee shall go out of office annually, but be eligible for reappointment; and that, among other very important duties, the Committee shall always nominate twice the number of examiners to be appointed. That, as a rule, there shall be two or more examinations on professional subjects, and that the fees of candidates be not less than thirty guineas, to be paid in two or more payments. That every successful candidate shall, subject to the by-laws of each licensing body, be entitled to receive the licence of the Royal College of Physicians, the diploma of Member of the Royal College of Surgeons, and the licence of the Society of Apothecaries. And that any or either of the co-operating medical authorities shall be at liberty to withdraw from the Scheme, and the joint Examining Board constituted under it, at any time after five years from October 1, 1876, upon giving to each of the other authorities one year's previous notice of their intention so to do. The Scheme also contains a clause making certain exemptions respecting the first examination, and the amount of fees to be paid, in favour of members of the English universities who may have fulfilled certain specified requirements. As regards the appointment of examiners, the Amended Scheme gives considerably increased power to the Society of Apothecaries, which is to appoint as many examiners as each of the other two corporations—as many in medicine as the Royal College of Physicians will, and only one less than the four universities put together; half the whole number of examiners in chemistry; and three out of the ten examiners in midwifery. The College of Physicians, though it examines in surgery such of its candidates as do not already possess a surgical qualification, and gives the double qualification, is content not to appoint an examiner in surgery on the new Board. And, in like manner, the College of Surgeons appoints none of the examiners in medicine, though it now has such an examiner on its own examining staff; it is content, also, with having the appointment of six out of the ten examiners in surgery.

An Appendix to the Scheme regulates the appropriation of the fees received for the examinations. One-half of the whole is to be appropriated for "the payment of examiners, and other expenses incidental to the examinations, in such manner as the Committee of Reference may determine, subject to the approval of the co-operating medical authorities," and the other half is divided among the medical corporations. The College of Surgeons is to receive *two-sixths* towards the maintenance of the museum, "as an institution of national as well as professional importance, for its unendowed professorships, and other allied expenses," and other *two-sixths* "in respect of

qualifications to be granted"; and the College of Physicians and the Society of Apothecaries each take *one-sixth*, "in respect of qualifications to be granted."

It is evident that the representations of the authorities at the Conference were strongly actuated by a spirit of compromise and mutual concession, and the appropriation of even such a "lion's share" of the net receipts, after paying the expenses of the new Board, to the Royal College of Surgeons can hardly be objected to, considering the importance of keeping up the museum, and the large number of qualifications the College grants every year.

Little time was lost before the several medical authorities took the Amended Scheme into consideration, and the President of the General Medical Council was able to state, in answer to a question from one of the members, before the end of May, that the Universities of Oxford and Durham had assented to it; that the University of Cambridge had replied that the Syndicate appointed to consider it had been unable to recommend the approval of the alterations proposed to be made as to the appointment of examiners; that the College of Physicians had assented, with the important "if" that we have elsewhere noted; that the Society of Apothecaries had approved of it; and that the College of Surgeons approved, "if all the other bodies agree." But it soon afterwards appeared that the University of London, from which no reply had then been received, did not agree to the Scheme as it stood. Two important alterations in it had been suggested "by the Medical Committee of the Senate" of the University, and approved by the Senate, namely—(1) "That the Committee of Reference should be constituted of representatives to be appointed in equal numbers by each of the medical corporations and universities of England;" and (2) "That if the first proposal be adopted, the appointment of examiners from the list nominated by the Committee of Reference should be left entirely in the hands of the three medical corporations whose diplomas or licences will be obtained by the candidates who shall pass the conjoint examination." These alterations were sent, by the Conference of Representatives, to be considered by the medical authorities, the Conference adding a recommendation that, if the first proposal should be adopted, the number of representatives of each corporation and university in the Committee of Reference should be two. This action on the part of the University of London went very near to shipwreck the Scheme. The College of Physicians, as we have already stated, assented to both alterations; but a strong party in the Council of the College of Surgeons very strongly objected to the first of the two. It was felt, and very naturally, that the College had already yielded a great deal, and now still more was demanded of them. According to the Amended Scheme, very large powers are given to the Committee of Reference. They are to nominate all the examiners; they are to "arrange and superintend all matters relating to the examinations, in accordance with regulations approved by the co-operating medical authorities, or the majority of them"; and they are "to consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by any of the co-operating medical authorities, and to report their proceedings to all the said authorities." And eight of the twenty members of this Committee—which, if the Scheme ever comes into operation, will be, after the General Medical Council, the most powerful and important medical body in England—were to be appointed by the four universities, though not 5 per cent. of the medical men practising in England and Wales hold a degree from them. But this, which satisfied, or at any rate was accepted by, Oxford, Cambridge, and Durham (for the objection made by Cambridge referred to another part of the Scheme), did not content the ambition of the youngest of the English universities; and that body had the—audacity we were about to say, but we will be very polite,—the courage to propose such a radical alteration in the constitution of the Committee as to give the universities a positive majority over the corporations, and to place such a body as the College of Surgeons (the most powerful of the corporations, and granting between three and four hundred qualifications a year) on the same level, *quâ* representative power, with the University of Durham (the feeblest of the universities, and which grants perhaps two medical degrees yearly). It was not to be expected that the College would easily accept such a proposal, though they had already done so much in the cause of Conjoint Schemes. However, at the Council meeting of October 26, the Scheme, as altered by the University of London, was adopted, but by so small a majority, some of the members declining to vote, that at a subsequent meeting, on November 9, confirmation was refused to the minute of the former meeting relating to the Scheme, and the matter was referred to a special meeting appointed to be held on the 1st of the present month; when it was generally expected that a decision adverse to the proposed alteration would be come to. But though not a voice had been raised in remonstrance, outside the corporations at least, when the University of London had for the aggrandisement of the universities imperilled the acceptance of the Scheme, now that the College of Surgeons hesitated to transfer so much of the power entrusted to them to the Committee of Reference, and to place themselves in subjection to the universities, which have really no share in the education of the majority of medical practitioners, they were vehemently denounced as obstructives, and were, not vaguely, threatened with dire consequences to the institution itself should they not submit. What effect such expostulations and threats may have had we do not pretend to know; but the great point in favour of the altered Amended Scheme being finally accepted by the College was the fact that the master-spirit who had presided over the Conference of Representatives was still on the College Council, though no longer its President; and certainly if any man has earned a right to exercise a specially potential voice in favour of proceeding with the Scheme, it is Sir James Paget, who, as chairman of the Committee of Reference, and of the Conference of Representatives, has never spared time or labour in the cause of a Conjoint Examining Board. We need not, however, speculate as to what were the motives and influences in favour of further concessions; the great fact is that they prevailed, and the College did in the end accept the alterations proposed by the University of London, and accepted them by a large majority—namely, by fifteen votes to eight—in a full meeting of the Council, of whom only one member finally declined to vote either for or against the resolution. And there the matter now rests; but the "if" of the College of Physicians has still to be met, and the objection raised by the Senate of the University of Cambridge.

Before leaving the subject of Conjoint Boards it may be noted here that the Conference Committee, appointed by the University of Dublin and the Colleges of Surgeons and Physicians of Ireland, have agreed to, and put forth a Scheme for, a Conjoint Board. But the Scheme has still to be approved by the Colleges; and it is imperfect, as it does not include either the Queen's University in Ireland or the Apothecaries' Hall.

At the annual election into the Council of the Royal College of Surgeons of England there were four vacancies, caused by the retirement, in the prescribed order, of Messrs. Simon, Holden, and Humphry, and by the death of Mr. Southam, of Manchester. The retiring members offered themselves for re-election, and deservedly obtained that honour. For the remaining vacancy three Fellows presented themselves, and Mr. Wheelhouse, of Leeds, was the successful candidate, there having been a decided feeling among the Fellows that another provincial surgeon ought to be appointed to the vacancy created by the lamented death of Mr. Southam.

Mr. Quain having resigned his seat in the General Medical Council, the College of Surgeons have elected Sir James Paget to succeed him as their representative. Both the College and the Council are to be congratulated on such an appointment, as no one is more entitled to speak with authority on medical education, from all points of view, than Sir James.

The forty-fourth annual meeting of the British Medical Association was to have been held in Brighton, the Council having been moved to accept an invitation to meet there by the energy and enthusiasm of the late Sir John Cordy Burrows, who was appointed President-elect. But it appeared later that a not inconsiderable number of the medical practitioners of the place and district had not joined in the invitation; and, further, some discontent was excited by the choice of gentlemen to deliver the addresses in chief, many of the Brighton men considering that some slight had been shown to the local celebrities. This placed the Council of the Association in a very unpleasant difficulty, from which they were released by the unexpected and lamented death of the President-elect, but only to be met by another difficulty—namely, Where should the meeting be held? Then Sheffield stepped forward with a hearty invitation to that town; and the meeting, a very successful and pleasant one, was held there on the first and three succeeding days of August. The President, Dr. De Bartolomé, of Sheffield, gave an interesting and instructive address on the natural wealth and industrial pursuits of that town, and on the changes that have taken place, within his knowledge, in its chief manufactures, in the social condition of its inhabitants, and in the type of its diseases; he considered that there has been of late years a great improvement in the health of the district, and that the inhabitants have greatly benefited physically by the immigration into it of tens of thousands of robust and athletic men from the "Black Country" and from all parts of the agricultural districts. The type of disease had, in his opinion and experience, gradually become less adynamic. The common epidemic fevers had not of late required the extremely stimulating treatment of former times, and had not spread so universally nor so rapidly; and he attributed this improvement in part to the taste acquired by the highly paid artisans for country life, but mainly to the constant and abundant supply of water of first-rate quality, to the improved and still improving system of connected drainage, the closing of graveyards within the town, the opening-out of wide and therefore better ventilated streets, and the visible, though slow, improvement in the construction of dwellings for the working-men and the poor. And he well pointed to all this as a lesson and encouragement to other towns and cities. Dr. Sieveking's Address in Medicine—an able, thoughtful, and very "suggestful" production—was on the future of medicine and of the medical profession, and on the causes of the advancements made in recent times. Speaking in the same tone as Mr. Gladstone did in a remarkable address to the students of the London Hospital Medical School, he expressed the conviction that a great future lies before us, the prospect of which "forces upon us the conviction that we are entering upon a field of wider duties, of greater service to our fellow-men, of a nearer approach to the fulfilment of our highest destiny as members of a Christian commonwealth." Mr. Favell, of Sheffield, gave an excellent and practical Address in Surgery, in speaking of which we cannot do better than borrow from Mr. Jonathan Hutchinson's speech in moving a vote of thanks to the orator. "He had never known," he said, "an address in which the selection of special subjects had been better made, better met, or dealt with with more ability. The address was not only able and practical, but it recommended, with boldness, some of the most recent novelties in surgery, and contained many other points which could not fail to interest the profession." The other of the chief addresses—the Address in Public Medicine—was given by Dr. A. Carpenter, of Croydon, a master in the subject. He was listened to, as he well deserved, with great attention and interest as he spoke of the difficulties and obstacles attendant on the progress of public medicine, set forth what he held to be some of the main and fundamental principles of sanitary work—"motion as opposed to stagnation, simplicity as opposed to complexity," and the peremptory utilisation of animal *débris*—and illustrated some of his teaching by relating what had been achieved by irrigation on the Croydon Sewage Farm at Beddington." Some excellent addresses were delivered by the Presidents of Sections; Dr. Brown-Séquard and Dr. Rutherford made a valuable scientific contribution to the success of the meetings; and a very important series of papers were read in the Section of Medicine, on industrial diseases. In every way, as regards both work and recreation, the meeting was a successful one.

The British Association for the Advancement of Science met in Glasgow on September 6, under the Presidency of Professor Andrews, of Belfast. Valuable papers were read in all the sections; and Professor M'Kendrick, as President of the Department of Anatomy and Physiology, in the Section of Biology, gave an especially good and instructive address "On the Scientific and Social Relations of Anatomy and Physiology."

During the meeting of the Social Science Congress, held at Liverpool, several subjects of interest to the profession and the public were brought before the Health Section. But perhaps one of the most remarkable papers was the address delivered by Mr. Hawksley, C.E., as President of the Section. He dealt mainly with sanitary legislation, and certainly his tone formed a very striking contrast with that of Dr. B. W. Richardson on the same subject last year, for he took a very decidedly depreciative and discouraging view of the value of sanitary science, roundly asserting that sanitary measures can exercise only a very limited control over epidemic diseases, and are not capable of materially extending "those limits of life which Nature has in her wisdom prescribed." He declared that during the thirty-six years, 1838 to 1873, "there has not been an atom of movement towards the extension of human life in England"; and that an effort to check the pollution of rivers, at the risk of injuring trade interests, is "snatching at the shadow and leaving the substance." The Social Science Association can hardly be congratulated on the choice they made this year of a President for their Health Section.

The British Medical Defence Association have been very active, and very generally successful, in prosecuting illegal practitioners; but, among other difficulties, have been met by that common one of a deficiency of funds, and cannot even get the penalties recovered in the metropolitan police-courts under the Medical Act of 1858. That Act directs that any such penalties shall be paid to the Treasurer of the Medical Council; and their Registrar had stated that the whole or a portion of the penalties should be allowed to the Defence Association towards the expenses of prosecutions conducted by them; but another and prior Act directs that all penalties shall be retained by the Receiver of the Metropolitan Police-courts, and lawyers say that the Receiver is in his rights in retaining them. So the Defence Association cannot get any part of them. Under these circumstances they have asked the Executive Committee of the Medical Council to help them. They were courteously listened to, and learnt that the Council have requested their President to address the Treasury on the subject.

The various Medical Societies have been prosperous and active, and have done good work. The chief feature of the season was the Debate on Syphilis at the Pathological Society, which occupied the Society during several meetings. The subject was introduced by an admirable address, and closed by a brilliant reply, from Mr. Jonathan Hutchinson; and among

the speakers who discussed the views he had put forward were the best known workers in pathological science in this country. Questions of great importance and interest in general pathology were raised during the debate; the variety of opinion that exists amongst the leaders of the profession on the explanation, and even on the facts, of so unfortunately common a disease as syphilis, was clearly shown; and the defects in knowledge were clearly set forth. The immediate result of the debate are not great, perhaps, but it was a profitable debate, and it may be confidently expected to bear good fruit eventually. We published the address and the speeches in full at the time, and commented on them, and we cannot afford space or time now to give a summary of the outcome; but the subject will come once more before the same Society in January next, when a meeting is set apart for the exhibition of specimens illustrating the pathology of visceral syphilis. At the Clinical Society an interesting and instructive discussion took place on the value of phosphorus in the treatment of leucocythæmia and allied diseases; instructive chiefly in showing the very little, if any, power that phosphorus really possesses over those affections, and in raising a suspicion that it may excite or favour fatty degeneration of the kidneys. At that Society, and others, very interesting papers were read also on the use of salicin and salicylic acid in the treatment of rheumatic fever. The subject must be held to be still *sub judice*, but those remedies do certainly appear to possess very remarkable power in lowering the temperature of the body, and therefore may prove of great value in states of hyperpyrexia in that and other disorders. A new society was formed during the year—the "Association of Surgeons practising Dental Surgery"; it is presided over by Mr. Cartwright, held a very successful inaugural meeting on April 26, and has had several interesting and useful meetings since. There is room for it to do good work, and it promises to deserve a continuance of the prosperity that has so far attended it.

There seemed at one time some reason to fear that another great wave of cholera might be about to spread from India over the globe; the "plague" again showed itself in the Levant, and the possibility of its once more visiting England was discussed; and yellow fever was introduced into the port of Liverpool. But the fear of these terrible maladies gradually passed away, and the health of the country, as evidenced by the low general rate of mortality, has been good. But there have been several severe local outbreaks of epidemic fevers, as the epidemic of typhoid—another "milk epidemic"—at Eagley, and the outbreak of scarlet fever in various places; and we have now an epidemic visitation of small-pox in the metropolis, which will probably spread over the country. Mr. Simon, whose labours in sanitary science are beyond praise, and are of European fame, resigned his post of Medical Officer to the Privy Council and the Local Government Board, as he felt he was not allowed to be of the same valuable service as formerly; and Dr. Seaton was appointed Medical Officer to the Local Government Board only. Dr. Deville, Medical Officer of Health at Harrogate, offended the trade interest of the place by advising a medical superintendence of lodging-houses, and the local Commissioners of Health petitioned the Local Government Board to sanction his dismissal. This the Board refused to do, but the local Authority have placed him in a very unpleasant position by, nevertheless, refusing to receive his reports or pay his salary, and by instructing the inspector of nuisances not to obey his orders. What will be the outcome of such encouragement to officers of health remains to be seen.

The story of the anti-vaccination Guardians at Keighley has been so often and so lately told in our columns that it need not be repeated here. The obstructive Guardians were at length imprisoned, released under heavy bonds for good behaviour in the future, and have since resigned.

The Arctic Expedition was obliged to return to England at the end of October, without having been able to reach the Pole, though it had succeeded in getting nearer to it than any previous explorers had, and had done very valuable work in scientific surveying and exploring. The members of the Expedition, officers and men alike, had, unhappily, full opportunity for showing—as it was confidently expected they would, should occasion arise—that British seamen still possess all their old qualities of courage, endurance, heroism, and pluck; for (and this was not expected) a severe and disastrous outbreak of scurvy attacked the sledging parties this summer, caused terrible sufferings, crippled the Expedition, and compelled it to return to England without attempting another winter in the Arctic regions. Controversy as to the cause or causes of this outbreak has raged in the daily journals; but all that is absolutely and clearly known at present is that the sledging parties were practically without lime-juice; and the Admiralty has not yet vouchsafed to give the public any explanation of, or reasons for, this disuse of *the* well-known and thoroughly proven preventive of scurvy.

"Hospital Sunday" was again observed on June 18, with a not very satisfactory or encouraging result as respects the amount collected. In the first year of the "Hospital Sunday" collection the sum received amounted to £27,700, and in the second year (1874) to £29,936, while in 1875 the collection fell to £26,396; and this year, though a greater number of congregations joined in the movement, the total collected was still nearly £700 less than the sum received in the first year. But the committee consider that, looking at the very serious commercial and monetary depression experienced during the year, the result is not so very unsatisfactory.

Of the "Hospital Saturday" we cannot say anything save that we do not yet know what amount was really collected, nor how it is to be distributed.

Many of the metropolitan hospitals have been enlarged or improved during the year, or are being rebuilt. The new wing—the "Grocer's Wing"—of the London Hospital was opened by her Majesty in person on March 7. The Royal Ophthalmic Hospital, Moorfields, and the Charing-cross Hospital have been enlarged and otherwise improved; a new wing added to the Royal Hospital for Diseases of the Chest, and new buildings erected for the East London Hospital for Children. The Royal Infirmary for Children, in the Waterloo-bridge-road, was also reopened after repair and improvements; and we are glad to hear that the committee of the Great Northern Hospital have plans for a new hospital under consideration.

A terrible accident occurred at St. George's Hospital in June, through the bursting of a huge cast-iron water-tank placed on the top of the building, and the discharge of its volume of water through the roof and the flooring of two wards into the students' waiting-room on the ground-floor. Two female patients were, unhappily, so much hurt that their injuries proved fatal, and two students were slightly injured, but it is wonderful that the evil results were not much worse. The damage to the building has been repaired, at no slight expense to the Hospital funds.

Sir William Fergusson was for several weeks through the summer confined to the house and his bedroom by serious illness, the symptoms of which were at one time so grave as to cause much anxiety and apprehension to his friends—and their name is legion—in the profession and among the public; but, happily, he is again active and busy among us once more. Dr. Arthur Farre was also laid up for a long time by a very severe injury, caused by his falling through a window at the back of his house; but he too, we are glad to say, has recovered, and is again "out and about."

We must refer our readers to our pages for the various honours of different kinds that have been paid to the eminence

valuable services, and merits of individual members of the profession. We can mention only a few here. Mr. Simon, on resigning the post of Medical Officer to the Privy Council, received from her Majesty the Companionship of the Most Honourable Order of the Bath, in acknowledgment of his "most distinguished" public services. Dr. J. Fayrer was promoted from the Companionship to the Knighthood of the Most Exalted Order of the Star of India, in recognition of his eminent and valuable services as Physician to the Prince of Wales during his Royal Highness's tour in India. Dr. V. S. Gouldsbury has been made a Companion of the Most Distinguished Order of Sir Michael and St. George; and Dr. Owens, Lord Mayor of Dublin, and Dr. W. Miller, Mayor of Derry, received the honour of knighthood from the late Lord Lieutenant of Ireland, his Grace the Duke of Abercorn, on his leaving that country. Professor W. T. Gairdner, of Glasgow, has been appointed one of the Physicians to her Majesty in Scotland, in succession to the late Professor Laycock; and Professor Pirrie, one of her Majesty's Surgeons in the same division of the kingdom: and Dr. Charles Fitzgerald has been made Surgeon-Oculist to the Queen in Ireland. Movements have been set on foot to raise testimonials to some of the distinguished men we have lost during the year, as Professor Parkes and Mr. Campbell De Morgan; and a testimonial to the late Dr. Wyldbore Rumsey, of considerable value, was subscribed for when that great sanitary worker was laid aside by ill-health. He had the pleasure of seeing it, and that was all, for he was on his death-bed when it was presented.

Among the many whose deaths it has been our lot to record, there have happily been several who had attained to a very ripe old age before they were called away. Sir John W. Fisher, and Mr. Charles Mayo, of Winchester, had each lived to the age of eighty-eight, and the latter had enjoyed such vigorous health that he was still on the active staff of his hospital when he was eighty-two, and did not cease to practice till, in 1874, he became blind. Mr. John Higginbotham, of Nottingham, and Dr. J. Pickering, died at eighty-seven; Mr. Jeronimo Simoens, of Twickenham, and Mr. Thos. Edward Eden, of Lower Norwood, at eighty-five; Dr. John Gairdner, of Edinburgh, at eighty-six; Mr. T. Watts Chaldecott, of Addlestone, Dr. Morgan Culhane, of Kensington, and Mr. C. Renny, C.B., at eighty-four; Dr. Henry Rainey, of Glasgow, at eighty-three; Dr. W. Turnbull, of Huddersfield, and Dr. John Webster, at eighty-two; Dr. Robert Croome, at eighty-one; and Dr. Edmund Tatham, of Kendal, and Dr. John T. Graham, of Epsom, at eighty-years of age; while Dr. W. Tiffin Iliffe, of Epsom, Mr. Thos. Webb, of Barton, Mr. Richard Egan, of Guildford, Dr. Charles Holland, F.R.S., Dr. Charles White, of Brighton, Dr. W. Eaton, of Grantham, Sir J. Lomax Bardsley, M.D., Dr. Ludlow Roots, Mr. John Robertson, of Manchester, Sir Edward Hilditch, Mr. John Watson, Sir David Dumbreck, K.C.B., Dr. H. J. Sibthorpe, of Dublin, Dr. R. Norton, Mr. Adam Young, of Boston, and Mr. Ellis Jones, of Liverpool, also lived till they had passed, some by many years, the age of three score and ten. On the other hand, we have had to regret the loss of some men at, or almost at, the outset of professional life: Mr. H. Lawrence Champneys died at the age of twenty-two, Dr. D. M. Brunton at the age of twenty-four, Dr. J. R. Baillie Cormack at the age of twenty-seven, and Mr. R. L. Sheffield when he was thirty-three. And not a few were taken from among us who had rendered, and were rendering, excellent service to the public and the profession, and from whom much gain to the science and art of medicine might still have been expected or hoped: George Green Gascoigne was only forty-six when he died; Dr. Warburton Begbie only forty-nine; and Dr. Samuel Mostyn, of Clifton, the same age; we lost Edmund Parkes at the age of fifty-six; Sibson, at sixty-one; Campbell De Morgan and Professor Laycock, at sixty-four; Mr. George Naylor and Dr. Day-Goss died at the age of forty-eight; Sir G. Duncan Gibb, at fifty-two; Surgeon-Major Fleming, at fifty-four; Mr. S. Parker, of Sheffield, at fifty-seven; Dr. J. C. Hall, of Sheffield, and Dr. Letheby, at fifty-nine; Sir William Wilde, at sixty-one; Sir J. Cordy Burrows, at sixty-two; Mr. Victor de Méric, at sixty-five; and Dr. Rumsey, at sixty-seven. Dr. Thomas Inman also died at a comparatively early age. And though he had left the profession for literature, we must not omit to mention James Hinton, who died when only fifty-four, to the great regret of all who knew him or his writings.

We have had also, with great regret, to record the deaths of several of our most distinguished brethren abroad—men of European fame, and whose works were well known and appreciated in England. First of these must be named the honoured veteran of clinical teaching, M. Andral, who died this year at the age of seventy-eight; and among others, Pitha, of Vienna; Steiner, of Prague; Traube, of Berlin; Chelius and Gustav Simon, of Heidelberg; Ehrenberg, Béhier, and Stromeyer.

Turning now to the volumes of the journal itself, which have, we venture to think, sustained its reputation as a scientific medical journal, we proceed to give, as has for some years been our habit, a condensed summary of their principal contents:—

We have been fortunate in being able to publish a selection from Professor Ogston's admirable lectures on "Medical Jurisprudence": they are rich with the results of the ripe experience and long-continued observations of that able and celebrated expert and teacher in Medical Logic and Medical Jurisprudence. Mr. Hutchinson has also enabled us to continue to give his valuable lectures on "Injuries to the Head," and papers of great practical interest and value on the "Hereditary Transmission of Gout," and on "Colles' Law, and on the Communication of Syphilis from the Fœtus to the Mother." We have given to our readers lectures, or "clinical" lectures, from several others of our prominent and able brethren—as, for instance, Dr. George Johnson's lecture "On a Fatal Case of Peritonitis, excited by the Escape of Hydatids from the Liver"; Dr. A. B. Duffin's, "On a Case of Multiple Syphilitic Paralysis"; Dr. Tilbury Fox's, on "Tubercular Leprosy," and on "Pemphigus Foliaceus"; Dr. Morell-Mackenzie's, on "Cancer of the Œsophagus, based on 100 Cases," and on "Throat Diseases"; Dr. Edward Long Fox's, "On Spinal Hæmorrhage"; Dr. Beale's, "On the Medicine of Our Time"; and lectures by Mr. Furneaux Jordan, "On Extension of Inflammation from the Epididymis to the Urethra"; by Mr. Maunder, "On a Case of Malignant Stricture of the Œsophagus"; by Dr. J. R. Wolfe (of Glasgow), "On Granular Conjunctivitis, with Cataract Complications"; by Dr. C. Bell Taylor, "On a Case of Glaucoma"; and by Mr. C. Higgens, on "Ophthalmology." We have also been able to give, by permission, full translations of some very valuable foreign lectures, as that of Professor W. Ebstein, of Göttingen, on "Cancer of the Stomach"; that of Professor H. Quincke (of Berne), on "Pernicious Anæmia"; and some more of Dr. Jaccoud's Clinical Lectures. We have, of course, published the Harveian Oration, as prepared by Dr. Parkes, and delivered by Sir William Jenner; Mr. Hutchinson's address "On the Pathology of Syphilis," delivered as the introduction to the debate on Syphilis at the Pathological Society; Mr. Netten Radcliffe's Presidential Address to the Epidemiological Society, "On the Prospect of a Reappearance of the Plague in this Country and on the Continent of Europe"; Dr. George Buchanan's Address to the Society of Medical Officers of Health, on "Citizenship in Sanitary Work"; and Dr. H. G. Sutton's Address to the Hunterian Society; and we have given very full abstracts of Dr. S. O. Habershon's Lumleian Lectures "On the Pathology of the Pneumogastric Nerve"; and of Dr. Howship Dickinson's Croonian Lectures, "On the Pathology and Relations of Albuminuria."

Under the heading of "Original Communications" we have again, as in former years, been able, through the help of our friends and supporters, to give a great number of valuable papers, many of them from some of the best known and most able of our teachers and workers. Of these papers we may mention Dr. T. B. Peacock's, on "Cases of Paracentesis Thoracis"; Dr. Handfield Jones's, on "Cases of Obscure Nerve Disorder"; "Dr. Gavin Milroy's, "On Yaws and some Allied Disorders," and on the question, "Is Leprosy Contagious?" and, in connexion with these, an interesting paper on the same subject from a gentleman who writes from Melbourne under the name of "Mucor"; Dr. James Dunlop's "Contributions to Antiseptic Surgery"; Mr. Knowsley Thornton's papers on "The Progress in the Diagnosis and Treatment of Ovarian Tumours," on "Two Cases of Pelvic Hæmatocele successfully treated by Drainage," and on other subjects; Mr. J. Chiene's "Notes on the Treatment of Gleet"; and Dr. James Russell's "Clinical Illustrations of Graves' Disease"; "Clinical Studies," by Sir John Rose Cormack; and papers by Dr. Dudgeon (of Pekin), on "Calculus in China," and on "The Ailanthus Glandulosa in Dysentery"; by Dr. J. Sullivan, on "Masked Malarious Fever," on "Pernicious Fever," and on "The Bilious Fever of the Tropics"; by Dr. Althaus, on "A Case of Nerve Disorder consequent on Gonorrhœa, and treated by the Constant Galvanic Current," and "On the Prevalence of Nervous Diseases"; by Mr. Howard Marsh, on "A Case of Congenital Hydronephrosis, associated with Imperforate Rectum"; by Dr. J. Pearson Irvine, on "Cases illustrating the Occasional Obscurity of the Acute Specific Diseases," and "On a Case of Obstruction of the Bowel, successfully treated"; by Inspector-General Smart, C.B., "On Burns by Gunpowder, and on Scalds by Steam"; by Mr. Messenger Bradley, "On Precision in the Use of Topical Remedies"; by Dr. David Brakenridge, on "Objections to the Use of Salicylic Acid in Scarlet Fever"; by Dr. Thomas Barlow, "On a Case of Sporadic Hæmophilia"; by Dr. Markham Skerritt, on "A Case of Intestinal Perforation from Ulceration, with Abdominal Tumour of Obscure Origin"; by Dr. C. Bell Taylor, "On a New Method of Treating (so-called) Incurable Cases of Symblepharon"; and Professor James Spence's "Statistical Report of Operations performed in the Royal Infirmary, Edinburgh." We have also published a valuable "Clinical Study on Naples Fever," communicated to us by Professor Diodato Borelli, of Naples; instructive papers by Dr. Eickhorst, "On Primary Apoplexy of the Spinal Cord"; and by Professor J. Grübe, of Vienna, "On a New Method of making Pervious the Eustachian Tube, and of Inflating the Tympanum"; and papers by Dr. J. B. Wolfe, on "A form of Iridectomy applicable to Cases of Sympathetic Ophthalmia," and "On a New Method of performing Plastic Operations"; by Dr. A. Downes, "On a Skin Affection in Children the subjects of Congenital Syphilis"; by Mr. J. T. Mitchell, on "The Propriety of Bleeding in Acute Diseases"; Mr. F. W. Lowndes, on "The Working of the Contagious Diseases Act at Aldershot"; Mr. Bevan Lewis, on "Thermal Changes in Epilepsy, and the Epileptic Status," and other subjects; by Mr. Egan, on "Poisoning by Morphia"; by Surgeon Edward Nicholson, and by Dr. Leared, on "The Morphia Treatment of Delirium Tremens"; by Dr. Balmanno Squire, and by Mr. Hancocke Wathen, on "The Treatment of Chronic Eczema by Glycerole of Subacetate of Lead"; by Dr. John Imray, "On Tetanus in the Tropics successfully treated with Opium and Chloral Hydrate in combination"; by Dr. Henry Lawson, on "Subcutaneous Injection of Morphia in the Treatment of Sciatica, Lumbago, and Brachialgia"; and by Dr. J. C. Thorowgood, on "Death from Rupture of a very Small Intra-thoracic Aneurism." Papers also from Mr. Spencer Watson, "On the Use of Mercury in Traumatic Inflammations of the Eye"; Mr. Edward Sargeant, on "The Symptoms of the Patients in the Eagley Epidemic"; Dr. James McCraith, on "Practice of Physic in Smyrna"; and Mr. George Barraclough, "On Hereditary Syphilis, and the Contagious Diseases Act"; Mr. George Gaskoin's paper on "The Recent Discussion on Syphilis"; Surgeon-Major Dr. F. R. Hogg's "Notes on Infantile Diseases in India"; Dr. William Carter's (of Liverpool) "Two Cases of Recovery from Ascites"; a "Case of Phosphorus Poisoning in a Child successfully treated," by Dr. J. H. Courtenay, of Jamaica; and an interesting "Study of a Case of Impulsive Insanity," by Dr. James Maclaren. We have also to thank many other gentlemen, as Dr. T. Savage (of Birmingham), Dr. Ogilvie Will (of Aberdeen), Mr. Teevan, Mr. Hugh Richard Ker, Mr. E. Houston Forjett, Dr. T. T. Whipham, Dr. Clement Godson, Mr. W. J. H. Lush, Mr. C. Allen Fox, Dr. E. Slade King, Dr. T. Stretch Dowse, Mr. Walter Coulson, and others, for contributions for which we have gladly found space in our pages.

We have given at times special articles on various subjects of interest and importance; and of these some may be particularly mentioned here. We were very happy in being able to give again a "Letter from Madras," and some more "Notes on Wine and Spirits." We published two very instructive and useful letters on "Mentone" and "Cannes," containing information, advice, and warnings of great value to invalids thinking of resorting to those places. We gave a full abstract of a very interesting little treatise on "The Transmission of Syphilis," by Dr. Kassowitz, Physician to the Public Sick Children's Institute in Vienna; and a report of Dr. Heubner's monograph on "Syphilitic Disease of the Cerebral Arteries"; and we published also a full translation of Professor Virchow's valuable and very instructive "Description and Explanation of the Method of performing Post-mortem Examinations in the Dead-House of the Berlin Charité Hospital, with especial reference to Medico-Legal Practice." Among these special articles will also be found a careful and exact report which, in the interest of Hastings, we felt bound to make on the water-supply of that charming seaside health-resort. It drew upon us much wrath and reviling; but we are not at all without the hope that it may in the end lead to a full and constant supply of undeniably pure and safe water being secured for Hastings, both now and as it continues to increase in population and popularity.

In our Editorial Articles we have had to notice and comment on subjects of all kinds—scientific, social, political, ethical—affecting the profession, or the public by or through the profession. Among scientific subjects, such as advances in pathology, new modes of treatment in medicine and surgery, and new drugs, we have had articles on "Fat Embolism," on "Sudden and Rapid Death after Thoracentesis," on "The Physiological Properties of Cumarin," on "The Treatment of Rheumatic Fever with Salicylic Acid," on the "Excretion of Phosphoric Acid," on "The Explanation of Pulsating Liver," on the "Diagnosis of Empyema," and on the "Operative Treatment of Pleuritic Exudations"; and have treated also of "Torsion of Arteries," of the use of "The Distal Ligature in Cases of Aneurism," of "Subcutaneous Osteotomy," of the "So-called Organisation of Thrombus," of Virchow's opinions "On the Relation of Typhoid Fever to Drainage," of the "Surgery of the Nervous System," and of "The Intravenous Injection of Ammonia in Snake-Bites." Passing to subjects interesting more directly the public, we have noted the "Lessons taught by the Norwich Hospital Tragedy," "The Sanitary Restoration of Uppingham School," "The Enteric Fever at Croydon," "The Eagle Epidemic," "The various Improvement Schemes adopted or proposed under the Improved Artisans' and Labourers' Dwellings Act," the "Bravo Case," and the question of "Drunkards' Asylums." We have commented on the "Women-Doctors" question in

its various stages and aspects, "The Midwifery Licence of the Royal College of Surgeons," on "Imbeciles and County Lunatic Asylums," on "Lunacy and Science," the "Hastings Water-Supply," the "Warfare of Science with Religion," "Psychical Force," "School Discipline," "The Practice of Vaccination," "The Keighley Guardians," and "Small-pox in London," on the supply of "Skilled Nurses for the Poor," on "Phthisis and Change of Climate," and on "Health-Resorts"; and we have treated of the "Vivisection" question in all its stages, of the progress and varying phases of the "Conjoint Scheme" plans, and of the session of the "General Medical Council." This list does not, of course, include all or nearly all the subjects with which we have had to deal editorially, but it includes many of the most important and most generally interesting, and it seems to show how wide is the range of topics that call for notice in a medical journal; and in treating them we have desired to instruct the public on matters affecting the general health, and to consider their interests and well-being as fully as those of the profession.

In the "Hospital Reports" we have published cases in medicine and surgery from metropolitan and provincial hospitals, selected not as being rare and "curious," but as illustrating particular diseases or injuries, new methods of treatment, or special points or phases in the history of medical and surgical affections. The "Topics of the Day" and "The Week" have kept our readers informed about what has been going on at home of special interest, professionally or socially, and of subjects that have particularly engaged the attention of our professional brethren abroad. We have given short reviews of new professional works of merit or importance; and we have tried to find space for notices of new additions to or improvements in our means of giving aid, medically and surgically, and of new articles of diet,—though we have to acknowledge that in that, as in other departments of the journal, we have not been able to keep up with the fertility of production.

It only remains for us to heartily wish to all our friends and supporters, and to each and all of our brethren, wheresoever they be "betwixt the slumber of the poles," a Happy and Prosperous New Year.

THE WEEK.

TOPICS OF THE DAY.

The necessity for providing hospital accommodation for the schoolships stationed on the Thames, which we adverted to last week, has again been brought prominently forward. Mr. Stephen Cave, M.P., in presiding at the annual meeting of the Schoolship Society, recently held, stated that the epidemic of typhoid fever last year had cost the Society £3000, and he admitted that another epidemic had commenced which seemed likely to spread. But although warned by the experience of the past year, no hospital accommodation has been provided, and no means organised for the removal of the sick. The importance of the subject has been repeatedly urged upon the committees of the schoolships generally, and upon that of the *Cornwall* in particular, by the Port Sanitary Authority. It appears strange that the Home Office does not interfere in the matter, for the latter ship is classed as one of the Reformatory Schools, is visited periodically by Home Office inspectors, and has a grant from Government. There are now six schoolships moored between Greenwich and Gravesend; the *Warspite*, off Charlton, is perhaps sufficiently close to the Seamen's Hospital at Greenwich to render special accommodation unnecessary, although, in the event of an epidemic, that Hospital might not be able to receive all those affected. The *Cornwall* is moored at Purfleet, has no hospital accommodation of its own, none within ten miles, and no means of conveying the sick either by land or water. The *Chichester* and *Arethusa*, at Greenhithe, are similarly situated; but the cadet-ship *Worcester* has a special shore hospital of its own, as also has the *Exmouth*, off Grays. It is evident that for hospital purposes the various schoolship committees should unite, and obtain from the Admiralty a loan of some ship, say the *Worcester*, now being vacated by the cadets. The ship could, under the direction of the Conservancy, be moored wherever she was wanted most, and means would thus be afforded for isolating sick boys speedily, without danger of spreading any disease of an epidemic character among the riparian population. The subject is of too much importance to be allowed to drop, and we trust that the present outbreak of disease will hasten the various committees in coming to a decision without further delay.

At the meeting of the Richmond Select Vestry held last week, a letter was read from the Southwark and Vauxhall Company, threatening to cut off the supply of water to the town. It will be remembered that this Company, a few months ago, applied for an injunction to restrain the Vestry from proceeding with the construction of certain works for the supply of water to the town of Richmond from an artesian well; but the application was dismissed with costs. The letter stated that the Company had come to the conclusion that they had no right to extend the water-supply for the use of the inhabitants of Richmond, and that after January 13 next it would be stopped. An invitation was, however, given to the Vestry Clerk to make proposals for the continuation of the Company's service to the town. Meanwhile, the Select Vestry have not been idle. On the 20th inst. several of its members met to inspect the reservoir in the park, constructed in connexion with their new waterworks. It is 113 feet long by 111 feet broad, and will contain 750,000 gallons; it is connected with the pumping-station at Water-lane, Richmond, by a main over a foot in diameter, which will itself hold 50,000 gallons of water.

At a meeting of the Board of Guardians at Haxey, Gainsborough, held last week, the deaths of several more children were reported as resulting from vaccination. The Guardians unanimously resolved to demand from the Local Government Board a public inquiry, and urged upon that Board to suspend all further vaccinations throughout the whole union pending the inquiry. It is to be hoped that the Local Government Board will lose no time in acceding to the first half of the request. It is most important that nothing that can prejudice the public mind against vaccination should be allowed to be spread abroad; and if there is really anything wrong in the manner in which it has been carried out in this district it ought to be put right at once.

The President and Council of the Royal Society have resolved to petition the Committee of Council on Education to expend the Government Fund of £4000 for the promotion of scientific research in aiding education in that direction. The propositions made by the President and Council are to the following effect:—First, by conferring grants on competent persons, or giving prizes of considerable value for the solution of scientific problems; second, by entertaining applications from persons desirous of undertaking scientific investigations; third, by employing the funds for computation and formation of tables of "constants" and other labours of unremunerative scientific work.

The chairman of the Sanitary Committee of the Corporation of Brighton last week congratulated the Town Council upon the high position in which Brighton stood in the Registrar-General's returns, notwithstanding that the whole country was suffering, more or less, from epidemics of a serious nature. In the week ending the 16th inst., the death-rate was only 11 per 1000, or half the rate of all the other large towns. The same result was shown three weeks ago, and the average death-

rate of the eleven weeks of the present quarter was 17·5 per 1000, which was lower than he ever recollected it to have been.

The whole of the trees on the Albert Embankment, from Lambeth-bridge westwards, were last week removed, the reason given for this step being that the exhalations from the adjacent potteries have destroyed their vitality. This subject is important, because trees would add greatly to the beauty and pleasantness of the Embankment; and it is also a serious one from a more purely sanitary point of view, as fumes which prove so deadly to vegetation cannot fail to exercise an injurious influence on human beings. Would it not be possible to bring the matter under the notice of the Commission on Noxious Vapours, now sitting, with a view to some alteration being brought about in the neighbourhood?

Dr. Tripe, Medical Officer of Health for Hackney, reports a slight abatement in the small-pox epidemic in the district under his jurisdiction, the deaths from that disease in Hackney during the past fortnight having been 23, against 30 in the preceding fortnight; and the number of new cases reported being 98, against 113 in the same periods respectively. The cases were now more distributed over the parish, whereas before they were chiefly localised in Homerton. It must not be assumed, however, Dr. Tripe adds, that the epidemic has permanently abated, as the number of deaths during the present and previous visitations is very close—viz., 81 deaths during the first ten weeks of the epidemic in 1871, and 78 in the same period of the present outbreak. The Sanitary Committee report that they have taken every measure to prevent the spread of disease by disinfection of clothing, bedding, and houses: and their staff has been increased in order to undertake the large amount of work thus rendered necessary. The total number of cases reported to the Medical Officer of Health for Hackney since October was 421, and the number of cases reported in that parish last week (37) was the smallest number recorded since the end of October. The vaccination work in the parish is stated to be perfectly satisfactory, there being, notwithstanding its large area, fewer unaccounted-for cases than in any of the adjacent parishes. Three cases of small-pox—one a fatal one—are reported from South Hackney.

SALICYLIC ACID IN ACUTE RHEUMATISM.

At the December meeting of the Medical Society of the Royal College of Physicians in Ireland, Dr. J. W. Moore communicated the results of his experience of this remedy in the treatment of acute rheumatism in the Meath Hospital and County Dublin Infirmary. Detailed observations of six cases were given, and brief notes of ten cases treated by other methods were appended for the sake of comparison. The ten patients spent an average period of 26·6 days under treatment in hospital. The average duration of the stay in the wards of those who were given salicylic acid was 14·8, and this too although most of the patients treated by it were purposely kept under observation for many days after the symptoms had disappeared. The mean duration of the sojourn in hospital is now only about *one-half* what it used to be. Again, an examination of the clinical charts in the cases shows that under the ordinary methods of treatment the average number of "days of pyrexia," or days on which the axillary temperature reached or exceeded 99° Fahr., was 19·3. Under salicylic acid, on the contrary, it was 5·5 days. So that the symptom of feverishness was but *one-fourth* as persistent in the second series of cases as it had been in the first. If it were fair to base any definite opinion on so few observations, the author would give the following conclusions as to the value of the new treatment:—1. Salicylic acid appears to be a valuable and almost specific remedy in the treatment of acute rheumatism. 2. After the administration of a few moderate doses of five grains each, given at hourly intervals, a marked amelioration of the symptoms usually occurs. Thus, the temperature and pulse begin to fall, the swelling and pain of the affected joints subside, and the patient sleeps. 3. The above doses—*i.e.*, of five grains each—are quite sufficient to produce an impression on the disease, while the patients make but little complaint either of the frequency of the dose or of the taste of the medicine. 4. When pushed far, it sometimes causes singing in the ears and diaphoresis. Under these circumstances its administration should be temporarily suspended. 5. To prevent relapse, it should be given for some days, but at gradually lengthening intervals. 6. Finally, as to its probable action as a preventive of the dangerous cardiac lesions of acute rheumatism, the author could only endorse the words of Dr. Coates, of Belfast, in a recent paper:—"I think it can hardly be denied that medicines which cut short the disease, as I believe there can be no doubt salicylic acid does, must render the liability to these complications less."

ROYAL COLLEGE OF PHYSICIANS.

At an extraordinary meeting of the Royal College of Physicians, on the 22nd inst., a communication was received from the Earl of Carnarvon, enclosing a memorandum from Dr. Vandyke Carter on the results of the segregation of lepers in Norway, and the memorandum was referred to the Leprosy Committee. The special thanks of the College were voted to Sir William Jenner for his present to the College of the Manuscript Harveian Oration of the late Dr. Parkes. A committee was appointed to confer with the Librarian of the College, Dr. Munk, on the subject of the preparation of a new edition of the College Roll; and it was resolved also to appoint a committee "to consider the best mode of preparing a new edition or reprint of the 'Nomenclature of Diseases.'" A report from the Council of the College was read, embodying a reply to some questions from the General Medical Council on the results of professional examinations. Among other things the answer referred to the frequent failure of the candidates from want of knowledge in chemistry, but added that a marked improvement had taken place in this respect since the College issued a warning on the subject to students; and the Council recommended that "in addition to the subjects already required as part of the general preliminary education of medical students, before commencing their professional studies, the elements of natural history, of botany, of zoology, and of chemistry should be made compulsory as a part of their general education, in order that sufficient time may be at the disposal of the student for the acquirement of his practical knowledge of medicine, surgery, midwifery, and therapeutics." The College adopted the report, with the addition that they "consider it undesirable to reply further to the questions in view of the probable establishment of a Conjoint Board."

OPERATION FEES TO GENERAL PRACTITIONERS.

At a meeting of the Thames Valley Branch of the British Medical Association (Dr. Down in the chair), held on December 14 at Kingston, Mr. Maunder made the following proposition:—"That an operation fee in a certain proportion to that given to the operator should be received by the practitioner at the time, on the same principle as confinement fees are paid. As a matter of delicacy, this suggestion should come from the consultant either at the moment of receiving his own fee, or earlier should the opportunity have presented itself." He said it had often seemed to him that gentlemen in general practice are called upon to exercise considerable forbearance when sharing the responsibilities of an operation performed by another. The operator takes his fee at the time, willingly bestowed when "the tear is in the eye," while the regular medical adviser not only gives his valuable time and assistance at the operation, but also his attendance during possibly a protracted convalescence, and in the end may get no recompense. It was resolved—"That it is the opinion of this Branch that it is desirable to put Mr. Maunder's suggestion with

regard to an operation fee into actual practice"; and it was hoped the subject would be discussed by other branches of the Association.

SMALL-POX IN DUBLIN.

Fatal cases of small-pox have occurred during the past fortnight in the Mater Misericordiæ, Hardwicke, and Cork-street (Fever) Hospitals, and isolated cases are coming under notice in various parts of Dublin. The Public Health Committee of the Corporation are bestirring themselves in the matter of the prevention of the spread of the disease. It has been resolved by the Committee that Section 50 of the Public Health (Ireland) Act, 1874, authorising the destruction of infected clothing, and awarding compensation for infected clothes destroyed by fire, shall be carried into effect. The Dublin Sanitary Association is on the alert also; and Dublin is now extensively placarded with monster bills published by the Association, headed "Small-pox and Vaccination." These placards give much good advice to the public in simple yet weighty language. The importance of vaccination and of revaccination is insisted upon, and the friends of the sick are urgently entreated to send the patients to hospital without delay.

PROFESSOR DEWAR ON LIGHT AND THE EYE.

In lecturing at the London Institution on the 18th inst. on "Light and the Eye," Professor J. Dewar illustrated the passage of electricity through the eye. In the first place, the structures of the eye were described in some detail, and then the eye of a recently killed frog was used to show the effect of light on it in producing electrical effects. The eye was placed in connexion with the electrodes; when light was thrown upon it from a lime-light, the electric effect, as told by the galvanometer, was unmistakably seen. The Professor explained that a lobster's eye was very favourable for such an experiment. He also stated that he had had it tried upon himself; he lay on his back, and a "puddling" was made round his eye, in which a saline solution was poured. One electrode was put in this, and his hand made the other. An observer let in varying amounts of light on his eye, and noticed the effect on the galvanometer with which he was connected. The results quite accorded with those obtained from the eye of a recently killed cold-blooded animal.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentlemen were admitted Licentiates on Dec. 22:—

Ballard, Philip, Bromyard.
Bull, James Weston, Guy's Hospital, S.E.
Clapp, Robert, Teignmouth.
Ellis, Philip Mackay, St. George's Hospital, S.W.
Eve, Frederic Samuel, St. Bartholomew's Hospital, E.C.
Ferguson, John, Ardwick, Manchester.
Green, Alfred Withers, Guy's Hospital, S.E.
Gross, Charles, Guy's Hospital, S.E.
Harris, Arthur Byam, Wotton-under-Edge.
Jones, Valentine Llewellyn Watson, Dowlais.
Masani, Hormasji Dadabhoy, 3, Bulstrode-street, W.
Moone, John, 63, Queen's-crescent, N.W.
Perry, Francis Frederick, University Hospital, W.C.
Robinson, Ernest Laurie, St. George's Hospital, S.W.
Robinson, George Winsor, St. Thomas's Hospital, S.E.
Wallis, Kenneth Serjeant, Edmonton.

The following candidates, having passed in Medicine and Midwifery, will receive the College licence on obtaining a qualification in Surgery recognised by this College:—

Diggle, William Alfred, Millbrook, Southampton.
Gomes, Dominic Anthony, 85, Hereford-road, W.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 21:—

Folks, Frederick Hyde, Dukinfield.
Lewis, Thomas Hope, Carmarthen.
Carlyon, Thomas Baxter, Cornwall.
Christian, John, Barrow, Rutland.
Welchman, Walter Henry Lawrence, Falmouth-road, S.E.
Mansell, Edward Rosser, Upper Norwood S.E.
Bellaby, Frederick, Nottingham.
Robinson, George Mason, Faversham.

The following gentlemen also on the same day passed their primary professional examinations:—

Noble, Henry Brewin, London Hospital.
Blaikie, William, St. Bartholomew's Hospital.
Osborne, James, Guy's Hospital.
Wright, Harry Claude, St. Bartholomew's Hospital.
Graves, Thomas William, King's College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bowrett, W. D., M.R.C.S., L.S.A.—Resident Medical Officer at the Leeds Fever Hospital.

BIRTHS.

Atthill.—On December 24, at St. Osyth, Essex, the wife of R. C. Atthill, L.R.C.P. Edin., of a son.

Fox.—On December 20, at Hyde-road, Ardwick, Manchester, the wife of Dacre Fox, F.R.C.S.E., of a son.

Fraser.—On December 24, at Greenlaw-park, Milton-bridge, Mid-Lothian, N.B., the wife of Henry Martyn Fraser, M.D., Deputy Surgeon-General of H.M.'s Service, of a son.

Hutton.—On December 20, at Leamington, the wife of Surgeon-Major George Allan Hutton, M.R.C.S. Eng., of a son.

Morris.—On December 21, at 37, Compton-terrace, Highbury, N., the wife of Malcolm A. Morris, M.R.C.S., of a son.

Murray.—On December 21, at The Parks, Tenbury, Worcestershire, the wife of W. Berkeley Murray, M.D., of a daughter.

Staines.—On December 21, at 42, Bloomsbury-square, the wife of J. F. Staines, L.R.C.P. Edin., of a son.

Walsh.—On December 17, at 41, Fitzwilliam-square West, Dublin, the wife of Albert J. Walsh, M.D., of a son.

MARRIAGES.

Breemaud—Culling.—On December 18, at West Lydford, Frederick James Breemaud, M.B., C.M., to Catherine Leah Georgina, eldest daughter of the late Robert Culling, M.R.C.S., L.S.A., both of West Lydford, near Somerton.

Fitzwilliam—Kinglake.—On December 21, at St. George's Church, Hanover-square, Thomas Wentworth Fitzwilliam, Royal Horse Guards, third son of Earl Fitzwilliam, K.G., to Elgiva Mary, eldest daughter of Hamilton Kinglake, M.D., of Wilton House, Taunton.

Green—Hope.—On December 23, at St. John's, Kilburn, Richard Green, third surviving son of Henry Thompson Green, M.D., of the island of Capri, to Ruth Edith, third daughter of William Hope, Esq., of Uckfield.

Howgate—Blackmore.—On December 21, at St. John's Church, Vipont Howgate, of Huddersfield, to Mary Maud, daughter of Edwd. Blackmore, F.R.C.S., of Byrom House, Manchester.

Rix—Nash.—On December 12, at St. Michael's, Bishop's Stortford, Benjamin Rix, M.R.C.S., etc., of Tunbridge Wells, Kent, to Ada Gifford, fourth daughter of Jonas Gifford Nash, Esq., of Bishop's Stortford, Herts.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bolton Union.—Resident Assistant Medical Officer at Workhouse. Candidates must possess the qualifications required by the Consolidated Orders of the Local Government Board—viz., registered to practise both medicine and surgery in England and Wales—which qualification must be established by production of proper diplomas, certificates, licences, or other instruments at the time of appointment. Applications for the office must be made in writing, accompanied by not more than three testimonials, to Simpson Cooper, Union Clerk, not later than January 4.

Bournemouth General Dispensary and Cottage Hospital.—Resident Surgeon. Candidates must be registered, unmarried, and possess a qualification in medicine and surgery. Testimonials, diplomas, etc., to the President of the Bournemouth Dispensary, care of A. A. Johnston, Esq., Hon. Sec., on or before December 30.

Chelsea, Brompton, and Belgrave Dispensary.—House-Surgeon and Secretary. Candidates must possess the diploma of one of the Royal Colleges of Surgeons; also the licence of the Apothecaries' Company or of the College of Physicians of London, or must be a graduate of the University of London. Candidates must send in their diplomas and testimonials on or before January 4, on which day their personal attendance will be required at 7.30 p.m.

Sussex County Hospital.—Surgeon and Assistant-Surgeon. Candidates must be Fellows or Members of the College of Surgeons of England, Dublin, or Edinburgh. Testimonials to the Secretary on or before January 3.

The Great Northern Hospital, Caledonian-road, London, N.—House-Surgeon. Candidates must be Members of the Royal College of Surgeons. Applications, with copies of testimonials, to the Secretary on or before December 30.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Honorary Physician. Candidates must be graduates of medicine of a university, and be Fellows or Members of the Royal College of Physicians of London, or Fellows of the King and Queen's College of Physicians of Ireland, or Fellows of the Royal College of Physicians, Edinburgh. Applications, with testimonials and certificates of registration, to the Secretary on or before December 30.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Resident Physician. Candidates must be registered practitioners. Testimonials and applications to the Secretary on or before December 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Caxton and Arrington Union.—Mr. Henry Raynes has resigned the Granadon District.

Dewsbury Union.—Mr. William Ellis has resigned the Morley District.

Whitchurch (Hants) Union.—Mr. Henry Hemsted has resigned the Weston District.

APPOINTMENTS.

Carnarvon Union.—Richard Williams, L.F.P. & S. Glasg., L.S.A., to the Llanrug District.

Poole Union.—Herbert A. Lawton, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Third District.

Warwick.—Alfred Bostock Hill, M.D., as Analyst for the County for one year.

ST. GEORGE'S HOSPITAL.—Her Majesty the Queen, as President, has been pleased to appoint the Duke of Grafton, Lord Leconfield, and Charles Hawkins, Esq., Vice-Presidents of this institution, to fill death vacancies. The number of Vice-Presidents, exclusive of the Royal Family, is limited to seven.

CREMATION IN PENNSYLVANIA.—The *New York Tribune* of December 6 publishes a despatch from Pittsburg, which says:—"The cremation of the body of the late Baron de Palm at Dr. Lemoyne's crematory was successfully accomplished this morning. The body arrived at the crematory yesterday, and was placed on the catafalque in the reception-room. It was afterwards taken from the coffin and wrapped in white cloth. At 8 27 a.m., Dr. Lemoyne, Dr. Arsdale of Pittsburg, H. J. Newton, and Colonel Olcott—the two latter the Baron's executors—carried the body to the mouth of the retort. Colonel Olcott put upon the body myrrh, frankincense, and cinnamon, and the winding-sheet was saturated with an alum solution. Roses, evergreen sprays, and *immortelles* were strewn upon the body, and all was ready. The body was on a wire cradle, which, when in the retort, raised it about two inches from the bottom of the retort. The retort door was opened, and as the body passed in a fume of smoke from the burnt evergreens rose from the body. Colonel Olcott pronounced the incineration ended and complete in two hours and twenty minutes. After the retort has cooled the ashes will be collected and placed in an urn provided for that purpose."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Van Steenkiste.—Received with thanks.

L. S. D.—The certified expenditure of the eight metropolitan water companies, down to the end of the year 1875, was as follows:—New River Company, £2,792,701; East London, £1,898,087; Southwark and Vauxhall, £1,766,901; Lambeth, £1,215,706; Grand Junction, £1,190,729; Chelsea, £979,973; West Middlesex, £916,696; Kent, £535,910; total, £11,296,206.

Accurate.—The following is, perhaps, a good general definition of the word "weather"—"Weather is the state or condition of the atmosphere with respect to heat, cold, dryness, moisture, wind, rain, snow, and fogs."

L.S.A.—The number of matriculations at Edinburgh for the session 1876-77 is the highest registered since the foundation of the University. There are 2069 already registered, while the average number of late entries and entries for the summer session will probably be from 200 to 250, thus bringing up the total to about 2300 for the academical year.

Small-pox.—It was formerly a favourite remedy, especially with ladies. John of Gadesden directed his patients to be wrapped up in scarlet dresses, adding that "when the son of the renowned King (Edward II.) lay sick of the small-pox, I took care that everything around the bed should be of a red colour; which succeeded so completely that the Prince was restored to perfect health, without a vestige of a pustule remaining." It was also the opinion of Avicenna that "red bodies moved the blood."

Dr. Wilson.—Consult Willcocks' "Laws relating to the Medical Profession," although since the passing of the Medical Act cases of the kind are almost obsolete.

Ethnologist.—The skeletons of the notorious Jonathan Wild and John Thurtell, executed for murder, are in the Museum of the College of Surgeons, where the skull of Eugène Aram may also be seen.

A BANKRUPT PUBLICAN AND DRUNKENNESS.

A somewhat unusual case was decided by the Leeds Stipendiary Magistrate last week, in respect to permitting drunkenness in a public-house in that town. The landlord of the Railway Hotel was summoned for allowing drunkenness on his premises. The defence set up was, that at the time of the commission of the offence the landlord was a bankrupt; that bailiffs were in possession of the house by order of the registrar; and that he (the landlord) was irresponsible for what occurred. This defence the magistrate considered to be good, and the police, in consequence, withdrew the summonses. If the landlord, under the circumstances, was not responsible for this breach of the law, were the bailiffs in possession, or who?

COMMUNICATIONS have been received from—

Dr. J. W. MOORE, Dublin; Mr. J. L. WOAKHIP, Riverhead; Dr. ALEX. BUCHANAN, Glasgow; Dr. WILTSHIRE, London; Dr. THOMAS, Liverpool; Messrs. SANG and BAKER, Edinburgh; Dr. BARLOW, Grange-over-Sands; THE SECRETARY OF THE HARVEIAN SOCIETY OF LONDON; Mr. STONE, London; Mr. C. F. MAUNDER, London; Mr. THOS. STORES, Nailsworth; THE REGISTRAR OF THE APOTHECARIES' HALL, London; THE REGISTRAR OF THE ROYAL COLLEGE OF PHYSICIANS, London; THE SECRETARY OF THE PATHOLOGICAL SOCIETY, London.

BOOKS AND PAMPHLETS RECEIVED—

Sang and Barker's Abridged Medical Account-Book—A Century of American Medicine, 1776-1876—John Charles Bucknill, M.D. Lond., Notes on Asylums for the Insane in America—Edgar Brinsmead, The History of the Pianoforte—Lombe Atthill, M.D. Univ. Dub., Clinical Lectures on Diseases Peculiar to Women—Patrick Black, M.D., Scurvy in High Latitudes.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Medical Examiner—The Louisville Medical News—Archives Générales de Médecine—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Iron—New York Medical Record—New York Druggists' Advertiser—Chicago Medical Journal and Examiner—Richmond and Louisville Medical Journal.

APPOINTMENTS FOR THE WEEK.

December 30. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

January 1, 1877. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

2. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

PATHOLOGICAL SOCIETY, 8½ p.m. General Meeting for Election of Officers. Dr. Pye-Smith—Case of Xanthelasma. Dr. Gowers—Mitral Disease. Dr. Goodhart—1. Cerebral Aneurism from Embolism; 2. Cerebral Tumour. Mr. Bryant—Aneurism of Femoral and Popliteal Arteries from Embolism. Dr. Greenfield—1. Aneurism and Division of Brachial Artery; 2. Malformation of Aortic Valves. Mr. Godlee—Granulation Material from White Swelling of Knee-Joint.

3. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

OBSTETRICAL SOCIETY, 8 p.m. Annual Meeting for the Election of Officers and Council. Reports and other business. Specimens. President's Address. Cases of Trismus Nascentium and Pyæmia in Children, by Drs. Napier, Roper, and Edis; and other Communications.

4. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

HARVEIAN SOCIETY, 8 p.m. Election of Officers. President's Address. *Conversazione.*

5. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

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